

World Lexicon of Grammaticalization

Second Edition

Extensively revised and updated, this second edition provides, in an A–Z format, an analysis of the most important generalizations that have been made on the unidirectional change of grammatical forms and constructions. Based on the analysis of more than 1,000 languages, it reconstructs over 500 processes of grammatical change in the languages of the world, including East Asian languages such as Chinese, Korean, and Japanese. Readers are provided with the tools to discover how lexical and grammatical meanings can be related to one another in a principled way, how such issues as polysemy, heterosemy, and transcategoriality are dealt with, and why certain linguistic forms have simultaneous lexical and grammatical functions. A list of grammatical concepts is provided, with examples from a broad variety of languages and references to key relevant research literature. Linguists and other scholars will gain a better understanding of languages on a worldwide scale.

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Abbreviations and Symbols

ABL	ablative
ABS	absolute
ACC	accusative
ACTU	actuality
ADE	adessive
ADJV	adjectivizer
AND	adnominal
ADV	adverb
ADVL	adverbial
AGR	agreement
ADVR	adverbializer
AGT	agent
ALL	allative
ALM	almost
AOP	aorist participle
AOR	aorist
AP	antipassive
APPL	applicative
APPR	apprehensive
ART	article
ASP	aspect
ASS	assertion particle
AUG	augmentative
AUX	auxiliary
AVER	avertive
BEN	benefactive
C	common gender; creole, when in reference to specific languages
CI, C2, etc.	noun class 1, 2, etc.
CA	Arabic-based creole
CAU	cause
CAUS	causative

CD	Dutch-based creole
CE	English-based creole
CF	French-based creole
CISLOC	cislocative
CL	noun class
CLASS	classifier
CM	class marker
CN	class noun
COM	comitative
COMP	complementizer
COMPAR	comparative
CON	continuous, continuative
COND	conditional
CONJ	conjunction
CONN	connective suffix
CONP	connective particle
CONSEC	consecutive
CONT	continuative
CONV	converb
COP	copula
CP	Portuguese-based creole
CPL	completive
CRS	currently relevant state
CS	Spanish-based creole
D	determiner
DAT	dative
DEB	debitive
DEC	declarative (mood)
DEF	definite
DEICT	deictic marker
DEM	demonstrative
DET	determinator
DIM	diminutive
DIR	directional
DISC	discontinuous
DISTAL	distal (demonstrative)
DM	discourse marker
DS	different subject marker
DU	dual
DUR	durative
DV	directional verb
EMPH	emphatic

EMPTY	empty marker
EP	epenthetic
END	sentence-ender
ERG	ergative
EVI	evidential
EVID	direct (firsthand) evidential
EXCL	exclusive
EXPER	experiential
F	feminine gender
FACT	factitive
FACTU	factual
FEM	female
FOC	focus
FP	final particle
FREQ	frequentative
FUT	future
FV	final vowel
GEN	genitive
GER	gerund
GL	goal
GLI	genitive/locative/instrumental (case marker)
GRI	grade 1, intransitive verb
GR5	grade 5
HAB	habitual
HON	honorific
HORT	hortative
HUM	human
IAM	iamitive
IDENT	identifier
IDEO	ideophone
ILL	illative
IMC	imperfective converb
IMMPST	immediate past
IMP	imperative
IMPERF	imperfect
IMPFV	imperfective
INAN	inanimate
INCL	inclusive
INCPL	incompletive
IND	indicative
INDEF	indefinite
INE	inessive

INF	infinitive
INFER	inferred
INSTR	instrument
INSTRN	instrumental noun
INT	intentional
INTER	interrogative marker
INTERJ	interjection
INTR	intransitive
INTJ	interjection
IRR	irrealis
IS	intransitive final suffix
JUNC	juncture
JUSS	jussive
LEST	marker of a 'lest' clause
LIG	ligature
LNK	linking vowel
LOC	locative
LOG	logophoric
M	masculine gender
MIR	mirative
MO	motion verb class
N	noun
N.D.	not dated
NAR	narrative
NEG	negation
NEUT	neuter gender
NF	non-feminine
NFUT	near future
NOM	nominative
NOMIN	nominalizer
NONFIRSTH	non-firsthand
NONFUT	non-future
NONPAST	non-past
NONSG	non-singular
NONVIS	non-visual evidential
NP	noun phrase
NPERF	near perfect
NPL	non-plural marker
NRL	non-relational noun marker
OBJ	object
OBL	oblique (case)
OM	object marker

OPT	optative
OST	ostensive predicator
P	pidgin, in reference to specific languages
PA	Arabic-based pidgin
PART	particle
PARTCP	participle
PARTV	partitive
PASS	passive
PAST	past
PE	English-based pidgin
PER	perlative
PERF	perfect
PERS	person, personal
PFV	perfective
PL	plural
PLU	pluperfect
PM	participial marker
POESS	postessive
POL	polite
POS	positive
POSS	possessive
POST	postposition
POT	potential
PP	past participle
PRED	predicate marker
PREP	preposition
PRES	present
PROG	progressive
PROH	prohibitive
PRON	pronoun
PROPR	propriative pronoun
PROX	proximative
PROXIM	proximal (demonstrative)
PRT	discourse particle
PST	participle of state
PTCPL	participle
PTPTCPL	past participle
PURP	purpose
PX	proximity marker; possessive suffix
Q	interrogative
QUOT	quotative
R	relational suffix

REAL	realis
REAS	reason
REC	reciprocal
RECP	recipient
REFL	reflexive
REPORT	reported evidential
RES	restrictive
RL	relational
RESULT	resultative
RM	relator, relation marker
SBJ	subject
SBST	substantivizer
SEQ	sequential
SG	singular
SIM	simultaneous (converb)
SIMIL	simulative
SOC	sociative
SR	switch-reference
SRDIR	superdirective marker
SREL	superrelative marker
SRESS	superessive marker
SS	same subject marker
STAT	stative marker
STATS	subject of a stative verb
SUB	subordinator
SUBEL	subrelative marker
SUBJ	subject
SUBJUNCT	subjunctive
SUF	suffix
T	transitive suffix
TAM	marker of tense, aspect, or modality
TERM	terminative
TNS	tense
TOP	topic
TR	transitive (preposition)
UA	unit augmented
TRI	trial
VEN	venitive
VINC	incremental vowel on verbs
VIS	visual (evidential)
VN	verbal noun
VSF	vacuous stem formative

I	first person
2	second person
3	third person
I	juncture I
II	juncture II
=	clitic boundary
?	morpheme of unknown meaning
*	reconstructed item
()	interlinear glosses tentatively volunteered by the present authors

1 Introduction

In the course of the last decades, a wealth of data has been published on the origin and development of grammatical forms. Part of these data, as they were available up to 2002, were published in the first edition of the *World Lexicon of Grammaticalization*. The main purpose of the present work is, first, to make some revisions to the first edition and, second, to provide an update on some of what has happened in grammaticalization studies since 2002. The update concerns, on the one hand, new, general developments that this field has experienced. To this end, some of the directions that appear to be particularly relevant to the field are pointed out in Section 1.3. On the other hand, the update concerns a wider database, considerably expanded with regard to the distinct language varieties (i.e. dialects included), which are over 1,000, and the processes discussed, which involve 544 grammaticalization paths.

Grammaticalization studies as we know them today are commonly assumed to have a history of hardly more than a century, even if their roots can be traced back to the nineteenth or even the eighteenth century. In this widely held assumption it is ignored that such studies have a much longer history in China, going back at least to the fourteenth century (Chappell and Peyraube 2011: 784). But presumably more than at any time in their history, these studies have experienced a boom in more recent times.

The framework adopted in the present book is concerned with language use across space and time; hence the findings presented may be of help for diachronic reconstruction, especially in areas where other tools available to the historical linguist, such as the comparative method, comparative typology, and internal reconstruction, do not yield appropriate results.

But the book should be of interest not only to the student of historical linguistics. The descriptive linguist will find information, for example, on how and why different grammatical meanings can be related to one another in a principled way. Thus, the data presented should be of help for a better understanding of notions such as polysemy, heterosemy, and homonymy, and why there are some regular correspondences between grammatical forms and the meanings expressed by them, or why certain linguistic forms have simultaneously lexical and grammatical functions. We may illustrate this potential

with the following example. The English form *have* is part of a number of different constructions.¹ On the one hand, it forms the predicate of a possessive construction (e.g. *They have a new car*), where it can be said to be a lexical item, that is, a possessive verb. On the other hand, it is also a grammatical item, namely an aspect marker in a perfect construction (*They have come*), and it is also a modal auxiliary (*You have to leave now*).

As the reader will see in this lexicon, such different morphosyntactic and semantic uses of one and the same form can be accounted for on the basis of principles of grammaticalization. Since these principles do not only apply to English but also to many other languages across the world, they are not only of help in accounting for structural similarities and differences within a given language but also across languages.

While the book addresses mainly the needs of linguists it should also be of interest to students of other disciplines. Anthropologists, sociologists, and psychologists may discover that the kind of cognitive processes and other forms of human behaviour held responsible for the evolution of grammatical forms is not all that different from the kind of behaviour they observe in their own fields of study.

Conceived as a reference work, the book is based on a comparative typological perspective, and as such it differs from relevant monographs on grammaticalization (e.g. Lehmann 1982 [1995]; Heine and Reh 1984; Heine, Claudi, and Hünemeyer 1991a; Traugott and Heine 1991a; 1991b; Hopper and Traugott 1993; 2003; Bybee, Perkins, and Pagliuca 1994; Pagliuca 1994; Heine 1997b; Giacalone Ramat and Hopper 1998; Heine and Kuteva 2007). Accordingly, an attempt was made to collect many data from as many different languages as possible and to avoid theoretical and regional biases – as far as this was possible and feasible. European languages are among the best documented in the world, both with regard to their history and their present-day structure. It is therefore hardly surprising that they have figured prominently in linguistic reference works. Attempts were therefore made in this work to avoid any Eurocentric bias and it is hoped that we were successful to some extent; for example, hardly more than 5 per cent of the grammaticalization processes discussed below are restricted to European languages. These attempts were supported in particular by two factors. On the one hand, there has more recently been a growing interest in the crosslinguistic and especially the areal dynamics of grammaticalization, and this interest surfaced, e.g. in the following important academic meetings: *Areal patterns of grammaticalization and cross-linguistic variation in grammaticalization scenarios*, University of Mainz,

¹ The term “construction” is used here in a loose sense for recurring form–meaning pairings consisting of more than one morphological unit, except when directly referring to the model of Construction Grammar (see Section 1.3). This usage thus differs from that of Construction Grammar (e.g. Goldberg 2006: 5) in not including “atomic constructions”.

12–14 March 2015, symposium on *Grammaticalization in Japanese and across languages*, Tokyo, 3–5 July 2015, National Institute for Japanese Language and Linguistics, and *Grammatikalisierung in interdisziplinärer Perspektive*, Munich, 6–8 July 2016.

On the other hand, this second edition of the lexicon has also been enriched with linguistic data from the languages of eastern Asia. Languages such as Chinese, Korean, and Japanese have at their disposal historical records some of which are older than those to be found in many European languages. Hence, these languages provide an almost ideal laboratory for the study of grammaticalization, as demonstrated by scholars from these countries, and this is also one of the reasons why this volume has an expanded authorship.

1.1 On Grammaticalization

Grammaticalization is defined as the development from lexical to grammatical forms and from grammatical to even more grammatical forms.² In accordance with this definition, grammaticalization concerns the genesis and development of grammatical forms. Its primary goal is to describe how grammatical forms and constructions arise and develop through space and time, and to explain why they are structured the way they are. Technically, grammaticalization involves four main interrelated mechanisms, typically though not necessarily applying in the order as listed below:³

(1) Mechanisms of grammaticalization

- (a) extension (or context generalization) – use in new contexts,
- (b) desemanticization (or “semantic bleaching”) – loss in meaning content,
- (c) decategorialization – loss in morphosyntactic properties characteristic of lexical or other less grammaticalized forms, and
- (d) erosion (or “phonetic reduction”) – loss in phonetic substance.

While three of these mechanisms involve a loss in properties, there are also gains. In the same way that linguistic items undergoing grammaticalization lose semantic, morphosyntactic, and phonetic substance, they also gain properties characteristic of their uses in new contexts. Grammaticalization requires specific contexts to take place, and it can be, and has been, described as a product of context-induced reinterpretation (Heine 2002). Accordingly, context is a crucial factor in shaping the structure of grammatical forms – to the extent that they may express meanings that cannot immediately be derived from their respective source forms.

² The term “grammatical forms”, or “grams”, roughly corresponds to Ramat’s (1999) “feature values”, and to what in some traditions are referred to as “functional categories”.

³ For alternative catalogues of parameters, see Lehmann (1982 [1995]) and Hopper (1991).

It has been argued that grammaticalization is not a distinct process, since the four mechanisms listed in (1) can be observed to be at work also in other kinds of linguistic change (Newmeyer 1998: 248ff.).⁴ There are a couple of reasons why we think that such a position is not justified. First, the main task of grammaticalization studies is to explain why grammatical forms and constructions are structured the way they are, and these four mechanisms, as opposed to many other conceivable mechanisms, have been found to be relevant to achieve such explanations. Thus, irrespective of how one wishes to define a “distinct process”, one is led to conclude that these mechanisms are part of one and the same explanatory framework.

Second, grammaticalization, as conceived here, is above all a semantic process. This process is context dependent, and grammaticalization can therefore be described in terms of context-induced reinterpretation. Not every reinterpretation leads to the rise of grammatical meanings. Rather, it is only when forms for concrete (e.g. lexical) meanings are used to also express more abstract (grammatical) meanings that grammatical forms emerge; for example, when a form used for a visible object (e.g. the body part ‘back’) is used also to refer to a nonvisible item (the spatial notion ‘behind’), or a form used for an action (‘go to’) is used also to refer to a grammatical concept (future tense). On account of its specific directionality, context-induced reinterpretation has been described in terms of metaphorical transfer, leading, for example, from the domain of concrete objects to that of space, from space to time, from (“real-world”) space to discourse space, and so on.

Desemanticization thus results from the use of forms for concrete meanings that are reinterpreted in specific contexts as more abstract, grammatical meanings. Having acquired grammatical meanings, these forms tend to become increasingly divergent from their old uses: they lose categorial properties characteristic of their old uses, hence undergoing decategorialization, and they tend to be used more frequently, to become more predictable in their occurrence, and, consequently, to lose in phonetic substance. Thus, the four mechanisms are not independent of one another. Typically, extension precedes or coincides with desemanticization, which again is followed by decategorialization and frequently also by erosion. There are a few cases where it has not yet been possible to establish that decategorialization really followed desemanticization in time, and we do not wish to exclude the possibility that in such cases the two may have occurred simultaneously. However, such cases appear to be less common: new grammatical meanings arise, and it usually takes quite some time before any corresponding morphological, syntactic, and/or phonetic changes can be observed. In many languages, prepositions unambiguously

⁴ Newmeyer (1998: 260) refers to desemanticization as “appropriate semantic change”, to decategorialization as “downgrading analysis,” and to erosion as “phonetic reduction”.

serving a grammatical function still have the morphosyntactic structure of their earlier uses as adverbial phrases (e.g. English *by means of*, *in front of*, *with respect to*) or verbal phrases (e.g. Chinese *zai* '(to be) at'; Alain Peyraube, p.c.), and tense or aspect auxiliaries may still behave morphosyntactically largely like lexical verbs even if they have lost their lexical semantics and serve exclusively as functional categories (e.g. English *be going to*, *used to*, *keep (doing)*, etc.). To conclude, there is evidence to suggest that grammaticalization can be defined as a distinct process.

It is sometimes assumed that grammaticalization invariably involves lexical categories; that is, that it is confined to the development from lexical to grammatical forms. This view tends to ignore the fact that such cases account for only part of what falls under the rubric of grammaticalization. Equally commonly, as we will see in the course of this work, items that are already part of the inventory of grammatical forms give rise to more strongly grammaticalized items. Prepositions often develop into conjunctions, temporal conjunctions tend to give rise to causal or concessive conjunctions, demonstrative determiners develop into definite articles or relative clause markers, verbal perfect inflections may become past tense markers, and so forth – all developments that take place within the domain of functional categories. Such developments are distinguished mainly from developments involving lexical categories by the difficulty of identifying and reconstructing them.

This raises the question of what constitutes a grammatical as opposed to a lexical meaning or category. Many proposals have been made on this issue, perhaps the most attractive one by Boye and Harder (2012) in their theory of discourse prominence. For example, depending on the kind of criteria that one may wish to adopt, demonstratives can be classified as lexical, grammatical, or something else (Diessel 2003; 2006). For Boye and Harder (2012: 20), in particular, demonstratives qualify as lexical, that is, nongrammatical expressions on the basis of tests of addressability and focus. In fact, like lexical expressions, demonstratives can be both addressed and focalized (e.g. *Look at that. – What?*) – that is, they are classified as discursively primary rather than secondary (Boye and Harder 2012: 13).

We have no problems with this conclusion to the extent that it is based on the theory of discourse prominence proposed by these authors. The perspective adopted here is slightly different, however, in that it is based on crosslinguistic principles of grammatical change, suggesting that the rise of new demonstrative markers is compatible with an interpretation in terms of grammaticalization, whereby lexical or less grammatical forms, such as verbs, may develop into (more) grammatical forms such as demonstratives – in accordance with paradigm parameters of grammatical change (Heine and Kuteva 2007: 33–46). As the examples provided in this book and in Heine et al. (2017) suggest,

demonstratives lack semantic, morphosyntactic, and frequently also phonological features characterizing the verbs from which they are derived. At the same time, demonstratives have acquired a schematic function that distinguishes them from their lexical sources.

This view is in accordance with the general line of change from lexical to grammatical forms and from grammatical to even more grammatical forms as it has been defined in earlier work (Kuryłowicz 1965: 69; Heine and Kuteva 2002a: 2; Hopper and Traugott 2003: 18). On this view then, there is reason to argue that demonstratives are grammatical (or functional) categories, even if they exhibit some features that distinguish them from other grammatical categories, as appropriately pointed out by Diessel (1999a; 1999b; 2003; 2006) and others. Within a more general chain of grammaticalization, however, demonstratives are distinctively less grammatical than categories they may give rise to, such as definite articles or markers of relative and complement clause subordination (see the examples provided in Chapter 3).

Grammaticalization is an essentially unidirectional process; that is, it leads from less grammatical to more grammatical forms and constructions. However, this process is not without exceptions. A number of examples contradicting the unidirectionality principle have been found (see, e.g., Joseph and Janda 1988; Campbell 1991; Ramat 1992; Frajzyngier 1996b; and especially Newmeyer 1998: 260ff.; see also the contributions to *Language Sciences* 23, 2–3; Campbell and Janda 2001). A few additional examples are pointed out in this book. These concern modality (see, for example, D-NECESSITY<> D-POSSIBILITY), on the one hand, and participant marking (for example, A-POSSESSIVE<> RECIPIENT), on the other.

As acknowledged by most of the scholars concerned, however, such examples are few compared to the large number of cases that conform to the principle⁵ (see Haspelmath 1999; 2000: 249). Furthermore, such cases can frequently be accounted for with reference to alternative factors, and finally, no instances of “complete reversals of grammaticalization” have been discovered so far (see Newmeyer 1998: 263).

Grammaticalization begins with concrete, lexical forms and constructions and ideally ends in zero – that is, grammatical forms increasingly lose in semantic and phonetic content – and they may be replaced by new forms. Grammaticalization has therefore been described as a cyclical process (Givón

⁵ See, e.g., Harris and Campbell (1995: 338), who summarize this situation thus: “there is a strong tendency for grammaticalization to proceed in one direction, though it is not strictly unidirectional”. Similarly, Joseph and Janda (1988: 198–200) claim that cases of demorphologization, a process that would contradict the unidirectionality principle, are rare and not seldom controversial. Finally, Newmeyer (1998: 275–6, 278) observes that cases conforming to the unidirectionality principle (“downgradings”) “have occurred at least ten times as often as ‘upgradings’”, and he concludes, “I suspect that, for whatever reason, there is a *general* directionality to the semantic changes observed in grammaticalization” (emphasis in original).

1979a; Heine and Reh 1984); see, e.g., the literature on the Jespersen Cycle (Dahl 1979) or the Negative Existential Cycle (Dahl 1979; Croft 1991a; van Gelderen 2008; 2009; Willis, Lucas, and Breitbath 2013a; Veselinova 2014). While there is some evidence to support this assumption, we have to be aware that, first, a grammaticalization process can stop at any point of development and, second, “worn-out” grammatical forms are not necessarily replaced by new forms. Thus, the metaphor of a grammatical cycle, though useful in certain cases, should not be generalized since it often does not apply for some reason or other.

1.2 Problems

Grammaticalization is a complex subject matter; it relates in much the same way to diachronic and synchronic linguistics as to semantics, syntax, and morphology, and it is rooted in cognition and pragmatics. Obviously, an endeavour such as that found here is an ambitious one – one that has to take care of a wide range of problems. In this section we deal with the most serious of these problems in turn, to the extent that they relate to the subject matter of the present book.

The findings presented in this work are meant to highlight processes of human behaviour that can be observed across cultures; yet these findings are based on data from a fraction of the world’s languages. One may therefore wonder what justification there may be to call this work a “world lexicon”. Our main reason is this: underlying human behaviour there appears to be a strategy of linguistic processing whereby more abstract functions are in appropriate contexts expressed in terms of forms for concrete concepts. We expect, for example, that in some unknown language there are ways of expressing temporal concepts in terms of spatial ones, spatial relations in terms of forms for concrete concepts (such as body parts or salient landmarks), aspectual contours of events in terms of forms for actions and motions, discourse procedural functions in terms of propositional semantics, or functions concerning the organization of texts in terms of linguistic forms for spatial or temporal deixis. Languages differ considerably in the way and the extent to which this strategy has given rise to grammaticalized constructions; nevertheless, we expect the effects of the strategy to be essentially the same across languages, including languages that are still undocumented, or extinct.

Throughout this work we are concerned with the relation between two kinds of concepts, which we refer to as the “source” and “target” concepts of grammaticalization. In this account, the impression is conveyed that there is always a unidirectional development leading from one distinct concept to another. But this is not only a simplified account; it is also at variance with much of what we have argued for elsewhere, namely that, rather than being

a development in discrete steps, grammaticalization must be conceived of as a gradual process. To achieve the goal of having a treatment of grammaticalization as a gradual process in the form of a lexicon, we were forced to reduce the process to two salient uses of forms, viz., source and target uses.

We are fully aware that this procedure rests on a gross simplification of the facts. The nature of the process has been described by means of terms such as “cline”, “continuum”, “chain”, “pathway”, “scale”, etc. (see Hopper and Traugott 2003: 6–7 for a discussion) and, depending on the perspective that one may wish to adopt, each of the terms has its justification. In the present book the perspective preferred is one according to which the process exhibits an interlocking pattern where uses of a grammaticalizing item share features with earlier, less grammaticalized uses of the same item. These uses, which have been described with reference to an “A>A/B>B” scenario (Heine et al. 1991a), exhibit a chain-like structure which cannot easily be divided into more or less separable “points” (see Heine 1992). Accordingly, rather than “cline” or “scale” the term preferred here is that of “chain of grammaticalization”.

Furthermore, target uses are not all of the same kind. In one language, a target use can be represented as a fully fledged, conventionalized grammatical category. In another language, by contrast, this use may surface only in the form of a usage pattern of the source concept that is restricted to one particular context. Most of the data presented below are of the former kind, but there are also cases where the information available does not allow us to determine which of the two is involved, or where we decided for specific reasons to also include instances of the latter kind.

Another problem can be illustrated with an example concerning the evolution of aspect and tense categories, where two or more different linguistic forms may simultaneously be involved: an auxiliary (e.g. *be* or *have*), a nonfinite marker (e.g. an infinitival, participial, or gerundival marker), and perhaps also a locative marker. Tense and aspect constructions in a number of languages worldwide do not uncommonly involve three distinct morphological elements, the English future marker *be going to* being a case in point. Another European example is the Latin verb *habēre* ‘to have’, which in the Romance languages has given rise to perfect markers on the one hand and to future markers on the other. What accounts for this divergent development? The verb *habēre* was not itself grammaticalized; rather grammaticalization involved entire periphrastic constructions, or event schemata: the construction *habēre* + perfect passive participle gave rise to perfect expressions, while *habēre* + infinitive periphrasis was responsible for the development of future constructions. In a lexicon project like the present one, such propositional structures had to be reduced to the salient segments of the constructions concerned, such as the *habēre*-markers figuring in the expression of future tenses in Romance languages; we will return to this issue in Section 1.3.

A related problem that we encountered concerns what one may call “complex grammaticalization”: a more complex linguistic structure can assume a grammatical function without involving the grammaticalization of any particular item figuring in this structure; see under Construction Grammar (Section 1.3). What exactly should the lexicon entry be that takes care of this grammaticalization? Take the following example. One widespread way of developing expressions for the grammatical concept of a comparative of inequality is to juxtapose two propositions that are in a polar contrast – one expresses the standard of comparison and the other the comparative notion. This opposition may be either antonymic, as in (2), or marked by the distinction of positive versus negative, as in (3).

(2) *Cayapo (Ge-Pano-Carib; Stassen 1985: 184)*

Gan ga prik, bubanne ba i pri.

You you big but I I small

‘You are bigger than I am.’

(3) *Abipon (Ge-Pano-Carib; Stassen 1985: 184)*

Negetink chik naã, oagan nihirenak la naã.

Dog not bad yet tiger already bad

‘A tiger is more ferocious (lit.: ‘bad’) than a dog.’

What is grammaticalized in such constructions is not a specific element but rather some propositional relation, viz., *be big* versus *be small*, or *be bad* versus *not be bad*. In a treatment like this book, which is concerned with segmentable linguistic forms, functions expressed by means of pragmatic or syntactic relations between forms without involving morphological segments of necessity had to be excluded.

Another problem concerns morphosyntactic mechanisms such as derivation and reduplication, which frequently are responsible for changes in the grammatical status of a linguistic form. An English adjective can be turned into an adverb by adding the suffix *-ly*. Similarly, category shift is achieved in quite a number of languages by means of reduplication; a Turkish adjective like *derin* ‘deep’ turns into an adverb (*derin derin* ‘deeply’) or a Malay verb (*diam* ‘to be silent’) into an adverb (*diam-diam* ‘silently’) when reduplicated (Ramat 2011: 499). While raising interesting questions for the student of grammaticalization, such mechanisms as well will have to be ignored in the present work. On the other hand, our concern will be with the question of how, for example, derivational forms like English *-ly* came to be what they are today. Accordingly, the fact that Modern English *-ly* is the result of a regular grammaticalization process whereby a Proto-Germanic noun **likom* ‘body, form’ developed via Old English *līc* from a noun into an affix is of central interest to the present study.

The sentence in (3) raises yet another question: at which point can we say that grammaticalization has been concluded? Can we really say that (2) and (3) are suggestive of a completed process of grammaticalization, or do they merely represent contextually induced interpretations that are irrelevant for the grammatical structures of the languages concerned? A number of tests have been proposed in grammaticalization studies to deal with this question; frequently, however, the information available on a given language is not sufficient to allow for a successful application of these tests. In such cases we decided to adopt the solution proposed by the author(s) dealing with that language.

In some cases we rely on comparative findings to determine whether a grammaticalization process has been concluded. For example, one of our entries has the form ONE > INDEFINITE, according to which the cardinal numeral for ‘one’ may grammaticalize to indefinite articles. Now, it has been argued for languages like French (*un(e)*) or German (*ein(e)*), for example, that the two, numeral and indefinite article, are the same, their difference being due to contextual or other factors; that is, that the relevant entry is not an instance of grammaticalization. That the two meanings are in fact different is suggested by comparative observations. Thus, there are languages where a given linguistic item serves as an indefinite marker but not as a numeral, and, conversely, there are many languages where a given item denotes the numeral ‘one’ but not indefinite reference. We take such observations as evidence that ONE and INDEFINITE are in fact different concepts, even if in some languages the same or a similar word is used for both.

Another problem concerns the directionality of grammaticalization and how to achieve historical reconstruction. How do we know that INDEFINITE is historically derived from ONE rather than the other way around? In this case, there is diachronic evidence to give an answer: in some languages, including a number of European ones, there is a marker that is used for both the numeral ‘one’ and the indefinite article, and by using historical records it is possible to establish that at some earlier stage in the development of these languages the item only served as the numeral expression before its use was extended to also designate indefinite reference. Now, since grammaticalization is essentially unidirectional, we are led to assume that in languages where no historical records are available the evolution was the same.

Even in the absence of historical documents it is possible to reconstruct directionality of change by using the mechanisms sketched in the preceding section. For example, decategorialization has the effect that the element concerned loses morphosyntactic properties characteristic of its less grammaticalized (e.g. lexical) source, such as the ability to take modifiers or inflections, and it shifts from a form class having many members (e.g. an open class) to one having only few members (a closed class). Erosion again means that that element tends to become shorter and/or phonetically less complex, to lose the ability to receive distinct stress or tone, and so on. Thus, if we find two different

uses of a given element, or two etymologically related elements, where one shows the effects of decategorialization and erosion whereas the other does not, then we can argue that the latter is less grammaticalized and reconstruct a directionality from the latter to the former, rather than the other way around. Even if we had no previous knowledge of the history of English we could nonetheless establish that the indefinite article *a(n)* is a later development of the numeral *one*, rather than the reverse, since the article exhibits a number of effects of decategorialization and erosion while the numeral does not. In this text we use this kind of evidence for reconstruction in addition to any kind of historical evidence that may be available.

Grammaticalization does not occur in a vacuum, and other forces also shape the evolution of grammatical forms, language contact being one. The rise of a new grammatical expression may be the result of grammaticalization, but it may also be due to the influence of another language or, quite commonly, both. The question of whether, or to what extent, a given development is from language-internal as opposed to language-external factors can frequently not be answered satisfactorily. Recent studies suggest that both are often simultaneously involved; we will return to this issue in Section 1.3.

These observations led us to the question of whether any restriction in the kind of linguistic transmission should be imposed when selecting the data for this volume. For example, should instances of grammaticalization that clearly occurred due to borrowing or, more precisely, to grammatical replication, be excluded (see Heine and Kuteva 2005)? A perhaps related issue concerns pidgins and creoles, which are a gold mine for students of grammaticalization, and throughout the 1990s a wealth of publications appeared demonstrating the relevance of grammaticalization to the study of these languages (see especially Baker and Syea 1996). With the rise of pidgins and creoles, the question again arises as to whether we are dealing with “natural” forms of transmission and, if yes, whether grammaticalization processes behave the same way, whether they have taken place, for example, between earlier and later forms of British English or between British English and Krio CE or Tok Pisin PE. The policy adopted here is to take all these kinds of data into account, at least as far as they are in accordance with principles of grammaticalization observed in “natural” language transmission. More recent research suggests that grammaticalization in pidgins and creoles does not behave essentially differently from that found in other languages (see, for example, Heine 2005 on reflexive forms). The reader is in a position to identify instances of borrowing or pidginization, or creolization, on the basis of the exemplification provided in this book (see also Section 1.3).⁶

⁶ Pidgin (P) and creole (C) examples are marked by adding abbreviated labels after the language name. For example, “CE” stands for “English-based creole” (see Abbreviations). Note that the classification underlying this usage is a crude one since terms like “English-based”, “Portuguese-based”, etc. are not unproblematic, and the boundary between pidgins and creole languages is notoriously fuzzy.

The terminology used to refer to grammatical categories differs from one author to another and from one language to another. Although we have tried to standardize terms, in many cases this turned out to be impossible because of insufficient information. It is therefore to be expected that, in accordance with the conventions adopted by the relevant authors, one and the same grammatical function may be referred to by entirely different labels, both within a given language and across languages.

The quality of the data provided in this work crucially depends on the kind of information contained in the published sources that we were able to consult. Frequently it turned out that the information was not satisfactory. For example, when dealing with a verb as the source for a certain grammatical category, it is not enough to consider the lexical semantics of that verb; which kind of grammaticalization it undergoes may depend entirely on its valency. In Southern Sotho, a Bantu language of Lesotho and South Africa, we find, among others, instances of grammaticalization like those presented in (4).

(4) ***Southern Sotho (Bantu, Niger-Congo; Doke and Mofokeng [1957] 1985)***

Verbal source	Grammatical form
-ea 'go (to)'	-ea- immediate future tense
-tla 'come (to)'	-tla- future tense
-tsoa 'come from'	-tsoa- immediate past tense

These examples suggest that in such cases it is not the deictic semantics of 'come' or 'go' that can be held responsible for the particular functions the resulting grammatical categories assume; rather, *it is the context in which they occur and the construction to which they belong* that determine their path of grammaticalization. If the verb takes an allative/goal complement, as in the case of Southern Sotho -ea and -tla, then the resulting function is future; if the verb takes an ablative/source complement, as in the case of -tsoa, then the result is a perfect or near past category (see Bybee, Pagliuca, and Perkins 1991). Unfortunately, most published sources that we were able to consult do not provide information of this kind. Due to such factors, our documentation must remain fragmentary in many cases.

This book is based on hypotheses on diachronic development. In a number of cases, these hypotheses have been adopted from the sources cited, but in others they were not contained in the relevant sources. For example, if in a given grammar the author states that the adverb 'behind' is "homophonous" with or "resembles" the noun 'back', or "may be historically related" to the noun 'back', then the hypothesis proposed here on the basis of a larger corpus of crosslinguistic data and typological generalizations is that we are dealing with an instance of the grammaticalization of a body part noun to a locative adverb. The reader is therefore reminded that a given author whose work is cited as

evidence for some reconstruction is not necessarily to be held responsible for the relevant reconstruction, such responsibility being entirely ours.

Instances of conceptual shift are illustrated with examples from different languages whenever appropriate data were available. In a number of cases, however, such data could not be found, and we had to rely on hypotheses put forward by other authors. In such cases, the reader is referred to the bibliographical references at the end of the book for further information.

An issue that is sometimes raised in recent studies of grammaticalization concerns the question about different degrees of grammaticalization, and the distinction primary versus secondary grammaticalization, which is closely related to it. In other words, changes from lexical to grammatical have been regarded as primary grammaticalization, whereas changes from grammatical to more grammatical have been regarded as secondary grammaticalization. Here we agree with Elizabeth Traugott (p.c.) that the notion of secondary grammaticalization lacks explanatory power and is highly problematic, all the more so that both lexical-to-grammatical and grammatical-to-(even more)-grammatical changes can be captured within a general definition of grammaticalization (see also Breban 2008; 2014). On this issue the reader is referred to Heine et al. (1991a: 156–61).

Another problem we were constantly confronted with was the following: how many examples should be adduced to illustrate a given instance of grammaticalization? There was no problem in cases where only a handful or even fewer examples were found for a certain path of grammaticalization. But for the many cases where the number of possible examples turned out to be exceedingly high, we adopted the policy of reducing exemplification to cases that illustrate both the genetic and areal distribution and the contextual diversity associated with the relevant grammaticalization process. Accordingly, the examples presented here do not necessarily reflect the entire mass of evidence that we were able to assemble. Nevertheless, in the vast majority of cases the amount of exemplification presented immediately correlates with the present state of our knowledge; that is, a grammaticalization process that is amply documented tends to receive a more extensive treatment than one where only a handful of examples have been found so far.

We noted earlier that in recent years quite a number of studies report on new processes of grammaticalization. However, the data presented in this volume constitute but a fraction of all instances of presumed or actual grammaticalization that we were confronted with. Time and again, readers of the first edition of this lexicon pointed out to us that they had found pathways of grammaticalization in the language(s) they were concerned with that were missing in the lexicon. Some of these suggestions were highly welcome and helped us fill existing gaps. In other cases we had to ignore such suggestions because the pathways proposed could not be considered, for the following reason.

Grammaticalization, as understood here, is the result of cognitive-communicative processes that are to some extent similar across languages, and the goal of the present lexicon is to contribute to the reconstruction of these processes *across* languages. Accordingly, we had to ignore grammatical changes for which so far no sufficient evidence could be found to identify them as reflecting some crosslinguistically regular pattern.

The following example may illustrate this procedure. As amply demonstrated in this book, morphological expressions for tense and aspect can be traced back to verbal as well as a number of additional sources, but not to nouns. Nevertheless, there is at least some evidence to show that in appropriate contexts even nouns can give rise to markers of verbal aspect. For example, in two Oceanic languages, namely Tahitian and Marquesan, the nominal *mea* ‘thing’ has grammaticalized via its attributive use into a stative aspect marker (Vernaudon 2011; Moyse-Faurie 2018: 301). Our reason for not including cases like this in the lexicon is that we have so far not been able to establish that they are or could be part of a more general cognitive-communicative process beyond the few languages concerned.

Thus, there were reasons for reducing the vast amount of reported processes. First, to strengthen the hypothesis that we are really dealing with crosslinguistic regularities of grammatical evolution, we were aiming at cases where examples from more than one language family are available, even if in the end we decided to also include a number of less widespread instances of grammaticalization whenever there were specific alternative reasons to do so. Second, we eliminated those cases where we were not convinced that the data allowed for fairly reliable reconstruction work. Not all of the processes that have been proposed in the course of the past decades are substantiated by appropriate empirical evidence. In fact, deciding on whether there is “appropriate empirical evidence” turned out to be one of the major problems we faced when working on this volume.

The approach used here is strictly comparative, and we will be concerned with a large number of languages and grammatical evolutions. This means that the specialist of a given language figuring in the book may be disappointed because many phenomena that would be relevant for understanding the constructional background and/or the contextual discourse environment of a given pathway of grammaticalization had to be ignored. But we hope that the bibliographical references provided will assist the reader in finding more comprehensive information on issues that could not be discussed in the book.

Finally, we were also faced with a problem that most lexicographers are confronted with: the closer one gets to completing a lexicon the more one tends to realize that one is dealing with an open-ended project and that one is still far from having exhausted the subject matter. But this problem is perhaps even more serious here than in conventional works on lexicography since

grammaticalization is a young and rapidly expanding field of research. The reader should therefore be aware that what is covered in this book represents merely the tip of the iceberg of what future generations of researchers might discover on this phenomenon.

1.3 New Developments

Since the first edition of this lexicon appeared in 2002, studies in grammaticalization have made considerable headway. In the present section, some of the directions that appear to be particularly relevant to this field are pointed out.

Construction Grammar

New grammatical forms do not arise in isolation; rather, they need appropriate contexts and constructions to evolve, and among the theoretical directions that have more recently informed work on grammaticalization, Construction Grammar in its various applications is arguably the most important. Obviously, this applies first of all to diachronic studies carried out in this framework, that is, studies concerned with constructional change (Hilpert 2013) or constructionalization (Traugott and Trousdale 2010; 2013; 2014; Trousdale 2008a; 2008b; 2013b).

In Construction Grammar, language is analysed as an inventory of combinations of form and meaning, that is, of “constructions”. This inventory consists of symbolic units of all sizes, from clauses down to the equivalents of traditional morphemes. Since its rise in the 1990s (Goldberg 1995; 2006; see also Croft 2001; Croft and Cruse 2004), Construction Grammar has been linked to grammaticalization studies, involving substantial cross-fertilization. Some students of grammaticalization contributed to Construction Grammar and, conversely, concepts of Construction Grammar were employed to reconstruct grammatical evolution (see below). For example, insights into constructional collocations provide a rich tool for describing processes of grammaticalization (e.g. Hilpert 2008; 2013; 2015; Torres Cacoullós and Walker 2011; Traugott and Trousdale 2014).

While there is substantial overlap between grammaticalization and constructional change, the two must be kept apart at the present stage of research, especially for the following reasons. First, constructions are essentially blind to the directionality characteristic of grammaticalization: The development of constructions, by contrast, may but need not result in new grammaticalized categories, it may also lead from more grammatical to less grammatical forms (e.g. Trousdale and Norde 2013). In work on grammaticalization, by contrast, unidirectionality is the most central theoretical concept.

Second, while the distinction between lexical and grammatical, and between less and more grammatical categories is definitional for grammaticalization (see above), such a distinction is not central or is even denied in common versions of Construction Grammar. Thus Noël (2007: 185) observes that “grammaticalization, as a change from lexical to grammatical, is not an issue in CG [Construction Grammar]: construction grammatical units can by definition not become more grammatical.”

And third, the study of constructions is by and large a matter of language-specific history. Grammaticalization in the sense as it is understood in this book, by contrast, is primarily concerned with typological generalizations across languages (see Heine and Kuteva 2002a; 2007). For example, English, Romanian, Bulgarian, Chinese, Swahili, and many other languages have undergone typologically the same grammaticalization process from lexical verb ‘want, wish’ to a future tense category. Nevertheless, the constructional history was, to the best of our knowledge, not the same in these languages. In some of them, like English, it involved a morphosyntactic schema [‘want’ + nonfinite (main) verb], in other languages, like Bulgarian, it involved a schema [‘want’ + complement clause], and in still other languages it involved neither but, rather, a serial verb construction.

What all the languages in this example appear to have in common is neither their constructional history nor their present constructional form of form–meaning pairings serving mainly or exclusively the expression of future tense.⁷ What they do have in common, rather, is, first, the fact that the modern future tense markers are etymologically related in some way or other to an earlier lexical verb for ‘want, wish’ and, second, that the development from the latter to the former was unidirectional in all languages concerned. It would seem that such a powerful crosslinguistic and diachronic generalization is not within the scope of any theory of Construction Grammar that presently exists, but it is the central concern of the present lexicon.

To be sure, instances of grammaticalization can be identified and analysed exclusively within a given language, and this has in fact become a major concern for students of grammaticalization.⁸ In the present study, however, the focus will be on the evolution of processes that have or allow for a typological perspective for understanding cognitive-communicative behaviour across different cultures.

Nevertheless, attempts to reconcile Construction Grammar and grammaticalization have recently increased. Such reconciliation would be possible if the definition of grammaticalization were adjusted to accommodate constructions

⁷ As noted above, the term “construction” is, except when directly referring to the model of Construction Grammar, used here in a loose sense for recurrent form–meaning pairings consisting of more than one morphological unit.

⁸ We are grateful to Elizabeth Traugott (p.c.) for having drawn our attention to this fact.

(e.g. Bybee 2003b; Himmelmann 2004), and if Construction Grammar were to allow for counterparts that are central to grammaticalization, such as the distinction between lexical and grammatical, or between less and more grammatical categories. The latter might be possible if a shift from lexical to grammatical to more grammatical were re-cast as a shift from more substantive to more schematic constructions (cf. Gisborne and Patten 2011: 100). But so far, the notions of “schematicity” as they are used in the two frameworks are hard to reconcile with one another; a highly schematic construction such as that of a transitive clause bears only remote resemblance to the schematic function, e.g. of a future tense category.

To conclude, there are some fundamental theoretical problems that so far cannot be considered to be resolved. Nevertheless, the intersection between Construction Grammar and grammaticalization has opened up a new and rapidly expanding field of study. And much the same applies to variation theory (see Poplack 2011 for an overview). Like Construction Grammar, it is able to deal with problems that are outside the focus of grammaticalization, yet are relevant for a more comprehensive understanding of how and why grammaticalization takes place.

Pragmaticalization

The question of how grammaticalization relates to alternative perspectives of linguistic analysis relates also to that of the limits of grammaticalization, and of grammaticalization studies. One concern in earlier work on grammaticalization was with how to delimit this field of research – a question that surfaced in numerous discussions on degrammaticalization (see Norde 2009 for an overview) and was also the subject of books such as Giacalone Ramat and Hopper (1998) and Bisang et al. (2004). What characterizes some more recent studies in grammaticalization is that the term was extended to the effect that virtually anything that happens in the history of grammar is subsumed under the term, making the term largely equivalent to “grammatical change”. Lindström Tiedemann (2006) therefore proposes the term “supergrammaticalization” to also include phenomena other than the ones traditionally associated with grammaticalization, such as word order restrictions, intonation marking, adapted sound change and adapted morphemes, within a wider understanding of grammaticalization.

The problem of delimiting has also received some attention in research on discourse markers, such as English *anyway*, *indeed*, *in fact*, *I mean*, *no*, *so*, *then*, *well*, *what else*, *you know*, etc. Also known as discourse particles, pragmatic markers, discourse connectives, etc., discourse markers are obviously diachronically derived from adverbs, conjunctions, reduced clauses, phrases, etc. Thus, we know that the discourse marker *well* in (6) developed historically from the adverb *well*, as illustrated in (5).

- (5) I can't hear you well.
- (6) Well, I can't hear you.

Developments such as the one from the adverb *well* in (5) to discourse marker as in (6) were claimed to be due mainly to grammaticalization (e.g. Traugott 1995; Auer 1996; Nakayama and Ichihashi-Nakayama 1997; Barth-Weingarten and Couper-Kuhlen 2002; Traugott and Dasher 2002; Günthner and Mutz 2004; Auer and Günthner 2005; Brinton and Traugott 2005; Brinton 2008a; van Bogaert 2011; Diewald 2011a; 2011b). But there is also another opinion on this issue: discourse markers are elusive to some parameters commonly used to define grammaticalization processes. This observation has induced a number of researchers to argue that discourse markers do not arise via grammaticalization but rather via a process called *pragmaticalization* (Erman and Kotsinas 1993; Aijmer 1997; Günthner 1999; Dostie 2004; Frank-Job 2006; Ocampo 2006; Norde 2009: 21–23; Arroyo 2011; Beijering 2012: 56–9, and others).

As the work on pragmaticalization shows, the development of discourse markers has been, and continues to be, a challenge to grammaticalization. An alternative account to pragmaticalization is proposed by Heine (2013), based on the framework of Discourse Grammar (Kaltenböck et al. 2011; Heine et al. 2013). On this view, rather than grammaticalization it is an operation called *cooptation* that is responsible for the rise of discourse markers. Cooptation has the effect that an information unit such as a clause, a phrase, or a word is taken out of the domain of sentence grammar and deployed for purposes of discourse organization. Being taken out of sentence grammar means that that unit is now semantically, syntactically, and prosodically independent. And being no longer part of the semantic, syntactic, and prosodic structure of the sentence, the unit will now serve the organization of the text and other discourse functions. However, once the unit has been coopted and is used recurrently for metatextual purposes, grammaticalization will take over and the unit may grammaticalize in much the same way as other linguistic material (Heine 2013).

The history of discourse markers thus appears to be more complex than was hitherto assumed, involving a sequence of cooptation followed by grammaticalization. This means, first, that grammaticalization cannot be held responsible for everything that happens in grammatical change. Second, it means that grammaticalization also applies to the study of discourse markers and other discourse material, even though in a more restricted form. And finally, it means that the term “pragmaticalization” can be dispensed with unless understood as referring to the combination of cooptation and grammaticalization (see, e.g., the entries *NOW*, *THEN*, *WELL*, and *WHAT* in the lexicon below).

Language Contact

An area that has always vexed students of grammaticalization is that of language contact: is the behaviour of speakers exposed to language contact different from that of other speakers? Do grammaticalization processes as we know them take place in such situations as well and, if yes, are these processes any different from those not involving contact? Furthermore, how does grammaticalization relate to languages that owe their existence to language contact, such as pidgin languages and creoles (see Section 1.2 above)?

Grammaticalization is widely held to be a language-internal process whereby speakers use the lexical and other linguistic resources available in their language to build new grammatical use patterns and categories. More recent research suggests, however, that language contact can play an important role in this process, be that as a propelling or an accelerating force, or even both (Bruyn 1996; 2009; Kuteva 1998a; 2000; Heine and Kuteva 2003; 2005; 2006). As this work suggests, contact-induced grammaticalization does not differ dramatically from other kinds of grammaticalization. Rather than the borrowing of already grammaticalized linguistic forms, this process involves most commonly *grammatical replication* whereby speakers use some structure and meaning of the replica language (R) and grammaticalize it on the model provided in language contact by another language, that is, the model language (M), thereby aiming at establishing translational equivalence with a corresponding structure in M. Note that R may be either the first or the second language of the speakers concerned, and the same applies to M (Heine and Kuteva 2005). This work has shown, on the one hand, that processes of grammaticalization do not appear to be constrained by the distinction internal versus external language change. On the other hand, this work has also demonstrated that there are constraints on what are likely and what are unlikely processes of change in language contact (Heine 2008a): As the findings presented in the course of the last decades suggest, studies in grammaticalization can contribute to a better understanding of how people behave in situations of language contact.

Sign Language Research

Another significant development concerns linguistic discourse and diachronic change as it has been observed in languages in the visual-gestural modality, that is, sign languages. Due to the fact that sign languages have no written form, historical sources are scarce, and the oldest available sources (for American Sign Language, ASL) are only approximately 100 years old. Therefore, available studies commonly rely on internal reconstruction, as well as on insights about grammaticalization paths that have been identified based on the study of typologically diverse spoken languages. Despite this limitation, research

findings made for sign languages have provided some seminal insights into the nature of grammaticalization (see especially Janzen 1999; Janzen and Shaffer 2002; Pfau and Steinbach 2006; 2011).

Findings from various sign languages clearly indicate that grammaticalization is not restricted to speech and writing but can also be observed in the visual-gestural modality. The available evidence suggests that in sign languages, just as in spoken languages, grammaticalization is essentially unidirectional and includes developments from lexical to grammatical material. Interestingly, the pathways that have been identified overlap, for the most part, with those identified for spoken languages; for instance, noun to pronoun, noun/verb to conjunction, and adjective to intensifier. Selected examples from sign languages will be included in Part 3 (Source–Target Lexicon).

Yet, at the same time, there are also modality-specific pathways, which provide a wider perspective on the nature of grammaticalization. Most important in this respect is the observation that sign languages allow for the grammaticalization of manual and non-manual co-speech gestures (Van Loon et al. 2014). Wilcox (2007) identifies two possible scenarios: (i) the gesture is first lexicalized and turns into a grammatical element in a second step (e.g. gesture > adjective *STRONG* > modal *CAN* in ASL); (ii) the gesture undergoes grammaticalization directly, without an intermediate lexical stage. As for the latter scenario, Pfau and Steinbach (2011: 688) suggest the following pathway of changes, the source of which is a deictic pointing gesture (index finger extended). Once the gesture has entered the lexicon as a locative, the door is open for further grammaticalization along a path that is well known from the study of spoken languages.

Pointing gesture > Locative > Demonstrative pronoun > Personal pronoun > Agreement marker

An example of a non-manual gesture that has taken on a grammatical function in sign languages is the negative headshake (Pfau 2017).

The findings from sign language studies thus suggest that grammaticalization is in principle modality-independent. The implications that this observation has for grammaticalization as a cognitive-communicative process are still unclear and in need of much further research.

1.4 Conventions

For a better understanding of the Source–Target Lexicon, the following conventions should be borne in mind:

- (a) The lexicon is based on the reconstruction of grammaticalization processes. The formula “X > Y”, used throughout the lexicon, means that “X” represents a less and “Y” a more strongly grammaticalized expression. The symbol “>” stands for a hypothesis on the direction of diachronic

development. Wherever possible, this hypothesis is based on evidence from historical documents, such as earlier text data. For more than 90 per cent of the world's languages, however, such text data are not available and we had to rely on synchronically available data, using internal reconstruction, the comparative method, and typological generalizations on grammatical change as methodological tools.

- (b) Entries contain two kinds of information. The first consists of data from different languages, especially from languages that, to our knowledge, are genetically “unrelated”. The second concerns our analysis of this information, that is, our classification and diachronic interpretation of these data. To distinguish these two, all information relating to the latter is printed in small capital letters. Items printed in small capitals each stand for a cluster of closely related meanings (or functions) that we assume to be suggestive of a crossculturally relatively stable concept. The term “concept” is used as a pre-theoretical notion; no claim is made, for example, that the concepts presented are semantic primitives of any kind or that the label used to refer to a particular concept is suggestive of a prototypical manifestation of that concept.
- (c) For a number of the grammatical concepts distinguished there do not appear to exist generally agreed upon technical terms. In such cases we decided to take English meaning labels that are assumed to express the relevant concept and its equivalents in other languages, being aware that this is far from being a satisfactory convention.
- (d) To save space, the concept labels are kept as short as possible. Thus, instead of writing “ablative case marker”, or “ablative gram”, we simply use the label “ABLATIVE”. Nevertheless, we did not always succeed in proposing short concept labels, as can be seen in the use of somewhat clumsy labels such as PERS-PRON, THIRD PLURAL (which stands for ‘third person plural pronoun’).
- (e) Details on the cluster of meanings subsumed under the relevant concept label are provided in parentheses whenever this was felt to be desirable; this parenthetical information is maximally of three kinds. First, for possible disambiguation it may contain the concept that taxonomically includes the one preceding the parentheses. For example, the concept HEAD has the gloss ‘body part’ following it in parentheses, or ONE has ‘numeral’ added in parentheses. Such parenthetical information is presented in the index of grammatical concepts in Part 2. Whenever concepts are involved that do not figure in this index – that is, when lexical concepts are involved – this information is added in the main text (e.g. HEAD (body part)). Second, typical glosses that one might expect to figure in English expressions for the given concept are provided. Third, wherever necessary, these glosses are followed by further descriptive details on the relevant concept.

- (f) At the end of an entry, there may be more general comments relating to the nature of the grammaticalization process in question.
- (g) In the course of our work we were confronted with a number of orthographical issues and problems. As far as this was feasible, we rendered linguistic data in their original form, typically in the standard form used for the language (at least as far as the standard form is based on the Roman script). For example, as one might expect, we are using the tilde to mark nasalized vowels (or consonants). There are, however, regional conventions that we also had to take into account. In Nama (of the Khoisan family), nasalized vowels are not marked by a tilde but rather by a circumflex; in the standard orthography of Kikuyu and Kamba there is again a tilde, but it does not mark nasalization but rather open vowels. Data sources for Korean used different transliteration systems, e.g. McCune-Reischauer Romanization, Ministry of Education Romanization, and Yale Romanization. For consistency, Yale Romanization is used in this lexicon.
- (h) Wherever possible we present examples with interlinear glosses. Those printed in parentheses stand for glosses and translations that are not in the original examples; for these we take full responsibility. In some cases there were no glosses in the original nor were we able to find appropriate glosses ourselves. We nonetheless decided to include such examples, hoping that the reader interested in more details will consult the bibliographical references cited.
- (i) Another dilemma that we were constantly confronted with was that, on the one hand, we aimed at unifying the data on which this work relies as much as possible. On the other hand, we also aimed at representing the intentions of the relevant authors as closely as possible, honouring their respective terminologies and other conventions. This means, for example, that some language data presented are cited under the label 'Chinese', while others are cited under 'Modern Chinese', 'Mandarin', or 'Mandarin Chinese', even if these labels may refer largely to one and the same linguistic entity.
- (j) Our goal is to illustrate all examples with text material, where one text piece, marked by (a), would present the source use and a second text piece, marked by (b), the target use of the item. In most cases, however, no appropriate text material was available, or we decided to dispense with presenting text material in order to save space. We hope that such inconsistency, which is inherent in comparative projects such as this one, is not an obstacle to the use of this work.
- (k) Sources are duly acknowledged in parentheses after the data presented. But for reason of space, the sources have to be restricted to what we consider to be the main contributing author or authors. We apologize to other authors who may also have contributed information.

2 Grammatical Concepts Used in This Work

The following list is a classification of the grammatical concepts (or functions) figuring in this work, where the term concept is used in a pre-theoretical sense. Since we will be dealing with concepts, terms such as `ABLATIVE` or `COMPLEMENTIZER` stand for semantic-functional, rather than morphological or syntactic, categories. Notice that with notions such as `COMPLEMENTIZER` there exists terminological confusion in the literature since `SUBORDINATORS` and `SUBORDINATING CONJUNCTIONS` have also been referred to as `COMPLEMENTIZERS`. In such cases we have tried to follow the classification offered by the authors of the primary sources. The term “grammatical concept” is used here in a loose sense; no attempt is made to trace a boundary between “grammatical concepts” and non-grammatical or “lexical concepts”. If one finds concepts such as `ONLY` or `TOGETHER`, for example, which one might not be inclined to treat as grammatical concepts, then we simply wish to say that these items exhibit more grammatical properties, or fewer lexical properties, than the concepts from which they are historically derived. Such properties relate in particular to the productivity, applicability to various contexts, and syntactic and paradigmatic status of the items. For example, grammatical forms are closed-class items, and whenever we found that a given concept is regularly derived from some closed-class item we decided to consider it a candidate for inclusion. Both `ONLY` and `TOGETHER` have the numeral `ONE` as one of their historical sources (see Chapter 3, `ONE > ONLY`, `ONE > TOGETHER`), and although numerals have a fairly large membership in some languages, they normally can be described as closed-class paradigms; hence we decided to tentatively include items such as these two in our treatment.

Furthermore, the characterizations and taxonomic labels that we propose are not intended to be definitions of the concepts; rather, they are meant to assist the reader in narrowing down the range of meanings that a given grammatical marker may convey (see, e.g., Bybee et al. 1994; Dixon 2010a; 2010b for more details); in a number of cases, such characterizations consist of nothing but English translational equivalents – a procedure that certainly is far from satisfactory.

In addition to the concept label, the reader will find additional labels in parentheses referring to taxonomically superordinate, more inclusive categories. Since a given concept may belong to more than one more inclusive category, more than one term may appear in parentheses. For example, the entry *ACROSS* (*SPATIAL*, *CASE*) stands for a concept *ACROSS*, which belongs to the concepts used for introducing nominal participants (*CASE*); at the same time, it is also part of the more inclusive category of *SPATIAL* concepts. Rather than reflecting a taxonomy of grammatical concepts, this parenthetical information is simply meant to provide more information on the uses of the primary concept. Yet there will be cases where the reader may be puzzled as to the exact meaning of a given concept label; in such cases, we refer to the language data presented in the Source–Target Lexicon (Chapter 3), where more information on the use of these labels can be found.

Two grammatical domains, namely possession and modality, turned out to be particularly complex and needed to be subclassified into different grammatical concepts. To this end, we are using prefixes for distinguishing terminologically between the concepts concerned, where the stem stands for a conceptual domain and the prefix for the specific grammatical function (in the alphabetic arrangements to be presented these prefixes are ignored). In the domain of possession, the prefixes are A- for attributive possession, B- for ‘belong’-possession, and H- for ‘have’-possession.

In the domain of modality, two subdomains are distinguished, which are possibility and necessity, and the prefixes are used to distinguish concepts within each of the subdomains, namely B- for boulomaic, C- for circumstantial, D- for deontic, E- for epistemic, and PI- for participant-internal modality (see Narrog 2012a: 288–9 for terminological equivalences in the domain of modality; Narrog 2017c). Accordingly, there are the following correspondences:

Present terminology	Terminology in Heine and Kuteva (2002a)
B-NECESSITY	Intention
D-NECESSITY	Obligation
E-NECESSITY	Probability
C-POSSIBILITY	Root possibility
D-POSSIBILITY	Permission
E-POSSIBILITY	Possibility
PI-POSSIBILITY	Ability

Note that this terminology differs from that employed in the first edition of the Lexicon in that it takes into account distinctions that were ignored in that edition (see especially Bybee et al. 1994; Auwera and Plungian 1998; Narrog 2009a; 2012a).

Many of the terms presented are used by other authors to refer to somewhat different, or even to entirely different concepts. Wherever we found such contrasting uses we point them out in footnotes. It is unlikely, however, that we are aware of all the terminological conventions that exist, and we apologize to the reader for any inconvenience that may result from our terminological choices.

Concept label	Approximate gloss and descriptive notes
Ability	<i>see</i> PI-POSSIBILITY
ABLATIVE (SPATIAL, CASE)	'(away) from'; also 'from above/below/inside'; marker introducing a spatial source participant; direction from, source
ABLATIVE (TEMPORAL, CASE)	'from', 'since'; marker introducing a temporal (source) participant
ACCORD (CASE, CONJUNCTION)	'according to'; marker introducing a nominal or clausal participant, accord clauses
ADDITIVE	'plus', 'and'; marker introducing a quantifying participant
ADVERSATIVE (CONNECTIVE)	'but', 'however', 'nevertheless'; marker introducing an adversative participant
AFTER (TEMPORAL)	'later than', 'after'; marker introducing a temporal participant
AGAIN	'again', 'once more'; repetitive marker
AGENT (CASE)	e.g. 'by'; marker for a participant that instigates or performs the action described by the main verb
AGREEMENT	marker of grammatical agreement, i.e. of the person, number, gender, or class, typically on the verb
ALLATIVE (SPATIAL)	'to'; marker introducing an allative/directional participant; direction toward
ALREADY	'already'; focus particle or marker
ALSO	'also', 'too', 'as well'; marker modifying nouns and other categories
NP-AND (CONNECTIVE)	'and'; noun phrase-conjoining marker
S-AND (CONNECTIVE)	'and'; clause-conjoining marker
ANDATIVE	'motion thither'; marker for a movement away from the speaker or deictic centre; itive, translocative. Cf. VENITIVE
ANTERIOR	<i>see</i> PERFECT
ANTIBENEFACTIVE	<i>see</i> MALEFACTIVE
ANTICAUSATIVE ¹	marker that typically reduces the valency of a verb by one participant, which as a rule is the agent
ANTIPASSIVE	marker that demotes the patient of a transitive verb, thereby reducing the valency of the verb, turning the agent into the only argument of the verb
APPLICATIVE	marker that increases the valency of a verb by one participant. Depending on the language concerned, the marker may express

¹ According to Haspelmath (1990: 33), an anticausative "denotes a spontaneous process without an implied agent, while the basic verb denotes a transitive action". Anticausative markers, which are not infrequently referred to as intransitivizing elements or intransitivizers, differ from passives in that no agent is implied.

	a range of functions such as ablative, benefactive, comitative, goal, locative, patient, and recipient. ²
AROUND (SPATIAL, CASE)	'round about', 'round and round'; marker introducing a locative participant
AUGMENTATIVE	marker denoting 'bigger, larger than normal'. Cf. DIMINUTIVE
AVERTIVE (ASPECT/TENSE/ MODALITY)	'almost, nearly'; marker for an action or event that was on the verge of taking place but did not take place. Cf. PROXIMATIVE
BEFORE (TEMPORAL, CASE)	'before', 'earlier'; marker introducing a temporal participant
BEHIND (SPATIAL)	'behind', 'back', 'in back of', 'after'; marker introducing a locative participant; "backterior"
BENEFACTIVE (CASE)	'for', 'for the benefit of'; marker introducing a participant indicating that the action of the main verb is for the benefit or on behalf of someone else. Cf. MALEFACTIVE
BESIDE (SPATIAL, CASE)	'beside', 'at the side of'; marker introducing a locative participant
CASE	marker used for introducing a nominal (or pronominal) participant
CAUSATIVE	'cause to be', 'cause to do'; a marker for an agent that brings about the action or state it describes
CAUSE (CASE, CONJUNCTION)	'because of', 'since', 'on account of', 'therefore'; marker introducing a participant of cause or reason
CERTAINTY (EPISTEMIC MODALITY)	'it is certain that'; marker used by the speaker to emphasize that the proposition is true
CESSATIVE (ASPECT)	indicates that an event stops but not necessarily that it is completed. Cf. COMPLETIVE
CHANGE-OF-STATE	'become', 'turn into'; inchoative, ingressive. Cf. RESULTATIVE
CLASSIFIER	classificatory particle; a general term referring to the specific system of formatives that consists of quantifiers, repeaters, and noun classifiers proper (see Senft 1996: 16)
COMITATIVE (CASE)	'(together) with'; marker introducing a comitative participant
COMMON (GENDER)	gender category that includes feminine and masculine, possibly also other concepts. Cf. NEUTER
COMPARATIVE (CASE)	'than'; marker of standard in comparative constructions of inequality. <i>See also</i> EQUATIVE COMPARATIVE, MORE
COMPLEMENTIZER	'that'; marker introducing complement clauses (conjunction)
COMPLETIVE (ASPECT)	indicates that something is done thoroughly and to completion. Cf. CESSATIVE
CONCERN (CASE, CONJUNCTION)	'about', 'concerning'; marker for a nominal or clausal participant that signals the topic or concern of what a predication is about
CONCESSIVE (CONJUNCTION)	'despite the fact that', 'even though'; marker introducing a concessive participant
CONDITIONAL (CONJUNCTION)	'if'; marker of conditional protasis
CONJUNCTION	e.g. 'and', 'or', 'but', etc.; marker used for conjoining phrases, clauses; phrase connective, clause connective, sentence connective
CONSECUTIVE (CONJUNCTION)	'and then', 'thereafter'; marker signalling a new event in narrative discourse. Cf. NEW-EVENT

² This characterization of APPLICATIVE is slightly more general than that proposed by Dixon (2010b: 423): "valency-increasing derivation which prototypically operates on an intransitive clause, putting underlying S argument into A function and introducing a new O argument".

Continuous (aspect)	<i>see</i> PROGRESSIVE, DURATIVE
COPULA ³	‘be’; predicate marker used in propositions of the type ‘x is (a) y’; identifying copula, classifying copula. <i>See also</i> EXIST; LOCATIVE COPULA
Dative	<i>see</i> RECIPIENT
DEFINITE	‘the’; definite article; nominal determiner
DEMONSTRATIVE	‘this/these’, ‘that/those’; nominal determiner
DEONTIC (MODALITY) ⁴	is concerned with necessity or possibility of acts performed by morally responsible agents; <i>see</i> OBLIGATION; PERMISSION
DIMINUTIVE	marker denoting ‘smaller than normal’, such as English <i>-let</i> in <i>piglet</i> , <i>booklet</i> . Cf. AUGMENTATIVE
DISCOURSE MARKER	e.g. <i>anyway</i> , <i>indeed</i> , <i>in fact</i> , <i>now</i> , etc. Typically short, syntactically unattached expressions serving mainly the organization of texts
DISTAL (SPATIAL)	‘far away’; deictic marker for spatial distance. Cf. PROXIMAL
DOWN (SPATIAL)	‘down’, ‘below’, ‘under’, ‘underneath’; marker used to introduce a locative participant
DUAL (NUMBER)	marker for a number unit consisting of no more and no less than two items
DURATIVE	‘keep doing’
EARLIER (TEMPORAL)	‘earlier’, ‘before’, ‘ago’; temporal marker
EGRESSIVE (ASPECT)	‘stop doing’; <i>see also</i> CESSATIVE
ELATIVE ⁵	‘too’, as in <i>too much</i> , <i>too big</i> , etc. Cf. SUPERLATIVE
EMPHATIC	marker expressing emphasis or contrast
emphatic reflexive	<i>see</i> INTENSIFIER
EPISTEMIC (MODALITY)	is concerned with the speaker’s knowledge and beliefs about the state of affairs expressed in the utterance; <i>see</i> CERTAINTY; POSSIBILITY; PROBABILITY
EQUATIVE COMPARATIVE	‘as ... as’; comparative marker of equality; comparison of equality
EQUATIVE COPULA	‘be’, as in <i>John is a teacher</i> ; predicate marker
ERGATIVE	marker introducing the agent argument of a transitive verb in ergative languages
EVEN	‘even’; scalar focus particle
EVIDENTIAL	marker providing information about the evidence on which a report is based; <i>see also</i> EVIDENTIAL, DIRECT, INFERRED, QUOTATIVE, REPORTED
EVIDENTIAL, DIRECT	marker providing information about the evidence on which a report rests, where the speaker is a direct witness of the situation. The evidence is frequently visual but it can also be based on hearing, smell, and occasionally on touch

³ With the term COPULA, we are referring to a range of different predicative notions, including identification, classification, specification, and characterization (see Hengeveld 1992). Excluded are existential copulas (see EXIST) and locative copulas (see LOCATIVE COPULA).

⁴ Deontic modality has also been called “agent-oriented modality” (see, e.g., Bybee et al. 1994) or “root modality” (Coates 1995).

⁵ Note that this term is used in quite a different sense in the literature on case marking, where it refers to the notion ‘out of’.

EVIDENTIAL, INFERRED	marker providing information about the evidence on which a report rests, based on information acquired through inductive or deductive inference
EVIDENTIAL, QUOTATIVE	marker providing information about the evidence on which a report rests based on speech reports with reference to the authorship of the quoted source
EVIDENTIAL, REPORTED	marker providing information about the evidence on which a report rests with no reference to the author of the report
EXCLAMATION	marker expressing the speaker's affective response to a situation, such as an exclamative utterance (<i>How awful!</i>)
EXCLUSIVE	'we excluding you'; a distinction made within (>) FIRST PERS-PRON, which excludes the hearer/addressee. Cf. INCLUSIVE
EXIST ⁶	'there is [X]', '[X] exists'
EXPERIENTIAL	markers dedicated to coding that an event has taken place at least once at some point in the past ('ever', 'at least once')
FEMALE	'female'; marker used as a nominal modifier to refer to female participants
FILLER	fillers, like English <i>uh</i> , <i>um</i> , also called interjective hesitators, planners, or filled pauses, are short information units that serve text planning functions, signalling, e.g., hesitation and/or delay
FIRST (NUMERAL)	'(the) first'; ordinal numeral
FIRST (PERS-PRON)	'I', 'we'; first person pronoun
FIRST (TEMPORAL)	'at first', 'to begin with'
FOCUS	marker used in sentences that focus on some participant, typically presenting that participant as new information
FREQUENTATIVE (ASPECT)	marker indicating that an event takes place frequently, i.e. neither once nor habitually
FRONT (SPATIAL, CASE)	'in front of', 'before'; marker introducing a locative participant; "fronterior"
FUTURE (TENSE)	'will', 'shall'; indicates that the speaker predicts an event to occur after the moment of speech
FUTURE, NEAR (TENSE)	indicates that the speaker predicts an event to occur very soon after the moment of speech; near future, immediate future
GLOTTONYM	derivational marker to derive a language name from the name of an area or the people speaking that language, e.g. German <i>-isch</i> in <i>Portugiesisch</i> 'Portuguese (language)', cf. <i>Portugiese</i> 'Portuguese (person)'
HABITUAL (ASPECT)	'do habitually'; marker for an event occurring habitually or usually, repeated on different occasions
HONORIFIC	marker of honorific reference
HORTATIVE	marker used by the speaker to encourage or incite someone to action
IAMITIVE	marker which combines meanings typical of words like 'already' with those of perfects ⁷

⁶ EXIST includes what Hengeveld (1992) refers to as existence and reality. EXIST markers are typically one-argument predicates (e.g. *There is coffee*); however, they can also have two participants (e.g. roughly, *There is coffee for you*), which differ drastically from one-participant markers in their grammaticalization behaviour.

⁷ Iamitives (from Latin *iam* 'already') are grams which overlap in their use with perfects but differ in that they can combine with stative predicates to express a state that holds at reference time; nevertheless, the boundary between the two is frequently unclear (Östen Dahl, p.c.). Iamitives

Immediate	<i>see</i> FUTURE, NEAR; PAST, NEAR
IMPERATIVE	modally marked form of the verb to express directives, commands, requests
IMPERFECTIVE (ASPECT)	marker used to indicate that an event is viewed as unbounded temporally. Cf. PERFECTIVE
IMPERSONAL	marker for an agent that is suppressed but still understood
Impersonal pronoun	<i>see</i> INDEFINITE PRONOUN
IN (SPATIAL)	'in', 'inside', 'within'; marker introducing a locative participant; interior
IN (TEMPORAL)	'in', 'within', 'during'; marker introducing a temporal participant
INCEPTIVE (ASPECT)	'start doing', 'begin doing'; inceptive, ingressive
Inchoative	<i>see</i> CHANGE-OF-STATE
INCLUSIVE	'we including you'; a distinction made within (>) FIRST PERSON, which includes the hearer/addressee; cf. EXCLUSIVE
INDEFINITE	'a, an'; indefinite article; nominal determiner
INDEFINITE PRONOUN	'something', 'someone', etc., including impersonal pronouns, like French <i>on</i> or German <i>man</i>
Ingressive	<i>see</i> CHANGE-OF-STATE
Instead	<i>see</i> REPLACIVE
INSTRUMENT (CASE)	'with', 'by means of'; marker used to present a participant as an instrument
INTENSIVE	'very', 'extremely'; intensive marker
INTENSIFIER	'-self', as in <i>The king himself</i> , <i>The king did it himself</i> ; frequently referred to as emphatic reflexive, identifier ⁸
Intention	<i>see</i> B-NECESSITY
INTERJECTION	<i>wow!</i> , <i>Boy!</i> , typically short emotive exclamation
Interrogative	<i>see</i> S-QUESTION, W-QUESTION
ITERATIVE (ASPECT)	'do repeatedly'; repetitive; marker indicating that an action is repeated
Itive	<i>see</i> ANDATIVE
LATE (TEMPORAL)	'be late (be delayed)'
LATER (TEMPORAL)	'then', 'thereafter', 'afterwards', 'later'
LEST	'lest', 'or else'. The term stands for a clause type as a semantically elaborate category (Kuteva 2009) which encodes an undesirable verb situation that is to be avoided. ⁹
Like	<i>see</i> SIMILATIVE
LOCATIVE	marker introducing a locative participant

differ from 'already' in having a higher text frequency and showing a strong tendency to be grammaticalized with natural development predicates (Dahl and Wälchli 2016).

⁸ For a discussion of intensifiers, frequently referred to as emphatic reflexives, see König and Siemund (2000).

⁹ The undesirable situation is generally portrayed as counterfactual, and the canonical 'lest' clause construction is in two parts: one depicting the negative situation, and another outlining the preemptive action (Evans 1995: 264). In less canonical extensions of this category, the preemptive action may be elided or simply implied by context, or the undesirable event may in fact be already taking place. We follow Austin (1981: 225–9) in using the term 'LEST' for a clause which has also been referred to as 'admonitive', 'adverse consequence clause', 'apprehensional', 'apprehensive', 'evitative', 'negative purpose clause', or 'precautioning' (see Dixon 1980; Evans 1995; Lichtenberk 1995; Epps 2008; Vuillermet 2018, among others).

LOCATIVE COPULA	'be at', 'be somewhere'; predicate marker used in propositions of the type 'X is (located) at Y'
LOGOPHORIC	marker used in indirect quotes referring to the person being quoted; designating a particular category of personal and/or possessive anaphoric pronouns which refer to the author of a discourse or to a participant whose thoughts are reported
MALE	'male'; marker used as a nominal modifier to refer to male participants
MALEFACTIVE (CASE)	'to the detriment of'; marker for a participant indicating that the action of the main verb is to the detriment of someone else; antibenefactive. Cf. <i>BENEFACTIVE</i>
MANNER (CASE, CONJUNCTION)	marker introducing a manner participant
MATERIAL (CASE)	'from', 'with'; marker for a participant typically indicating the material from which an object is made
MIDDLE ¹⁰	marker indicating that the patient of the action is implicated as contributing to the action in some way
MIRATIVE ¹¹	marker of surprise for the speaker's sudden awareness of a fact hitherto unknown, unappreciated or not considered relevant to the present
MORE	'more (than)'; marker denoting more of a quality or quantity than defined by some standard. <i>See also</i> <i>COMPARATIVE</i>
B-NECESSITY (INTENTION)	'to intend to' (boulomaic necessity)
D-NECESSITY (OBLIGATION)	'have to', 'should', 'must'; the agent is presented as being obliged to perform the action described in the proposition (deontic necessity)
E-NECESSITY (PROBABILITY)	'it is likely that'; with such markers, the speaker indicates that the situation described in the proposition is probably true (epistemic necessity)
NEGATION	'not', 'no'; marker of negation
NEGATION, EXIST	'there is not/no'
NEUTER (GENDER)	a gender category that is neither feminine nor masculine. Cf. <i>COMMON</i>
NEW-EVENT	marker expressing a function that can be paraphrased roughly as 'watch out, now something new is going to happen that is relevant to what follows' (Heine 2000a). Cf. <i>CONSECUTIVE</i>
NEXT	'the next', 'the following'
NO	'no'; interjection
NOMINALIZER	marker used to derive nouns from verbs, adjectives, and other categories; for example, English <i>-er</i> , <i>-ization</i>

¹⁰ Kemmer (1993: 238) observes, "The semantic middle is a coherent but relatively diffuse category that comprises a set of loosely linked semantic sub-domains centering roughly around the direct reflexive." It remains unclear whether we are really dealing with a distinct functional notion; we are including it tentatively on account of the discussion in Kemmer (1993).

¹¹ There is disagreement as to whether 'mirative' represents a distinct grammatical category. It would seem, however, that mirativity is distinguished as a functional concept in a number of languages, even if not commonly expressed by a dedicated grammatical marker (see, e.g., DeLancey 1997; Lazard 1999; Olbertz 2012; Rett and Murray 2013).

NO LONGER	'no longer'
NOT YET	'not yet'
NP-and	<i>see</i> AND
object marker	<i>see</i> PATIENT
obligation	<i>see</i> D-NECESSITY
ONE (NUMERAL)	'one'; cardinal numeral
ONLY	'alone', 'merely', 'just'
OPTATIVE	the proposition represents the speaker's will
OR (CONJUNCTION)	'or'; alternative marker, conjoining noun phrases or clauses
OSTENSIVE PREDICATOR	'Here is X!'; as French <i>voici</i> 'here' in <i>Me voici!</i> 'Here I am!'. Ostensive predicates (OSTs) identify a participant deictically with reference to a place (Creissels 2017b)
OTHER	'another', 'other'
OUT (SPATIAL)	'out', 'outside'
PARTITIVE	marker introducing a participant expressing the notion 'a part of' or 'partly affected'
PASSIVE	a marker indicating that the action is viewed from the perspective of the recipient or patient of the verb, while the agent is suppressed or demoted
PAST (TENSE)	indicates that an event occurs before the moment of speech
PAST, NEAR (TENSE)	an event that occurred immediately before the moment of speech; recent past, near past, immediate past
PATH (SPATIAL, CASE)	'through', 'via'; marker introducing a locative participant; path marker
PATIENT (CASE)	marker for a participant that is the undergoer of the action denoted by the verb; direct object
PERFECT ¹² (ASPECT)	marker indicating that a past event is relevant to the situation at reference time; anterior
PERFECTIVE (ASPECT)	marker used to indicate that an event is viewed as bounded temporally. Cf. IMPERFECTIVE
PERHAPS	dubitative marker, 'perhaps', 'maybe'; marker of epistemic modality
PERLATIVE (SPATIAL, CASE)	'across'; marker for a movement 'through', 'across', or 'along' the referent of the noun that is marked
Permission	<i>see</i> D-POSSIBILITY
PERS-PRON (PRONOUN)	personal pronoun, pronominal marker. <i>See also</i> FIRST; SECOND; THIRD
PLURAL (NUMBER)	plural marker, typically on nouns
A-POSSESSIVE	'of'; marker of attributive (nominal) possession; genitive case, associative, connective, nominal possessive marker
B-POSSESSIVE	'X belongs to Y', 'X is Y's'; predicative possession, marker of 'belong'-constructions
H-POSSESSIVE	'X has, owns Y'; predicative possession, marker of possessive 'have'-constructions
Possibility	<i>see</i> E-POSSIBILITY
C-POSSIBILITY (ROOT POSSIBILITY)	'can'; it is possible for the agent to carry out the action described by the proposition, due to circumstances external to the agent, e.g.

¹² Our term "perfect" corresponds to what Bybee et al. (1994) call the "anterior".

	<i>You can get that book in our bookstore</i> ; also known as circumstantial or situational possibility
D-POSSIBILITY (PERMISSION)	'be allowed to'; the agent is allowed to do the action expressed by the main verb (deontic possibility)
E-POSSIBILITY	'it is possible that'; marker expressing that the speaker indicates that the situation described in the proposition is possibly true (epistemic possibility). Cf. POTENTIAL
PI-POSSIBILITY (ABILITY)	'can, be able' (participant-internal possibility)
POTENTIAL	'be capable of'; marker expressing a potential change of state, that is, the possibility that that change will take place cannot be ruled out. Cf. C-POSSIBILITY, E-POSSIBILITY
PRESENT (TENSE)	marker whose main function it is to indicate that an event is occurring simultaneously with the moment of speech
Probability	see E-NECESSITY
PROGRESSIVE	'be doing'; marker for an event that is in progress at reference time
PROHIBITIVE	'don't do!'; negative imperative
PRONOUN	a marker standing for a noun or noun phrase
PRO-VERB	semantically empty predicate marker standing for other verbs in certain contexts; e.g. <i>do</i> as in <i>do jogging</i>
PROXIMAL (SPATIAL)	'nearby', 'close to'; deictic marker for spatial proximity. Cf. DISTAL
PROXIMATIVE (ASPECT) ¹³	'be about to', i.e. 'be on the verge of doing'. Cf. AVERTIVE
PURPOSE (CASE, CONJUNCTION)	'in order to', 'so that'; a marker introducing the purpose of an action
S-QUESTION	marker of polar (yes–no) questions
W-QUESTION	'who?', 'what?', etc.; marker of word questions
QUOTATIVE	a marker introducing direct speech
Reason	see CAUSE
RECIPIENT (CASE) ¹⁴	'to'; marker for a typically human goal or recipient; indirect object, dative
RECIPROCAL (PRONOUN)	'each other'; a marker indicating that participants act upon each other
REFLEXIVE (PRONOUN)	'self', as in <i>I saw myself in the mirror</i> ; the patient is the same referent as the agent (i.e. the two have identical reference)
RELATIVE (CONJUNCTION)	'who', 'which', 'that'; marker introducing relative clauses
Repetitive	see ITERATIVE
REPLACIVE	'instead of', 'rather than'; marker introducing a nominal or clausal participant other than the expected one
RESULTATIVE (ASPECT) ¹⁵	'having reached a new state'. Cf. CHANGE-OF-STATE
S-and	see AND
S-question	see QUESTION
SAME	'(the) same', 'identical'

¹³ Note that this term is also used in some other ways. For instance, proximatives have also been referred to as prospectives (Nevskaya 2005). For a detailed discussion of the terminological confusion regarding proximatives and prospectives, see Nevskaya (2017: 13–28). In this book the term PROXIMATIVE refers exclusively to an aspectual notion (see Heine 1994b).

¹⁴ The term RECIPIENT replaces the earlier term DATIVE in Heine and Kuteva (2002).

¹⁵ RESULTATIVE is also used in other senses; here we use it exclusively as a term for a verbal aspect. Conceivably, RESULTATIVE and (>) CHANGE-OF-STATE can be grouped together.

SECOND (PERS-PRON)	'you', 'you all'; second person pronoun
SIDE (CASE)	'by the side of', 'on the side of'; marker introducing a locative participant
SIMILATIVE (CASE, CONJUNCTION)	'like', 'as if', 'thus', 'in the manner of'; marker of similarity participants, e.g. <i>Mary swims like a dolphin</i> ; simile
Simile	see SIMILATIVE
SINCE (TEMPORAL, CASE, CONJUNCTION)	'since (the time when)'; marker introducing temporal participants
SINCE (CAUSAL, CONJUNCTION)	'since, as, because'; marker introducing a causal participant
SINGULATIVE (NUMBER)	marker restricting the reference (of a noun) to a single entity
SOME (QUANTIFIER)	'some'; approximative marker
Source	see ABLATIVE
SPATIAL (CASE)	marker introducing a spatial/locative participant
STILL	'still'; focus particle or marker
SUBORDINATOR (CONJUNCTION)	general marker introducing adverbial clauses, having a range of adverbial functions, such as presenting locative, temporal, causal, and/or conditional functions
SUCCEED ¹⁶	'manage to do', 'succeed in doing'
SUITABLE	'to be sufficient, enough', 'to be fitting', 'to be suitable'
SUPERLATIVE	'(the) most'; marker for 'a position on top of or over'. Cf. ELATIVE
SWITCH-REFERENCE (SR)	marker indexing that the referent of an argument of a verb is different from that of a preceding verb
TEMPORAL	marker introducing a temporal participant
Terminative	see EGRESSIVE
THEN (TEMPORAL)	'then', 'afterwards', 'later'
THERE (SPATIAL)	'there'; deictic marker of distal location. Cf. DISTAL
THIRD (PERS-PRON)	'he', 'she', 'it', 'they'; third person pronoun
TOGETHER	'together'
TOPIC	the theme of a sentence, that is, what the sentence is about, as 'X' is in 'as for X'
TRANSITIVIZER	marker transforming an intransitive verb into a transitive one
TRIAL (NUMBER)	marker for a number unit consisting of no more and no less than three items
TWO (NUMERAL)	'two'; cardinal numeral
UNTIL (TEMPORAL, CASE, CONJUNCTION)	'until', 'up to'; marker introducing a temporal participant
UP (SPATIAL)	'up', 'on', 'above', 'over'; marker introducing a locative participant; "superior"
VENITIVE	'motion hither', 'motion towards'; marker for a movement toward the speaker or deictic centre; ventive. Cf. ANDATIVE
Ventive	see VENITIVE
VP-and	see AND
W-question	see QUESTION

¹⁶ While 'succeed' is typically encoded as a lexical item, some languages appear to treat it as a functional category.

3 Source–Target Lexicon

A

‘Abandon, to’, *see* LEAVE¹

Ability, *see* PI-POSSIBILITY

ABLATIVE > (I) AGENT

This pathway appears to be based on a conceptualization of agents as sources of actions (see Luraghi 2014). According to Palancar (2002: 205), ablatives form by far the most common spatial category found in the syncretism of passive agent markers. While the present pathway may provide a natural choice in any language, it has been exploited especially but not only in Indo-European languages. In languages showing this pathway, ablative or source markers (‘(away) from’) gradually develop into markers encoding agent participants (see Palancar 2002: 205, table 7; Wiemer 2011a: 541) as shown in the following two examples.

Archaic Chinese *yu* ‘from’, ablative preposition (> switch stage, either ablative or agent marker) > *yu*, preposition introducing agents (Long et al. 2012). Modern Chinese *you* ‘from’, ablative preposition (> cause marker) > *you*, preposition introducing agents (Long et al. 2012). Qiang *-wu*, ablative postposition > *-wu*, agent postposition (Long et al. 2012). Tibetan *ne*²¹³² can introduce both source and agent participants (Long et al. 2012).

LaPolla (1995) identifies twenty-three Tibeto-Burman languages showing this pathway. LaPolla proposes the following more general pathway: ablative > instrument > manner > agent > reason conjunction.

Bulgarian *ot* ‘from’, ablative preposition > agent marker in passive constructions (Maslov 1982: 326). Ex.

¹ Concerning the meaning of grammatical forms, see the list of grammatical concepts in Chapter 2.

Bulgarian

- (a) *Toj idva ot basejna.*
 he come:3:SG:RES from swimming:pool:DEF
 ‘He is coming from the swimming pool.’
- (b) *Tazi kartina e narisuvana ot*
 this picture is draw:PAST:PASS:PARTCP from
Picasso.
 Picasso
 ‘This picture is painted by Picasso.’

German *von* ‘from’, ablative preposition > agent marker in passive constructions. Ex.

German

- (a) *Sie kommt vom Bahnhof.*
 she comes from:the station
 ‘She is coming from the station.’
- (b) *Sie wird vom Staat bezahlt.*
 she becomes from:the state paid
 ‘She is paid by the government.’

The following European languages provide instantiations of it (the respective case markers are added in parentheses): Latin *ā, ab* ‘from’ as well as descendants of the Latin ablative preposition *dē* ‘(down) from’ in modern Romance languages, and Modern Greek (*apó*). Furthermore, descendants of Common Slavic *ot* provide examples, e.g. in Old Polish, Czech, Croatian, and Serbian (see also the Bulgarian example above), and so does Welsh (*gan*). Non-Indo-European languages of Europe include Basque (*-tik, -(r)ik*), Hungarian (*-tól*), and Maltese (*minn*) (Wiemer 2011a: 541; Palancar 2002: 156; see Noonan and Mihás 2007 for more examples from European languages).

But the pathway is by no means restricted to this continent, as the following example from a Kordofanian language of the Republic of Sudan illustrates: Krongo *nkA-*, *nkí-*, ablative marker (ABL) > agent marker in passive constructions (rarely used). Ex.

Krongo (Reh 1985: 149, 229)

- n- ác- ètá- átíjí nì nkà- káaw y- ikkì*
 NEUT- PART- kill- PASS snake ABL- person M- that
 ‘The snake has been killed by that man.’

Furthermore, there are languages of the Eskimo-Aleut family, like Inuktitut (*-mit*) of Canada and West Greenlandic (*-mit*) (Wiemer 2011a: 541; Palancar 2002: 156). Languages showing an ablative-agentive syncretism also include the Indo-Iranian language Gujari (Gojri) (*dū*), the Dravidian languages Tulu (*-tti*) and Kannada (*-inda*), the Turkic languages Bashkir (*-dan*), Karachay-Balkar (*-dan*), Kazakh (*-dan*), Kirghiz (*-dan*),

Shor (-*dan*) (Noonan and Mihas 2007), Mongolian (-*ees*), Ainu (*or(o)wa*) of Japan, the Oceanic language Fijian (*mai*), Athpare (-*lamma*) of Nepal, as well as the Australian language Kayardild (((*ki*)*i*)*na*) (see Palancar 2002: 205, table 7).

Evidence for this pathway from ablative marker to a marker denoting an animate instigator can also be found in first language acquisition (Diessel 2011: 132–3). This grammaticalization is presumably related to another one whereby agents are encoded as locative participants, and both are probably part of a more general process whereby agents in passive constructions are expressed in terms of spatial concepts. *See also* COMITATIVE; HAND; LOCATIVE.

ABLATIVE > (2) COMPARATIVE

Archaic Chinese *yu* ‘from’ > *yu* comparative marker (standard marker) in comparatives of inequality (Alain Peyraube, p.c.).

Latin ablative case suffix > ‘than’, standard marker in comparative constructions of inequality. Ex.

Latin (Stassen 1985: 27)

Cato Ciceron-e eloquentior est.
 Cato:NOM Cicero- ABL more:eloquent is
 ‘Cato is more eloquent than Cicero.’

Bulgarian *ot* ‘from’, ablative marker > ‘than’, standard marker in comparative constructions. Ex.

Bulgarian

- (a) *Toj idva ot basejna.*
 he come:3:SG:RES from swimming:pool:DEF
 ‘He is coming from the swimming pool.’
- (b) *Toj trjabva da e po- mlad*
 he must to be:3:SG:PRES more- young
ot neja s edna- dve godini.
 from her with one- two years
 ‘He must be younger than her by a couple of years.’

Bijie Yi *ka*³³ ‘from’, adposition > *ka*³³ ‘than’, standard marker in comparative constructions (Long et al. 2012). Tibetan *-nas* ‘from’ > ‘than’, marker of standard noun phrases in comparative constructions. Ex.

Tibetan (Stassen 1985: 115)

Rta- nas khyi chun- ba yin.
 horse-from dog small-one is
 ‘A dog is smaller than a horse.’

Turkish *-den, -dan*, ablative suffix > ‘than’, comparative marker (nominal suffix). Ex.

Turkish (Rühl 1970: 25; Lewis [1967] 1985: 54)

- (a) *ev-den çikacak.*
house-ABL go:3:SG:FUT
'He will leave the house.'
(b) *kurşun-dan ağır*
lead-ABL heavy
'heavier than lead'

Aranda *-nge*, ablative case suffix > 'than', marker of standard noun phrases in comparative constructions. Ex.

Aranda (Wilkins 1989: 185–6)

- (a) *Re pmere-nge lhe-ke lhere-erne.*
3:SG:SUBJ camp-ABL go-PAST:CPL creek:bed-ALL
'He went from the camp to the creek.'
(b) *Kwementyaye kele anteme atyenge-nge arlpenty-ulker.*
Kwementyaye OK now 1:SG:DAT-ABL tall-more
'Kwementyaye is already taller than I am.'

Crosslinguistically, ABLATIVE markers form one of the most common, if not the most common, means of encoding standard noun phrases in comparative constructions (Stassen 1985; Heine 1997b); see also Noonan and Mihás (2007: 18–19) for a large number of languages showing case syncretism between ablative and comparative markers. This grammaticalization appears to be an instance of a more general process whereby spatial concepts are used as structural templates to express the standard of comparison; compare LOCATIVE; UP.

ABLATIVE > (3) INSTRUMENT

This pathway is in need of more diachronic evidence. Ablative–instrumental case syncretism is crosslinguistically widespread (Noonan and Mihás 2007; Narrog 2014: 75).

Noonan and Mihás (2007) observed it in a wide range of languages. These include the following languages (the respective case markers are added in parentheses): Galo (*-lo-kə*'), Hakha Lai (*-ʔin*), and Mishmi (*gō*) of the Sino-Tibetan family; the Indo-Iranian languages Hindi (*se*), Magahi (*se*), Lambadi (*-ti*), Ossetic (*-əj*, *-jə*), Panjabi (*-tō*), and Sinhala (*-ake-ŋ*); the Dravidian languages Brahui (*-ān*), Kannada (*-inda*), Konda (*-and*), Kui (*-ʔai*), Kurux (*-ti*), Naiki (*-la*), and Pengo (*-aŋ*); the Austroasiatic language Korku (*ten*); the Eskimo-Aleut language Siberian Yupik (*-miŋ*); as well as the Tungusic languages Nanaj (*-zi*) and Oroch (*-zi*).

What is unclear so far is the directionality of grammaticalization underlying this syncretism. That the hypothesis proposed here is correct is supported by the following observation: in a number of the languages listed above, case syncretism is not restricted to ablative and instrumental functions but also includes that of a comparative marker, such languages being Brahui, Hakha Lai, Hindi,

Kurux, Lambadi, Magahi, Ossetic, and Panjabi. ABLATIVE markers form one of the most common sources for comparative markers, that is, for expressing the standard noun phrase in comparative constructions (Stassen 1985; Heine 1997b; *see* ABLATIVE > COMPARATIVE). Instrumental markers, by contrast, do not appear to give rise to comparative markers. Now, if there were a development INSTRUMENT > ABLATIVE then one might expect at least some languages showing syncretism restricted to instrumental and comparative functions, but such languages do not seem to exist. On the basis of this synchronic typological observation we hypothesize that ablative markers provide the diachronic source for both instrumental and comparative case markers, as part of a polygrammaticalization chain where the ablative is the source, with the comparative and the instrument being the targets of two distinct grammaticalization paths.

Compare INSTRUMENT > ERGATIVE; ABLATIVE > AGENT.

ABLATIVE > (4) MATERIAL

Qiang-*wu*, ablative postposition > -*wu*, instrument postposition > -*wu*, marker of material (LaPolla and Huang 2003). Bulgarian *ot* ‘from’, ablative marker > *ot*, marker of material. Ex.

Bulgarian

- (a) *Toj idva ot basejna.*
 he come:3:SG:PRES from swimming:pool:DEF
 ‘He is coming from the swimming pool.’
- (b) *Tazi bluza e ot koprina.*
 this blouse is from silk
 ‘This blouse is made from silk.’

Yagaria -*loti*’, -*toti*’, instrumental suffix > ‘from’, marker of material. Ex.

Yagaria (Renck 1975: 43)

yavá-toti’ lu’ elo-hi-d-a-e.
 stone-from axe make-PAST-3:PL-5IND
 ‘They made axes from stone.’

Lezgian -*kaj* ‘from below’, ‘from’, subelative (SUBEL) marker, nominal suffix > ‘out of’, marker of material. Ex.

Lezgian (Haspelmath 1993: 97)

Werg- eri-kaj awu-nwa-j čigirt
 nettle- PL-SUBEL make-PERF-PARTCP čigirtma
ajal- ri- z gzař k’an-da-j.
 child- PL- DAT much like-FUT-PAST
 ‘The children liked čigirtma, (a dish) made out of stinging nettles, a lot.’

More research is needed on the exact nature and the genetic and areal distribution of this process.

ABLATIVE > (5) PARTITIVE²

In Romance languages, a partitive article developed out of an ablative marker, namely the preposition *de* (Luraghi, De Smit, and Igartua forthcoming). The Latin ablative preposition *de* ‘of, from’, frequently followed by the distal demonstrative *ille* (M), *illa* (F), *illud* (NEUT), had developed already in the twelfth and thirteenth centuries into a partitive marker in Piedmontese of northwest Italy, subsequently grammaticalizing further into an indefinite article (Miola 2017: 154–7).

A similar development took place in French. The Latin combination *de (ille)* had already in Old French given rise to a partitive marker. By the fifteenth and sixteenth centuries it turned into an indefinite article mainly with direct objects, and from 1700 onward it became increasingly obligatory in all syntactic positions (Carlier and Lamiroy 2014; Miola 2017: 154–6). Ex.

Old French (twelfth century; Carlier and Lamiroy 2014; Miola 2017: 154)

Del vin volentiers bevaient.
 of(= PARTV):the wine gladly drink:IMPFV:3:PL
 ‘They gladly drank (some) of the wine.’

German *von* ‘from’, preposition > *von*, partitive marker in specific contexts. Ex.

German

Gib mir ein bisschen von dem Käse!
 give to:me a bit from the cheese
 ‘Give me a bit of the cheese!’

Bulgarian *ot* ‘from’, ablative marker > *ot*, partitive marker. Ex.

Bulgarian

- (a) *Toj idva ot basejna.*
 He COME:3:SG: PRES from swimming:pool:DEF
 ‘He is coming from the swimming pool.’
- (b) *Polovinata ot sãkrovišteto*
 half:DEF from treasure:DEF
 ‘half of the treasure’

Lezgian *-kaj* ‘from below’, ‘from’, subelative marker (nominal suffix) > *-kaj*, ‘of’, partitive marker. Ex.

Lezgian (Haspelmath 1993: 97)

Kursant- ri- kaj gza- buru
 cadet- PL- SUBEL many- SBST:PL (ERG)
ruš ari- q^h galaz q’üler- zawa-j.
 girl- PL- POESS with dance- IMPFV-PAST
 ‘Many of the cadets were dancing with girls.’

² Dedicated partitive markers such as case suffixes, expressing the notion ‘a part of’ or ‘partly affected’, seem to be crosslinguistically rare (see Luraghi and Kittilä 2014). The present treatment is not restricted to dedicated partitive markers but also discusses constructions containing some morphological exponent that has or includes a partitive function.

Qiang *-ka* ‘from’, ablative postposition > *-ka* ‘... of ...’, partitive particle (following a noun) (LaPolla and Huang 2003: 391). In Krongo, the ablative marker *nkí*, *nkA-* has a partitive function when used in adnominal expressions. Ex.

Krongo (Reh 1985: 149)

k-ábálà kàlyá nkànáày ncáarè; ...
 PL-IMPV:play children ABL:3:PL CONP:PL:two
 ‘Two of the children play; ...’

Luraghi and Kittilä (2014: 50) observe that “the Finnic partitive originates from the Finnic-Mordvinian separative (‘away from’) case, which was used as a rudimentary partial object, but also as a kind of partitive attribute”. Finnish **-tA*, separative (ablative) case marker > partitive marker (Huomo 1999). The modern Basque partitive *-(r)ik* appears to derive from an earlier ablative. Ex.

Basque (anonymous reader)

- (a) *Maulerik*
 Maule-(r)ik
 Maule-ABL
 ‘from Maule’
- (b) *Ez daukat dirurik.*
 Ez da- uka- t diru- (r)ik
 NEG PRES-have- 1:SG:ERG money- PARTV
 ‘I don’t have any money.’

In Basque, “the partitive is an allomorph of the present ablative: the two case forms became differentiated at a pre-literary stage ... At a later stage, the partitive remained indefinite, while the ablative acquired definiteness and singular number” (Luraghi and Kittilä 2014: 50).

Harris and Campbell (1995: 339–41) observe that the “development of a partitive out of the expression of a partial through a genitive or through a locative (in roughly the meaning ‘from’) ... is a good candidate for a unidirectional change, to which we know no counterexamples”. See also Harris and Campbell (1995: 362–3) for examples from Finno-Ugric.

Since PARTITIVE markers may go back to (>) A-POSSESSIVE markers and the latter to ABLATIVE markers (*see* ABLATIVE > A-POSSESSIVE), we seem to be dealing with a more general grammaticalization chain: ABLATIVE > A-POSSESSIVE > PARTITIVE (*see* also Luraghi, De Smit, and Igartua forthcoming).³

³ The latter is suggested by observations made by Harris and Campbell (1995: 363), who note, with reference to the evolution in Mordvin: “The Mordvin ablative can be used as a ‘restricting’ object case, for example where ‘to eat of/from bread’ develops the meaning ‘eat some (of the) bread’, from which the grammatical function of the partitive case developed” (*see* also Luraghi, De Smit, and Igartua forthcoming).

Furthermore, ABLATIVE markers can be grammaticalized forms of verbs expressing the source of motion, such as ‘come from’ (see COME FROM > ABLATIVE), partitives may ultimately be derived from such verbs. For example, Luraghi and Kittilä (2014: 52) note that the Basque partitive marker might ultimately go back to the verb **din* (Modern Basque *jin*) ‘come from’.

See also CHILD, A-POSSESSIVE > PARTITIVE.

ABLATIVE > (6) NEAR PAST

French *venir de* ‘come from’, verb > *venir de*, near past tense marker.⁴ Ex.

French

- (a) *Je viens de Lyon.*
I come from Lyon.
‘I come from Lyon.’
- (b) *Je viens de manger.*
I come from eat:INF
‘I’ve just eaten.’

Kala Lagau Ya -ngu ablative case marker > yesterday past marker (Blake 1994: 183).

Pitta-Pitta (Blake 1994: 182)

Tatyi-ka- Inya nganytya.
eat- NOMIN:ABL I
‘I’ve just eaten.’

French *sortir* ‘come out’, verb > Haitian CF *sòti* ‘come (from)’, *sòt(i)* ‘to have just done’. Ex.

Haitian CF (Hall 1953: 55)

l-fèk sòt rive kéyi gnou kòk vin bâ mwê.
(3:SG-TAM come:from arrive gather a nut come give 1:SG)
‘He has just gathered a nut for me.’

More research is needed on the genetic and areal distribution of this process. Underlying this grammaticalization there appears to be a process whereby a tense (or aspect function) is expressed in terms of physical, spatial motion; compare COME TO > FUTURE; COME TO > PROXIMATIVE; GO TO.

ABLATIVE > (7) A-POSSESSIVE⁵

Latin *dē* ‘from’ (ablative preposition) > French *de*, marker of attributive possession (‘of’), Catalan *de*, genitive marker. Ex.

⁴ Note that ABLATIVE markers are not uncommonly derived from verbs meaning ‘come from’; see COME FROM > ABLATIVE.

⁵ A-POSSESSIVE (= marker of attributive possession; Heine 1997a) stands for what is commonly translated in English by ‘of’ or genitive -s.

Catalan (anonymous reader)

La casa de Pedre
 the:F:SG house of Peter
 ‘Peter’s house’

Frisian *fan* ‘from’, preposition > marker of attributive possession (Tiersma 1985: 54, 94). Old English *of* ‘from’ > Middle English possessive marker (‘of’; Traugott 1986b: 541). German *von* ‘from’, ablative preposition > marker of attributive possession (‘of’). Ex.

German

- (a) *Er kommt von drüben.*
 he comes from over:there
 ‘He originates from the ex-GDR.’
- (b) *das Pferd von Peter*
 the horse from Peter
 ‘Peter’s horse’

Upper Sorbian (Corbett 1987: 302)

kniha wot Jan-a
 book from/of Jan-GEN
 ‘Jan’s book’

Macedonian (Koptjevskaja-Tamm forthcoming; quoted from Koneski 1982: 525)

palto-to od Petre-ta
 coat-DEF:NEUT:SG from/of Peter-OBL
 ‘Peter’s coat’

In the following example, it is a ‘belong’-construction of possession (B-POSSESSIVE), rather than an A-POSSESSIVE (see Heine 1997a), that is involved: Hawaiian *no* ‘from’ > ‘belong to’. Ex.

Hawaiian (Susanne Romaine, p.c.)

- (a) *No Maui ‘o Kimo.*
 from Maui ? Kimo
 ‘Kimo is from Maui.’
- (b) *No Kimo ka hale.*
 of Kimo the house
 ‘The house is Kimo’s/belongs to Kimo.’

Lhao Vo *me*⁵⁵ ‘from’, ablative particle > *me*⁵⁵ ‘... of ...’, possessive marker/nominalizer (Long et al. 2012).

See also Lehmann (1982: 111) and Harris and Campbell (1995: 339–41). Note that most of these examples relate to European languages, and Noonan and Mihas (2007: 3) observe on the syncretism between ablative and genitive morphology in their survey of the languages of Eurasia:

Nonetheless, what is striking about this syncretism is how common it is within a geographically contiguous region of Europe and how rare it is outside, at least within our surveyed area. There seems little doubt that this is a feature of the European

Sprachbund. Its rarity outside seems to mean that the particular grammaticalization path is not often utilized for the creation of new genitives. (Noonan and Mihás 2007: 3)

But in addition to a range of European languages, Noonan and Mihás find such a syncretism also in a few other languages, namely the Indo-Aryan languages Kashmiri (*-i*) and Palula (*dii*), the Tibetic language Jad (*-na*), and the Permic languages Komi-Permyak (*-lišʹ*), Komi-Zyrian (*-lišʹ*), and Udmurt (*-leš*).

Historical evidence for this pathway comes, for example, from western European languages, where case markers (Latin *dē*, German *von*, etc.) first served as case-marking prepositions before they developed further into possessive markers.

This is an example of a more general process whereby participant marking within the clause is extended to the syntax of the noun phrase. Compare BENEFACTIVE > A-POSSESSIVE; LOCATIVE > A-POSSESSIVE. Note, however, that there is also a process in the opposite direction; see, for example, DEMONSTRATIVE > RELATIVE.

ABLATIVE > (8) SINCE (TEMPORAL)

Archaic Chinese *zi* ‘from’, ablative preposition > *zi* ‘since, after’, temporal preposition (Long et al. 2012). Chinese *cóng* ‘from’ > *cóng* ‘since’ (Haspelmath 1997b: 66). Romanian *de* ‘from’ > ‘since’; Polish *od* ‘from’ > ‘since’; Croatian *od* ‘from’ > ‘since’; Lithuanian *nuo* ‘from’ > ‘since’; Greek *apó* ‘from’ > ‘since’; Georgian *-dan* ‘from’ > ‘since’; Maltese *minn* ‘from’ > ‘since’; Persian *az* ‘from’ > ‘since’; Punjabi *tō* ‘from’ > ‘since’; Kannada *-inda* ‘from’ > *-inda* ‘since’; Tamil *-leruntu* ‘from’ > ‘since’ (Haspelmath 1997b: 66). For more details, see Haspelmath (1997b: 66–8), who proposed this instance of grammaticalization.

The process appears to be part of a more general process whereby spatial concepts are used to also express temporal concepts; compare ALLATIVE; BEHIND; IN; LOCATIVE.

ACCOMPANY > COMITATIVE

The Chinese verb *tong*, meaning ‘share with’, ‘accompany’ was grammaticalized probably during the Tang period to a comitative preposition. In Contemporary Chinese, i.e. from the nineteenth century onward, *tong* began to also function as a coordinating conjunction (Peyraube 1996: 190–1; Heine 2014: 75). Korean *tepwul-* ‘accompany’, verb > *-(wa)tepwule* ‘with’, comitative case marker (Rhee 2016c).

Walman *-aro-* and *-a-* ‘be with’, ‘accompany’, verbs > ‘with’, comitative marker (Brown and Dryer 2008: 545; Heine 2014: 69). Thurston (1987: 147) observes that in all languages of northwestern New Britain, Papua New Guinea, the verbs for ‘accompany’ also express ‘with’, that is, they appear to be used as

comitative markers. Some of these languages are genetically interrelated, belonging to the Austronesian family, but not all of them are; for example, Anêm is classified as a genetic isolate. The languages are described by Thurston (1982; 1987) as forming a Sprachbund, that is, as being areally interrelated.

We hypothesize that this situation is due to a process whereby the use of verbs for ‘accompany’ was, at least in some of the languages, extended to also serve as grammatical markers. Concerning the structural change from verb to comitative marker, see Heine (2014: 76). *See also* MEET > COMITATIVE.

ADVERSATIVE > MIRATIVE

With the term ‘mirative’ we refer to a notional category involving surprise because of the speaker’s sudden awareness of a fact hitherto unknown, unappreciated or not considered relevant to the present. Mirativity is not normally the default meaning of a grammatical category; rather, it is frequently a secondary or tertiary meaning of some grammatical marker; *see also* EVIDENTIAL, INFERRED > MIRATIVE.

In a number of languages, adversative connectives – either on their own or in combination with other constructional features – have acquired the function of miratives in specific contexts. The English connective *but* may function as a sentence particle expressing mirativity when used at the beginning of a sentence, see (b) below:

English

- (a) *Mary loves cakes but she is rather slim.*
 (b) *Many citizens of the so-called First World are still shocked to discover that we tropical islanders speak English. “But you speak English so well”, they say.*

In Bulgarian, both adversative conjunctions – *ama* ‘but’ (colloquial) and *no* ‘but’ (neutral); see below – function as sentence particles expressing mirativity when used sentence-initially:

Bulgarian

[Context: Hearer comes out of the swimming pool and Speaker opens the conversation.]

<i>Ama/no</i>	<i>ti</i>	<i>može-š</i>	<i>da</i>	<i>pluvaš!</i>
but ₁ /but ₂	you	can-2:SG:PRES	CONJ:PARTCP	swim:2:SG:PRES

‘I am surprised that you can swim!’ (Plausibly derivable from: ‘I expected you to not be able to swim but – contrary to expectation – you can swim.’)

In Italian, the conjunction *ma* ‘but’ marks mirativity when used at the beginning of an exclamative clause:

Italian

Ma questa macchina è veloce!
 but this car is fast
 ‘I am surprised that this car is fast!’

The Dutch conjunction *maar* ‘but’ can introduce an utterance related to the discourse-pragmatic context, whereby it no longer functions as a connective of two conjuncts but as a sentence particle expressing surprise:

Dutch (Foolen 1993)

Maar wie we daar hebben!
But who we there have
‘[You here!!!/look] who we have here!’

Likewise, the conjunction *mais* ‘but’ in French can be used in order to introduce an utterance related to the discourse-pragmatic context. Ex.

French (title of a children’s book by Didier Dufresne)

Mais ... tu marches!
But ... you walk
‘But ... you are walking!’

The conjunction *ama* ‘but’ in Turkish, too, can be used at the beginning of an utterance as a marker of mirativity:

Turkish (Selin Mesmeh, p.c.)

Ama yüzme-yi biliyor-sun!
but swim-ACC:OBJ can-2:SG:PRES
‘But you can swim!’ [Context: Hearer comes out of the swimming pool and Speaker opens the conversation. He is surprised that Hearer can swim because he expected the opposite.]

In Greek, the conjunction *ma* ‘but’ is used at the beginning of an exclamative clause as a marker of mirativity.

Greek (Isabella Greisinger, p.c.)

Ma den gínetai!
But not is-possible:3:SG:PRES
‘But it’s not possible!’ [Context: Someone says to his friend: ‘My little sister wants to come with us to the pub tonight.’ The Hearer is surprised because the Speaker’s little sister is too young to go to a pub at night.]

In Lebanese Arabic the conjunction *bās* ‘but’ may be used at the beginning of an exclamative clause as a mirativity marker:

Lebanese Arabic (Selin Mesmeh, p.c.)

[Context: Speaker realizes Hearer hasn’t left yet. Speaker opens the conversation]

(*Bās*) inta ba’d-ak hon!
(but) you:M still-are:M here
‘I am surprised you are still here!’

In Mangarrayi, spoken in the Northern Territory of Australia, the adversative conjunction *gana* ‘but’ can also function as a mirativity marker when used at the beginning of an exclamative clause:

Mangarrayi (Merlan 1982: 32, cited in Malchukov 2004: 189)

- (a) *Na-wu-wa ø-baañ gana na-vuŋ-gu ø-daymingan.*
 this:side N:ABS-nonsacred but other:side N:ABS-sacred
 ‘This side is not sacred, but that side is sacred.’
- (b) *Ganaji!*
but:fat
 ‘(Oh,) it is fat!’

The connective morpheme *-ntey* ‘but’ of Korean carries a mirativity-marking function:

Korean (Seongha Rhee, own data)

- (a) *Ku cha cengmal ppalu-ntey nemwu pissa-ta.*
 the car really be:fast-but too be:expensive-DEC
 ‘The car runs really fast but it’s too expensive.’
- (b) *Ku cha cengmal ppalu-ntey.*
 the car really be:fast-MIR
 ‘The car is really fast! [I’m surprised!]

The present pathway cannot be described exhaustively in terms of grammaticalization. As argued in Heine et al. (2016; 2017), it also involves cooptation, a discourse strategy whereby a unit of sentence grammar – which in most cases is a subordinate or dependent clause – is deployed for specific discourse purposes such as expressing functions of text organization, attitudes of the speaker, and/or speaker–hearer interaction. Whereas grammaticalization typically leads to semantic and morphosyntactic integration, cooptation has the opposite effect, that is, the unit is semantically and morphosyntactically unattached, frequently also being prosodically marked off. Thus, unlike most of the other data discussed in this book, an evolution of this kind is more complex, being the result of cooptation of an adversative clause as a main clause utterance, followed by grammaticalization (Heine 2013). Cooptation in the present case had the effect that an adversative clause was deployed for a specific function, namely for expressing mirativity, thus acquiring the appearance of an insubordinate (Evans 2007) or incoordinate sentence (Kuteva et al., in prep.), frequently having the appearance of an exclamatory utterance. Accordingly, in the resulting mirative construction, the adversative connective appears typically in utterance-initial position or, in rigidly verb-final languages, in utterance-final position.

AFTER > CONSECUTIVE

In this pathway, temporal adpositions meaning ‘after’ grammaticalize into markers linking clauses temporally, typically turning into consecutive conjunctions (‘after’, (and) then’).

According to Haig (2001: 203–4), this process took place in three genetically unrelated languages of East Anatolia, namely the Turkic language Turkish (postposition *sonra* ‘after’), the Kartvelian language Laz (postposition

suk'ule ‘after’), and the Iranian language *Zazaki* (postposition *tepeyā* ‘after’). The information provided by Haig (2001: 203–4) suggests that this is a case of shared, contact-induced grammaticalization.

This is a process whereby the use of prepositions or postpositions is extended from the noun phrase to the clause and the sentence. Note, however, that language contact appears to have been involved in the spread of this process. *See also* BEHIND > AFTER; FINISH > CONSECUTIVE.

AGAIN > (1) CONCESSIVE

In a number of languages of East Anatolia, words for ‘again’ together with their enclitic topic-switch markers have given rise to markers of concessive clauses (‘nevertheless’, ‘although’, ‘but’), expressing something that runs contrary to the expectations raised in the preceding clause (Haig 2001: 204–5). The languages, belonging to three different language families, are the Turkish language Turkish, the Kartvelian language Laz, and the Iranian languages *Zazaki* and *Kurmanjî* Kurdish. The markers concerned are Turkish *yine de*, Laz *xolo ti*, *Zazaki finā žī*, and *Kurmanjî* Kurdish *dîsa jî*. The information provided by Haig (2001: 204) suggests that this is a case of shared, contact-induced grammaticalization (Heine and Kuteva 2005: 156).

This is a process whereby the use of material from within the clause is extended to also express relations between clauses. But more crosslinguistic evidence is needed in support of this pathway.

AGAIN > (2) REFLEXIVE

Hamea *mwâi* ‘again’ > *mwâi*, reflexive marker and intensifier (Moyse-Faurie 2008: 143). *Xaragure mûgé* ‘again’ > *mûgé*, reflexive marker. Ex.

Xaragure (Moyse-Faurie 2008: 142)

Nyără sa nyără mûgé.
3:PL hit 3:PL again
‘They are hitting themselves.’

Tawala *meme* ‘again’, verbal modifier > *me-*, reflexive marker (Ezard 1997: 136; Moyse-Faurie 2008: 143). Nengone *yawe* (+ *ko*) ‘back, again (+ intensifier)’ > *yawe* (*ko*), reflexive marker (Codrington 1885: 482; Moyse-Faurie 2008: 142). Paamese *-ris(i)* ‘return, go back’ > ‘again’ > *-ris(i)*, part of a reflexive construction (Crowley 1982: 180, 233–234; Moyse-Faurie 2008: 143). *Saliba uyo* ‘go back, again’ > *-uyo-*, reflexive function in a serial verb construction. Ex.

Saliba (Margetts 1999: 334; cited in Moyse-Faurie 2008: 143)

ya-kita-uyo-i-gau.
1:SG-see-again-APPL-1:SG:OBJ
‘I saw myself.’

Maori *anō* ‘again’ > *anō*, reflexive and reciprocal marker (Bauer 1997:636; Moyse-Faurie 2008: 143).

Note that in some of the languages it is a polysemy set ‘return’/‘again’ that appears to provide the basis of grammaticalization and it does not become clear which of the two meanings is primarily involved (cf. RETURN > AGAIN). Furthermore, in some Oceanic languages, reciprocity is the only meaning derived from ‘return’ forms. For example, in the Tobati language of Irian Jaya, reciprocals are formed with *fem* ‘return’ adjacent to the verb (Lynch et al. 2002: 197; Moyse-Faurie 2008: 146).

This pathway has been identified so far only in Austronesian languages, and data from other language families from parts of the world other than the Pacific Ocean region are needed.

ALL > (1) PLURAL

This process has the effect that words meaning ‘all’ grammaticalize into plural markers on nouns or personal pronouns, e.g. Tibetan *thams* ‘all’ > *thams*, plural marker (Long et al. 2012).

Colloquial southern American English *y’all* (second person plural pronoun). English *all* > Tok Pisin PE *ol* ‘they’ (third person plural subject pronoun); see Kortmann and Schneider (2011: 274–6) for data on various English varieties. In Waŋkumara, the free form *buka* ‘all, together’ is commonly used as a plural marker (McDonald and Wurm 1979: 27). Portuguese *todo(s)* ‘all’ > Papia Kristang CP *nos-tūru* ‘we’ (‘we all’, first person plural inclusive pronoun; Stolz 1992b: 281). French *tous les* ‘all the’ > Tayo CF *tule*, *tle*, *te*, nominal plural proclitic or prefix. Ex.

Tayo CF (Kihm 1995: 234, 237)

<i>Tle</i>	<i>fler-</i>	<i>la,</i>	<i>le</i>	<i>fini</i>	<i>puse</i>	<i>e</i>
PL	flower-	DEF	TAM	CPL	grow	and
<i>pi</i>	<i>sa</i>	<i>atra-de</i>	<i>puse</i>	<i>akor.</i>		
then	they	PROG	grow	still		

‘The flowers have been growing, and they are still growing.’

Note that we have subsumed under this entry a number of different individual processes. More research is needed on the exact nature and the genetic and areal distribution of this process.

ALL > (2) SUPERLATIVE

Latvian *viss* ‘all’ > *vis-*, superlative prefix; Estonian *kõik* ‘all’ > superlative marker ‘of all’ (Stolz 1991b: 50–4). Amharic *hullu* ‘all’, used in superlative constructions. Ex.

Amharic (Ultan 1972: 134)

<i>kə-</i>	<i>hullu</i>	<i>yamral.</i>
from-	all	he:is:handsome

‘He is the most handsome of all.’

Hamer *wul-na* ‘all’ + dative suffix > superlative marker. Ex.

Hamer (Lydall 1976: 433)

wul- na kisi sana də gəb.
 all- for he fast exists runs
 'He runs fastest.'

Teso *kere* 'all' > superlative marker. Ex.

Teso (Kitching 1915: 25, 44)

- (a) *Aɲarit oni kere.*
 call:3:SG us all
 'He's calling all of us.'
- (b) *etogo ɲol ɲes le-telekarit kere.*
 house that COP REL-surpass all
 'That house is the biggest one.'

Note that it is not ALL on its own that is responsible for this grammaticalization; in addition some comparative predication (expressed, e.g., in the Teso example by means of 'surpass') is required. Heine (1997b: 124) notes: "Perhaps the predominant pattern for forming superlatives is that of replacing an individual standard of comparison . . . by the entire class of possible individuals, which means typically that the standard is modified by the quantifier 'all' and the like." For more examples, see Ultan (1972) and Heine (1997b: 124f.).

ALLATIVE > (1) COMPLEMENTIZER

This grammaticalization path is suggested by Hopper and Traugott (1993: 181–2), who note that "the reanalysis of a dative-allative particle as a complementizer is widespread". The following are among the examples adduced by them: Latin *ad* 'to', French *à* (< Latin *ad* 'to'), and Maori *ki*, which is both a dative and an allative marker "and is a complementizer with the same kinds of verbs as English *want*". Ex.

English (Hopper and Traugott 1993: 181)

- (a) *We handed the box to the Gypsy.*
- (b) *We want to ask you a few questions.*

It would seem that we are dealing with a chain of grammaticalization of the following kind: ALLATIVE > PURPOSE > INFINITIVE > COMPLEMENTIZER (see Haspelmath 1989); *see* ALLATIVE; PURPOSE. ALLATIVE itself is the target of other concepts; *see* under ARRIVE; GO TO; SEE.

ALLATIVE > (2) INFINITIVE

ALLATIVE markers tend to give rise to PURPOSE markers, which may further develop into INFINITIVE markers, a process that has been well described by Haspelmath (1989). For examples of the latter part of the evolution, *see* PURPOSE > INFINITIVE.

Note that ALLATIVE itself is the target of other concepts; *see* ARRIVE; GO TO; SEE.

ALLATIVE > (3) PATIENT

Qiang *-ta*, allative marker > *-ta*, patient marker (LaPolla and Huang 2003: 84). Tibetan *-la* is used both as an allative marker and a patient marker (Long et al. 2012).

Spanish *a*, directional preposition > marker of dative objects > marker of human/definite objects (Bossong 1985: 310; Rubin 2005: 110). Already in Classical Arabic, the directional preposition *li-* ‘to, for’ was used to mark nominal and pronominal direct objects, though almost exclusively before objects of verbal nouns and participles (Rubin 2005: 105). Some dialects of modern Arabic, including Lebanese, Syrian, Galilean, and Iraqi Arabic, employ a construction with the preposition *la-* ‘to, for’ to mark certain kinds of direct objects. Constraints on the use of the construction differ from one variety of Arabic to another, in that the construction may be restricted to definite or animate objects (Rubin 2005: 105–6).

Imonda *-m*, direction marker > (a) optional object marker, (b) obligatory object marker in [+HUMAN] object–subject relations. Ex.

Imonda (Seiler 1985: 165)

aia-l edel-m ue-ne- uōl
father-NOM human-GL CLASS-eat-PL do-PRES
‘Her father habitually eats humans.’

Lezgian *-z* ‘to’, direction marker, nominal suffix > *-z*, experiencer object marker. Ex.

Lezgian (Haspelmath 1993: 89)

- (a) *Zun medinstitutdi- z fi- da.*
I:ABS medical:school- DAT go- FUT
‘I’ll go to medical school.’
- (b) *Kasbubadi- z tara- n xile- l zurba sa quš aku-na.*
Kasbuba- DAT tree- GEN branch- SRESS big one bird see-AOR
‘Kasbuba saw a big bird on a tree’s branch.’

There may be two different pathways that are involved here, one leading from a dative (RECIPIENT) to a patient/accusative marker, and another leading to an experiencer marker (Martin Haspelmath, p.c.); *see also* RECIPIENT > PATIENT.

An anonymous reader of this book suggests that Latin shows evidence of a reversed process, in that the accusative suffix *-m*, inherited from Proto-Indo-European, serves as an allative in certain locations.

Note that ALLATIVE itself is the target of other concepts; *see* ARRIVE; GO TO; SEE.

ALLATIVE > (5) PURPOSE

Archaic Chinese *yu*, allative preposition > *yu*, purpose marker (Long et al. 2012). Imonda *-m*, directional marker (NP-suffix) > *-m*, purpose case marker (nominal suffix). Ex.

Imonda (Seiler 1985: 161)

- (a) *ně-m at uagl-n.*
 bush-GL CPL go-PAST
 ‘He has gone to the bush.’
- (b) *těta-m ai-fōhō-n.*
 game-GL PL-go:down-PAST
 ‘They have gone hunting for game.’

Albanian *për* ‘to’, directional preposition > *për*, preposition marking purpose. Ex.

Albanian (Buchholz, Fiedler, and Uhlich 1993: 403)

punon për nesër
 ‘to work for tomorrow’

This process leads not only to the rise of PURPOSE case markers but also to PURPOSE proposition markers; for example, Imonda *-m*, purpose marker > purposive clause marker. Ex.

Imonda (Seiler 1985: 162)

Tōbtō soh-m ka uagl-f.
 fish search- GL I go-PRES
 ‘I am going to search for fish.’

Lezgian *-z* ‘to’, direction marker (nominal suffix) > *-z/-iz*, purposive marker (verbal suffix). Ex.

Lezgian (Haspelmath 1993: 89, 156)

- (a) *Zun medinstitutdi- z fi- da.*
 I:ABS medical:school- DAT go- FUT
 ‘I’ll go to medical school.’
- (b) *I irid stxa čpi-n juldaš- ri-*
 this seven brother selves-GEN friend- PL-
q^h galaz quğwa- z fe- na.
 POESS with play- INF go- AOR
 ‘These seven brothers went to play with their friends.’

Basque *-ra*, the ordinary allative case marker, marks purpose when attached to a verb in the gerund. Ex.

Basque (anonymous reader)

- (a) *etxera noa.*
etxe- ra n- a- oa
 house- ALL 1SG: ABS- PRES- go
 ‘I’m going home.’

- (b) *liburu hau irakurtzera noa.*
liburu hau irakur- tze-ra n- a- oa
 book this read- GER-ALL 1:SG:ABS- PRES- go
 ‘I’m going to read this book.’

In the Western Nyulnyulan language Bardi of northwestern Australia, a form identical with the allative is also used as a purposive clause subordinator (McGregor in prep.).

This appears to be an instance of a widespread process whereby spatial and temporal markers are grammaticalized in specific contexts to markers of “logical” grammatical relations, such as adversative, causal, concern, concessive, and conditional relations; see, for example, LOCATIVE; SINCE; TEMPORAL; UP (see also Heine 2011c). Note that ALLATIVE markers themselves may be the target of other concepts; see ARRIVE; GO TO; SEE.

ALLATIVE > (6) RECIPIENT

Archaic Chinese *yu* ‘to, towards’, directional preposition > *yu*, recipient preposition (Long et al. 2012). Tibetan *la*¹² is used both as an allative postposition and a recipient postposition (Long et al. 2012). Tamil *-iṭam* ‘to’, directional bound postposition > bound postposition marking the indirect object. Ex.

Tamil (T. Lehmann 1989: 41)

Kumaar raajaa.v-iṭam oru pustakam koṭu-tt-aan.
 Kumar Raja- LOC a book give-PAST-3:SG:M
 ‘Kumar gave Raja a book.’

Lezgian *-z* ‘to’, direction marker (nominal suffix) (> ‘for’ benefactive/malefactive marker) > dative marker. Ex.

Lezgian (Haspelmath 1993: 88, 89)

- (a) *Zun medinstitutdi- z fi- da.*
 I:ABS medical:school-DAT go FUT
 ‘I’ll go to medical school.’
 (b) *Ruša gadadi- z cük ga- na.*
 girl:ERG boy- DAT flower give- AOR
 ‘The girl gave a flower to the boy.’

Examples of a development from allative to recipient functions can also be found in European languages. Thus, Latin *ad* ‘to’ has given rise to markers whose functions include that of a recipient in some Romance languages; compare also English *to*. Ex.

English

- (a) *I went to my teacher.*
 (b) *I spoke to my teacher.*

The preposition *yu* of Pre-Archaic Chinese (fourteenth–eleventh centuries BC) had both an allative and a dative meaning. Alain Peyraube (p.c.) considers it more likely that the dative meaning preceded the allative one in time; that is, we might be dealing with a counterexample to the present grammaticalization. See also Heine (2011c).

In a number of languages there is a polysemy set including allative, benefactive, purpose, and recipient functions, or some part of these functions; for example, all these functions are covered by the postposition ‘the’ of the Palula language of northern Pakistan (Liljegren 2016: 186–7). We hypothesize that underlying this set there is a chain of grammaticalization typically having the following form: ALLATIVE > BENEFACTIVE > RECIPIENT/PURPOSE.

Note that ALLATIVE itself is the target of other concepts; see ARRIVE; GO TO; SEE.

ALLATIVE > (7) SWITCH-REFERENCE

In geographically related but genetically remote languages of northern Australia the allative case marker comes to be used as a switch-reference marker in subordinate clauses whereby it is affixed to non-inflectional verbs such as coverbs, preverbs, or verbal particles (e.g. in Jaminjung and Wardaman), or to nonfinite verb forms (Schultze-Berndt 2005; 2006; McConvell and Simpson 2009; 2012).

Thus, the allative suffix *-bina* of the Jaminjung language has taken over the function of a switch-reference marker encoding coreference of the subject of the subordinate clause with an object (or, generally speaking, the undergoer) of the main clause as well as simultaneity of the verb situation in the subordinate clause with the verb situation in the main clause. Ex.

Jaminjung (Eva Schultze-Berndt, p.c.)

- (a) *gud ga-ngga=na burduj wagurra-bina.*
 off 3:SG;GO.PRES=NOW up rock-ALL
 ‘(the kangaroo) now jumps off, up on the rock.’
- (b) *gurrija-bina waj yirrurr-unga-ny.*
 digging-ALL leave 1:PL.EXCL > 3:PL-leave-PAST
 ‘We had left them digging.’

In the Garrwa language of northern Australia, the allative marker *-rri*, *-yurri*, or *-kurri* has given rise to a different subject marker (DS) when used with derived predicate nominals. Ex.

Garrwa (Mushin 2018: 267)

- manku ngayu wilina yanyba-kurri yalu-ngi.*
 hear 1:SG:NOM outside talk-DS 3:PL-DAT
 ‘I hear (them) talking to them outside.’

Likewise, in the Pama-Nyungan language Warlpiri, the allative marker *-kurra* has taken over the function of a switch-reference marker (Hale 1982: 290–4; 1994; Simpson & Bresnan 1983; Simpson 1988; 1991: 314ff.; Schultze-Berndt 2005).

This pathway is possibly the result of areal spread within Australia. Schultze-Berndt (2005) provides evidence for it in the following Australian languages: Wardaman (Non-Pama-Nyungan; cf. Merlan 1994: 287), Ngumpin languages (Pama-Nyungan, Ngarinyman; Jones 1994), Bilinarra (Pama-Nyungan; Nordlinger 1990: 32; 1998: 165), Jaru (Pama-Nyungan; Tsunoda 1981: 174–5), Kaititj (Arandic, Pama-Nyungan; Austin 1981: 326), Wagaya (Pama-Nyungan; Breen 1976: 592; Austin 1981: 327), Jingulu (Mirndi, Non-Pama-Nyungan; Austin 1981: 328; Pensalfini 2003).

Conceivably a related process took place in some Omotic languages of northeastern Africa. In the Maale language of southwestern Ethiopia, the morpheme *-é(-)m* marks different subjects and could be related to the dative morpheme *-m*, and in the related Bench language of southwestern Ethiopia; note that the suffix *-m* is used both as a different subject marker and a dative case morpheme (Treis 2012: 99). Dative (RECIPIENT) markers are frequently derived from allative markers; *see* ALLATIVE > RECIPIENT.

This appears to be a grammaticalization process whereby the use of a marker for spatial relations is extended to express syntactic relations within the text.

ALLATIVE > (8) TEMPORAL

Archaic Chinese *xiang*, allative directional preposition > Early Modern Chinese *xiang*, preposition introducing time (Long et al. 2012). German *zu* ‘to’, allative preposition > temporal preposition. Ex.

German

- (a) *Komm zu mir!*
come to me
‘Come to me!’
- (b) *Er kommt immer zum Wochenende*
he comes always to:the weekend
‘He always comes at the weekend.’

Albanian *për* ‘to’, directional preposition > ‘in’, ‘within’, temporal preposition. Ex.

Albanian (Buchholz et al. 1993: 403)

për tri javë
(to three weeks)
‘in/within three weeks’

Lezgian *-z* ‘to’, direction marker (nominal suffix) > temporal marker. Ex.

Lezgian (Haspelmath 1993: 88–9)

- (a) *Zun medinstitutdi- z fi- da.*
I:ABS medical:school-DAT go-FUT
‘I’ll go to medical school.’
- (b) *M. Hažiev 1958 = jisa- N 22 = martdi-*
M. Hažiev 1958 = year- GEN 22 = March-

z *kečmiš* xa- na.
 DAT dead become-AOR
 'M. Hažiev passed away on 22 March 1958.'

This grammaticalization appears to be an instance of a more general process whereby spatial concepts, including motion in space, are used as structural templates to express temporal concepts; *see also* ALLATIVE > UNTIL; ABLATIVE; BEHIND; IN; LOCATIVE. Note that ALLATIVE itself is the target of other concepts; *see* ARRIVE; GO TO; SEE.

ALLATIVE > (9) UNTIL (TEMPORAL)

Chinese *dao* 'to' > 'until'. Ex.

Chinese (Alain Peyraube, p.c.)

Yao deng dao liu dian cai zou.
 must wait until six hour then leave
 '(We) must wait until six before leaving.'

Middle High German *bī ze* (= *bei zu*) 'with to' > *bis* 'until'; Russian *do* 'to' > 'until'; Croatian *do* 'to' > 'until'; Bulgarian *do* 'to' > 'until'; Arabic *ʔilaa* 'to' > 'until' (Haspelmath 1997b: 67). Lezgian *-ldi*, superdirective marker 'onto', nominal suffix > 'until', temporal marker. Ex.

Lezgian (Haspelmath 1993: 101–2)

- (a) *Allahquli ruša- n diqet wiče-*
 Allahquli girl- GEN attention self-
ldi č'ugwa- z ala^h- zawa- j.
 SRDIR draw- INF strive- IMPFV- PAST
 'Allahquli was trying to draw the girl's attention to himself.'
 (b) *Wun i č'awa- ldi hina awa- j?*
 you:ABS this time- SRDIR where be:in- PAST
 'Where were you until now?'

This grammaticalization appears to be an instance of a more general process whereby spatial concepts, including motion in space, are used as structural templates to express temporal concepts; *see also* ALLATIVE > TEMPORAL; ABLATIVE; BEHIND; FRONT; IN; INTERIOR; LOCATIVE. Note that ALLATIVE itself is the target of other concepts; *see* ARRIVE; GO TO; SEE.

ALONE > (1) ONLY

Archaic Chinese *du* 'alone, lonely' > *du* 'only'. English *alone*. Ex.

English

- (a) *Susie was alone in the house.*
 (b) *Among my friends, Susie alone smokes.* (Anonymous reader)

German *allein* 'alone' > *allein* 'only'. Ex.

German

- (a) *Ich bin allein zu Hause.*
 I am alone at home
 'I am alone at home.'
- (b) *Allein wegen dem Duft mag ich Blumen*
 alone because:of the smell like I flowers
 'I like flowers only because of the smell.'

Bulgarian *samó* 'alone', adjective (NEUT:SG) > *sámo* 'only', adverbial. Ex.

Bulgarian

- (a) *Deteto e samó v momenta.*
 child:the is alone:NEUT:SG in moment:the
 'The child is alone at the moment.'
- (b) *Ivan jade sámó kiselo mljako za zakuska.*
 Ivan eat:3:SG:PRES alone:NEUT:SG yogurt for breakfast
 'Ivan has only yogurt for breakfast.'

Basque *bakarrik* 'by oneself' is attested from the fifteenth century, but only from the seventeenth century is it attested as meaning 'only' (anonymous reader; Sarasola 1996: 95). Ex.

Basque (anonymous reader)

- (a) *bakarrik etorr-i d-a.*
bakar- rik etorr- i d- a
 alone- ADVL come- PFV PRES- AUX
 'He has come by himself.'
- (b) *urtean behin bakarrik*
urte- an behin bakar:rik
 year- LOC once only
 'only once a year'

Swahili *peke yake* 'alone' (third person singular) > 'only'. Ex.

- (a) *A- na- kaa peke yake.*
 C1- PRES- stay alone
 'He lives alone.'
- A- na- taka chai peke yake.*
 C1-PRES- want tea only
 'He wants tea only.'

More research is needed on the exact nature and the genetic and areal distribution of this process. *See also* ONE.

ALONE > (2) REFLEXIVE

In Maori, the adverb (*an*)*ake* 'alone' constitutes one of the means used for expressing reflexivity (Moyse-Faurie 2008: 138). Ex.

Maori (Bauer 1997: 636; Moyse-Faurie 2008: 138)

I tapahi a Marama ia ia anake.
 PERF cut ART:PERS Marama OBL 3:SG alone
 ‘Marama cut herself.’

The adverb *hage* ‘alone’ of the Fagauvea language of New Caledonia serves as a reflexive marker in preverbal position (Moyse-Faurie 2008: 138). Ex.

Fagauvea (Moyse-Faurie 2008: 138)

E hage matea ie ia a cica.
 IMPFV alone admire ABS 3:SG ART:PERS dad
 ‘Dad admires himself.’

The Taba language of Makian Island uses the marker *do* ‘alone’ both as an intensifier and a reflexive marker in transitive constructions (Bowden 2001: 166–8; Moyse-Faurie 2008: 140–1). Chamorro *maisa* ‘alone’ > intensifier and reflexive (Topping 1973: 271; Moyse-Faurie 2008: 141). In Bislama PE of Vanuatu, the marker *wan* ‘one, alone’ (< English *one*) functions both as an intensifier and a reflexive. Ex.

Bislama PE (Tryon 1987: 182; Moyse-Faurie 2008: 141)

Em i sutum em wan.
 3:SG PRED shoot.TR 3:SG one
 ‘He shot himself.’

Kusaiean (Kosraean) *sifac*, intensifier + *na* ‘just, alone, very’ > *sifac na*, adverbial and adnominal intensifier and reflexive marker (Lee 1975: 106; Moyse-Faurie 2008: 141).

Note also that in the Sqliq variety of Atayalic languages of northern Taiwan, the form *nanak* is used both as a reflexive and a particle meaning ‘only’ (Long et al. 2012).

This pathway is found mostly in Austronesian, and most of all in Oceanic languages. That it also occurred in the pidgin–creole Bislama is presumably the result of contact-induced grammaticalization (see Heine and Kuteva 2005).

It would seem that this pathway is likely to involve a grammaticalization chain ALONE > INTENSIFIER > REFLEXIVE – that is, that there is an intermediate stage of intensifier use; compare INTENSIFIER > REFLEXIVE.

ALREADY > IAMITIVE

Many examples with the form *sudah* in Indonesian are translated in English by *already* and are also used as a perfect (see IAMITIVE > PERFECT), as in (a). The same form functions as an iamitive when used with a “natural development predicate” (that is, “a predicate which becomes true sooner or later under normal circumstances”; Dahl and Wälchli 2016: 328); see (b). Ex.

Indonesian (Olsson 2013: 5, 18)

- (a) *Kecil-kecil, si Ali sudah pacaran.*
 young-young DIM Ali already date
 ‘Although young, Ali already has a girlfriend.’
- (b) *Kamu tidak bisa memakan-nya. itu sudah busuk.*
 you not can eat-it that IAM rotten
 ‘You cannot eat it. It is rotten.’

The Akie language of north-central Tanzania has an ‘already-perfect’, expressing an event that occurred earlier than expected. This aspect, presumably a iamitive, is formed by means of the auxiliary *rààk* ‘be ready, have already done’, a grammaticalized form of the verb *raak* ‘finish’, that takes the following main verb in the subjunctive mood (König et al. 2015: 61–2).

According to Olsson (2013) there are a number of grams that function in a way similar to Indonesian *sudah*, such as Thai *lěew*, Vietnamese *đã* and *rôi*, Central Khmer *ban*, Lao *laev*, Paraguayan Guaraní-*ma*, and Yoruba *tí*.

The difference between IAMITIVE, ALREADY and COMPLETIVE is frequently unclear and the reader is therefore advised to also check under COMPLETIVE.

More data are needed to establish the crosslinguistic significance of this pathway. Note that markers for ‘already’ are frequently coded as adverbs, and a grammaticalization pathway from adverb to tense or aspect marker is well established; compare NEAR > AVERTIVE, PROXIMATIVE; TOMORROW > FUTURE; YESTERDAY > PAST. *See also* FINISH > IAMITIVE; IAMITIVE > PERFECT.

ALSO > NP-AND

Proto-Indo-European **eti* ‘also, too’ > Latin *et* ‘also, and’, Slavic *i*: > ‘and’ (Giacalone Ramat and Mauri 2011: 657). Ancient Turkic *taqə* (*taq-* ‘combine’ + *ə*, adverb suffix) (> Kazak (Turkic) *taǵə* ‘too, and, still’, adverb) > Kazakh *da/de/ta/te*, coordinating particle (Long et al. 2012).

Cayuga *hni* ‘also’, ‘too’ > *hni*, noun-phrase coordination conjunction. Ex.

Cayuga (Mithun 1988: 341–2)

- (a) *Akitakrá hni’ shə nyó: n’atə:tá:ke:.*
 I:fell also as far I:came:back
 ‘I fell on the way back, too.’
- (b) *Junior, Helen, Hercules hni’*
 Junior Helen Hercules also
 ‘Junior, Helen, and Hercules’

Khwe *tama-xa* ‘also’, adverbial particle > *tama-xa* ‘and’, NP-conjoining particle, added to both conjunct constituents. Ex.

Khwe (Treis 2000b: 76; Köhler 1989: 182, 268)

- (a) *Gòává-ń tama-xa //’án- a- ko té hĩ.*
 Mbukushu-C:PL also settle- JUNC- CONV be- PAST
 ‘The Mbukushu also lived there.’

- (b) /*Giriku- n tama-xa Kwáŋari-n tama-xa ...*
 |Giriku- C:PL also Kwangali- C:PL also
 ‘the |Giriku and the Kwangali ...’

This appears to be an instance of a more general process whereby adverbial categories are pressed into service as coordinating elements.

See Mithun (1988) and Treis (2000b) for more details on this grammaticalization; *see also* COMITATIVE; DUAL; TWO.

VP-AND > (1) S-QUESTION

The present pathway constitutes one of the four main processes that have been identified as leading to the emergence of polar question markers (Metslang et al. 2017: 501; *see also* Bencini 2003).⁶ In this pathway, the source of grammaticalization is most commonly a coordinating conjunction (‘and’), but also forms for ‘also’ or ‘together’ (cf. ALSO > NP-AND), typically appearing on the left periphery of an utterance; *see also* NEGATION, OR > S-QUESTION.

Metslang et al. (2017: 501) state that “interrogative particles of conjunctive origin are widespread in the Baltic region, found in e.g. Lithuanian, Latvian, Latgalian, Estonian, and Livonian”. The source meaning of the interrogative particles *biau* ~ *bau* and *be* ~ *begu* ~ *beg* ~ *bes* of Old Written Lithuanian was ‘and’, and the same applies to modern Lithuanian *er* and *ar*. Ex.

Lithuanian (Metslang et al. 2017: 502)

Ar tū buvāi vākar miestè?
 Q you:SG be:PAST:2:SG yesterday city:LOC
 ‘Were you in the city yesterday?’

In the earlier Latvian written language and dialects, the form *ar* ‘together’ also occurred as an interrogative particle. The Estonian conjunction *ja* ‘and’ can also function as a question marker; interrogative uses of *ja* can be found in the written language corpus from the 1890s onward (Metslang et al. 2017: 504). The primary interrogative particle *kas* of Estonian developed in the seventeenth and eighteenth centuries, its original meaning being ‘also’, ‘together’. The grammaticalization of this connective into an interrogative particle was connected to its becoming fixed on the left periphery of an utterance (Metslang et al. 2017: 502). Metslang et al. (2017: 501) describe this pathway thus:

Coordinating conjunctions or connective particles are used to offer a conjectured continuation of the preceding text; when confirmation of the conjecture is expected

⁶ The four sources are (a) markers of coordination (‘or’, ‘and’, ‘also’, ‘but’), typically on the left periphery of an utterance, (b) markers of subordination (insubordination of complementizers ‘if’, ‘whether’), typically on the left periphery, (c) markers of alternation (‘or not’, ‘or’, ‘not’), typically on the right periphery, and (d) markers of epistemic modality (‘perhaps’, ‘maybe’). Underlying most of the processes concerned there seems to be a presupposition to the effect that the speaker is seeking confirmation from the hearer on the truth value of an utterance (Metslang et al. 2017: 494, 514).

from the interlocutor, a conjectural question develops, the form of which may then change into that of a neutral question. (Metslang et al. 2017: 501)

See also NEGATION, OR, PERHAPS > S-QUESTION.

VP-AND > (2) SUBORDINATOR

Archaic Chinese *er*, VP-coordinating conjunction > Archaic Chinese *er*, subordinating conjunction linking adverbial phrases with their head verbs. In Archaic Chinese, *er* could also be used to introduce concessive, conditional, reason, or purpose clauses (Long et al. 2012). Tsou *ho* ‘and, also’, coordinating conjunction > *ho*, marker of adverbial clauses (Long et al. 2012).

That coordinating conjunctions ‘and’ may come to be used as subordinating conjunctions has been demonstrated by Harris and Campbell (1995: 290). The Mingrelian coordinating conjunction *da* ‘and’ has developed into a conditional clause marker, and Mingrelian *do* ‘and’ can be used as the temporal conjunction ‘as soon as’. Similarly, the coordinating conjunction *ta* ‘and’ of !Xun (N1 dialect) serves as a marker of cause clauses but may also introduce other kinds of adverbial clauses.

!Xun, N1 dialect (Heine and König 2015)

- (a) *yà-ndu'à ke !xòlù dǒngí ta diisá ta 'ú.*
 C1-DEM PAST mount donkey and be:slow and go
 ‘He rode the donkey slowly.’
- (b) *Yà /oa tci ta yà hía ≠èhi.*
 C1 NEG come and C1 PROG be:sick
 ‘He doesn’t come because he is sick.’

Such context-induced uses appear to be not uncommon in a number of languages, but it is not entirely clear whether, or to what extent, VP-AND markers are really conventionalized to subordinating conjunctions. In any case, this grammaticalization appears to be part of a more general process whereby markers of clause coordination give rise to subordination markers.

ANDATIVE > EVIDENTIAL, DIRECT

Direct evidentiality is typically associated with the full commitment of the speaker. The present pathway, postulated by Tournadre (1996), Oisel (2013), and Mélac (2014), among others, differs from many other processes leading to the rise of evidentials in that its source is not suggestive of evidence based on visual or non-visual sense information (cf. SEE > EVIDENTIAL, DIRECT; see also Aikhenvald 2004; 2011; 2018a).

Lhasa Tibetan possesses a DIRECT EVIDENTIAL marker (direct perception aorist verbal suffix *-song*) which comes from the archaic verb *song* (‘to go’). The suffix *-song* was an andative (translocative) suffix in Classical Tibetan, and its meaning shifted to direct evidentiality in Modern Tibetan (Eric Mélac, p.c.; Mélac 2014). Ex.

Lhasa Tibetan (Eric Mélac, p.c.; Tibet Student Corpus)

bu.mo=s rta cig bzhon- song
 daughter=ERG horse INDEF:SG ride- AOR:EVID
 ‘My daughter rode a horse.’ (= ‘I saw my daughter ride a horse.’)

In Kham, another Tibetic language, the aorist direct evidential suffix *-thal* appears to be etymologically related to a verb for ‘go’ in Classical Tibetan. In Dulong, a Sino-Tibetan language of China, the verb *jĩ* ‘go’ has grammaticalized into an auxiliary expressing direct evidentiality (LaPolla 2003: 679). Ex.

Dulong (LaPolla 2003: 679)

àŋ tẽ kà:i jĩ.

he AGT eat AOR:EVID
 ‘He ate.’ (= ‘I saw him eat.’)

The present pathway is proposed by Eric Mélac (p.c.; see also Aikhenvald 2004; Oisel 2013), who suggests that its distribution might be contact-induced. More research is needed in support of this pathway, in particular on what the nature of the direct evidence exactly is, and on the question of whether the source of grammaticalization was really an andative form, as Mélac argues, or rather a verb for ‘go’, as the data above suggest. Note that andatives are commonly derived from a motion verb for ‘go’; *see* GO > ANDATIVE.

ANTICAUSATIVE > PASSIVE

!Xun /'é (‘body’, noun > reflexive marker >) anticausative marker > passive marker. Ex.

!Xun, N1 (Heine and König 2015)

- (a) *Ma ke g//èà mí /'é ke àngòlà.*
 1:SG PAST bear my self in Angola
 ‘I was born in Angola.’
 (b) *g//ú má ke tchì ká'ŋ /'é ke mí.*
 water TOP PAST drink its self by 1:SG
 ‘The water has been drunk by me.’

This grammaticalization is well documented; it has been discussed in particular by Kemmer (1993: 151ff., 197); for details, see there and also Faltz ([1977] 1985) and Heine (2000). Usually it has been described as involving “middle” forms as a source, but the notion “middle” is not without problems, essentially because it does not appear to refer to a clearly delineable grammatical function. Concerning the evolution from anticausative uses to passive ones in early Romance, see Michaelis (1998). Reflexive markers constitute one common source for anticausative markers; hence, there appears to be a fairly wide-spread, more general pathway REFLEXIVE > ANTICAUSATIVE > PASSIVE; *see* REFLEXIVE > PASSIVE and also under BODY; HEAD.

Apprehensive, *see* LEST

AREA ('area', 'region') > LOCATIVE

Kpelle *pele* 'area', 'way', noun > 'around', postposition (Westermann 1924: 12). Imonda *la* 'area', noun > 'around', locative adverbial. Ex.

Imonda (Seiler 1985: 43)

ed-la-m ed li-f.

PX-area-LOC PX lie-PRES

'It is around there.'

This grammaticalization appears to be an instance of a more general process whereby nouns that imply some spatial reference in their meaning may give rise to locative markers (Heine 2011c); compare HOME; HOUSE; PLACE; SIDE. More research is needed on the genetic and areal distribution of this process.

'Arm', *see* HAND

ARRIVE ('arrive at', 'reach') > (1) ALLATIVE

Archaic Chinese *yu* 'go', verb > *yu*, preposition introducing a direction or end point (Long et al. 2012). Chinese *dào* 'reach', 'arrive', verb > *dào* 'to', preposition. Ex.

Chinese (Hagège 1975: 156; Alain Peyraube, p.c.)

(a) *Tā dào le Zhongguó.*

he arrive PERF China

'He arrived in China.'

Tā dào Zhongguó qù le.

he to China go CRS

'He went to China.'

Ewe *de* 'reach', transitive verb > 'toward', preposition (Lord 1989: 252; Heine et al. 1991a: 187ff.). Zande *da* 'reach', 'arrive', verb > 'as far as', 'until', preposition (Canon and Gore [1931] 1952: 23f.). French *arriver*, verb > Haitian CF *rivé* 'to' (movement to a place; Sylvain 1936: 131). Ex.

Haitian CF (Sylvain 1936: 131; Hall 1953: 55)

Li broté tut pitit-li rive Pako.

(3:SG take all child-3:SG to Pako)

'She moved all her children to Pako.'

This appears to be an instance of a process whereby process verbs on account of some salient semantic property give rise to grammatical markers expressing case relations (Heine 2011c); compare COME FROM; FOLLOW; GIVE; GO TO; LEAVE; SEE; TAKE.

ARRIVE ('arrive at', 'reach') > (2) PI-POSSIBILITY (Ability)

Koranko *ké* 'reach', 'arrive at', verb > 'can', 'be able', modal auxiliary. Ex.

Koranko (Raimund Kastenholtz, p.c.)

- (a) *Kélaye ára ké fɔɔ bà*
messenger TAM reach already Q
'Has the messenger already arrived?'
- (b) *ń téq ké táa-la...*
1:SG NEG reach go- at
'I am not able to walk....'

Mandarin Chinese *dào* 'arrive', verb of motion > *-dào* 'manage to', 'succeed', ability marker. Ex.

Mandarin Chinese (Li and Thompson 1981: 66)

<i>kàn-</i>	<i>dào</i>	<i>zhǎo-</i>	<i>dào</i>
see-	arrive	search-	arrive
'succeed in seeing'		'succeed in searching'	

Conceivably, this pathway can be grouped together with (>) ARRIVE > SUCCEED. More research is needed on this process.

ARRIVE ('arrive at', 'reach') > (3) SUCCEED

Mandarin Chinese *dào* 'arrive', verb of motion > *-dào* 'manage to', 'succeed', ability marker. Ex.

Mandarin Chinese (Li and Thompson 1981: 66)

<i>kàn-</i>	<i>dào</i>	<i>zhǎo-</i>	<i>dào</i>
see-	arrive	search-	arrive
'succeed in seeing'		'succeed in searching'	

Lahu *gà* 'reach', 'arrive at' (after a main verb) > 'manage to do' (Matisoff 1973: 233). More research is needed on the genetic and areal distribution of this pathway. *See also* ARRIVE > ABILITY.

ARRIVE ('arrive at', 'reach') > (4) UNTIL (TEMPORAL)

Archaic Chinese *dao* 'arrive at', verb > *dao* 'until', preposition (Long et al. 2012). Archaic Chinese *zhi* meaning 'arrive at' > *zhi* 'until' (Alain Peyraube, p.c.).

Southern Zhuang *thəŋ*⁵ 'get to, arrive at', verb > *thəŋ*⁵ 'until', adposition (Long et al. 2012). Fuzhou dialect of Min *gou*²¹³ 'arrive at', verb > *gou*²¹³, preposition introducing temporal end point (Long et al. 2012).

Khmer *dəl* 'arrive' > 'until', adverbial subordinator (Bisang 1998b: 769). Zande *da* 'reach', 'arrive', verb > preposition 'as far as', 'until' (Canon and Gore [1931] 1952: 23f.). Bulu *kui* 'reach', 'arrive', verb > *akui* 'until', 'up to', preposition (Hagen 1914: 252). Kikuyu *kinya* 'arrive at', 'come', intransitive verb > *kinya* 'until', temporal conjunction. Ex.

Kikuyu (Benson 1964: 219–20)

Ikara hahā kinya nj-ok-e.

(stay:IMP here arrive 1:SG-come-SUBJUNCT)

‘Stay here till I get back.’

Tswana *go fitlhela* (INF arrive) ‘arrive’, verb > ‘until’, preposition (Creissels in prep.a).

This grammaticalization appears to be part of a more extensive chain: ARRIVE > ALLATIVE > UNTIL; compare ALLATIVE; ARRIVE > ALLATIVE. See also ABLATIVE > SINCE; IN; LOCATIVE.

B**BACK (body part) > (1) AFTER**

Changting dialect of Hakka *pue*⁵ ‘back’, body part noun > *pue*⁵ *le*⁵ ‘back part, behind’ > *pue*⁵ *le*⁵ ‘after’ (Long et al. 2012). Korean *twi* ‘back, anus’, noun > *-twiey* ‘later, after’, temporal posterior postposition (Rhee 2016c). Korean *hwu* ‘back’, noun > *-hwuey* ‘after’, temporal posterior postposition (Rhee 2016c). Thai *lǎŋ* ‘back’, noun > *lǎŋ -càag* (lit.: ‘back from’) adverbial subordinator ‘after’ (Bisang 1998b: 773).

Icelandic *bak* ‘back’, body part noun > *bak(i)* ‘behind’, ‘after’. Ex.

Icelandic (Stolz 1992a: 16)

bak jól-um

after Christmas-DAT:PL

‘after Christmas’

In the Tibeto-Burman language Mongsen Ao of northeast India, the bound root of the relational noun *tā-sīn* ‘RL-back’ is developing a temporal meaning equivalent to ‘after VERB’ in sequential converb constructions (Coupe 2016). Ex.

Mongsen Ao (Coupe 2007: 449; Coupe 2016)

tuŋət li-əɬ sin á-hlú jīm.

3:DU stay-SEQ BACK NRL-field cultivate:PAST

‘After living [together], they cultivated fields.’

Bambara and other Manding varieties *kó* ‘back’, noun > *kó* ‘behind’, ‘after’, postposition (Creissels in prep.b).

This process appears to be an instance of a more general process whereby body parts are grammaticalized to spatial concepts which again are used to also express temporal concepts; compare BEHIND > AFTER.

BACK (body part) > (2) BEHIND

Anren dialect of Gan *p‘e* ‘back’, body part noun > *p‘etə* ‘behind’. Meixian dialect of Hakka *poi* ‘back’, body part noun > *-poi* ‘behind, outside, the other

side'. Changting dialect of Hakka *pue*⁵ 'back', body part noun > *pue*⁵*le*⁵ 'back part, behind' (Long et al. 2012).

Modern Chinese *bei* 'back' > *beihou* 'behind' (Alain Peyraube, p.c.).

Korean *twi* 'back, anus', noun > *-(uy)twiey* 'behind, in the back of', posterior postposition (Rhee 2016c). Icelandic *bak* 'back', noun > *(að) bak(i)* 'behind', 'after' (Stolz 1992a: 16). Halia *muri* 'back' > BACK-REGION (Svorou 1994: 75, 85). Tzotzil *pat(il)* 'back', 'bark', 'shell' > 'outside', 'behind', locative marker (de León 1992: 573, 578). Colonial Quiché *ih* 'back', body part noun > *-ih* 'behind', locative marker. Ex.

Colonial Quiché (Dürr 1988: 58f.)

x-e-be *chi* *r-ih* *ri* *vmul*.
cpl-3:PL:ABS-go LOC 3:SG:ERG-back DEF rabbit
'They went after the rabbit.'

Moré *pōré* 'back', 'the opposite', noun > 'behind', adverb, postposition (Alexandre 1953b: 325). Kpelle *pol* 'back' > 'behind', 'beyond', postposition (Westermann 1924: 12). Maninka-mori *kó* 'back', noun > *kó* 'behind', 'after', postposition (Creissels in prep.b).

Kono *kó* 'back', noun > *kó* 'behind', 'in back of', locative adverb, postposition. Ex.

Kono (Donald A. Lessau, p.c.)

Eé *pááándé* *kóngóè* *kó*.
3:SG:TAM far:IDEO hill:DET behind
'It is behind the hill.'

Bambara *kó* 'back', noun > *kóʝê* (lit.: 'back at') 'behind', 'after', postposition. Ex.

Bambara (Donald A. Lessau, p.c.)

- (a) *ń* *fä* *kó*
1:SG father back
'my father's back'
à *yé* *misi* *nyini* *kùlu* *kóʝê*
3:SG TAM cow look:for hill behind
'He looked for the cow behind the hill.'

Baka *pε* 'back', inalienable noun, *pepe* 'back', alienable noun > *pε* 'behind', adverb, adposition. Ex.

Baka (Brisson and Boursier 1979: 391; Brisson 1984: 142; glosses provided by Christa Kilian-Hatz)

- (a) *pε-lè* *há* *ké*.
back-1:SG:POSS ASP ache
'I have a backache.'
(b) *ʔá* *te* *te* *pé*
3:SG:NAR fall with back:3:SG:POSS
'He is falling backward.'

Aranda *ingkerne* ‘back’, noun > adposition ‘behind’. Ex.

Aranda (Wilkins 1989: 315)

Re ingke-lhe-me atyenge- nge ingkerne.
 3:SG:SUBJ foot-go-NONPAST:PROG 1:SG:DAT- ABL behind
 ‘He’s walking behind me.’

Welsh *cefn* ‘back’, ‘stay’, ‘ridge’, ‘support’ (Evans and Thomas 1963: 80) > *tu cefn i* ‘behind’, adposition (Evans and Thomas 1963: 80; Wiliam 1960: 37). Imonda *mās* ‘back’ > ‘behind’, postpositional noun (Seiler 1985: 40). Gimira *ges*⁴ ‘back’ > postposition *ge⁴šn⁵* (BACK case:marker) ‘after’, ‘behind’ (Breeze 1990: 38).

Kakataibo *kaxu* ‘back’, body-part noun > ‘behind’, postposition (Zariquiey 2018: 353). In the Tibeto-Burman language Mongsen Ao of northeast India, the bound root of the relational noun *tā-sīn* ‘RL-back’ is currently in the process of grammaticalizing as a postposition (Coupe 2007; 2016). Ex.

Mongsen Ao (Coupe 2007: 188; 2016)

tshəlun-la ifu akhu-la sin ku mən-əɬ
 fox-F DISTAL tiger-F BACK LOC sit-SEQ
 ‘Fox, having sat down behind Tiger, ...’ (< ‘at Tiger’s back’)

This grammaticalization appears to be an instance of a more general process whereby certain body parts, on account of their relative position, are used as structural templates to express deictic location; compare BELLY; EYE; FACE; FOOT; HEAD. Concerning some of the implications of this process, see Aristar (1991; 1999).

BACK (body part) > (3) CAUSE

Tatar *arqa* ‘back’, body part noun > *arqasānda* ‘at the back of’ > *arqasānda* ‘for, because of’, postposition of reason (Long et al. 2012). Moré *pōré* ‘back’, ‘the opposite’, noun (> postposition ‘after’) > *pōrē* ‘because of’, postposition of cause. Ex.

Moré (Alexandre 1953b: 325)

Eb zaba tāba pagha:pōorē.
 they quarrel woman because:of
 ‘They quarreled because of a woman.’

Wolof *ginnaaw* ‘back’, body part noun > *ginnaaw* causal ‘since’, subordinating conjunction (Robert 1999; 2004). Shona *musana* ‘lumbar region’, ‘back’ > *pa mu sana pa (kuti)* (lit.: ‘in back of (to say)’) ‘on account of’, ‘for the reason that’, prepositional or conjunctive element (Marconnes 1931: 220).

So far, only African examples have been found. It would seem, however, that we are dealing with a more general process whereby terms for body parts give rise to spatial markers that again may develop into markers for more abstract grammatical relations; compare HERE; LOCATIVE; PLACE.

BACK (body part) > (4) EARLIER

English *back*, body part noun > adverb; for example, *three years back*. Nanay *xamasi* ‘back’ > *xamasi* ‘ago’ (Haspelmath 1997b: 92). Estonian *tagasi* ‘back’ > *tagasi* ‘ago’. Ex.

Estonian (Haspelmath 1997b: 93)

Minu poeg naases kaks tundi tagasi.
 my son returned two hour:PARTV back
 ‘My son returned two hours ago.’

Bulu *mvus* ‘back’, body part noun > *mvus*, ‘back’, ‘ago’, temporal adverb. Ex.

Bulu (Hagen 1914: 268)

Melu metane mvus
 (days five back)
 ‘five days ago’

This grammaticalization appears to be an instance of a more general process whereby certain body parts, on account of their relative position, are first used as structural templates to express deictic location and then develop further into temporal markers; compare BACK > AFTER, BACK > THEN.

BACK (body part) > (5) THEN

Anren dialect of Gan *p’ē* ‘back’, body part noun > *p’etə* ‘behind’ > *p’etə* ‘later, then’ (Long et al. 2012). Kikuyu *thutha* ‘back’, ‘behind’, ‘rear’ (noun class 14) > *thutha*, ‘afterward’. Ex.

Kikuyu (Barlow 1960: 189)

Nĩ-n-gũ-kw-ĩra thutha, tw-oima nja.
 ‘I shall tell you afterward, when we go outside.’

Kikuyu *thutha* ‘back’, ‘behind’, ‘rear’ (noun class 14) > *thutha*, ‘after’, temporal preposition. Ex.

Kikuyu (Barlow 1960: 189)

Thutha ũ-cio nd-a-na-coka gũ-tũ-ruma.
 ‘After that he did not again abuse us.’

Egyptian *r-s3* ‘toward the back of’ > *r-s3* ‘after’, temporal subordinator (Gardiner 1957: 134). Ewe *megbé* ‘back’, *é-megbé* (3:POSS-back) ‘his/its back’ > *émegbé* ‘then’, ‘thereafter’, adverb, conjunction. Bambara *kó* ‘back’, noun > *òkó* ‘then’, temporal adverb, mostly clause-initial. Ex.

Bambara (Kastenholz 1989: 100)

ò kó, à yé à ké sègi jù fě.
 then 3:SG TAM 3:SG do basket down at
 ‘Then she put it down into the basket.’

Moré *pōré* ‘back’, ‘the opposite’ > ‘then’, ‘thereafter’ (Alexandre 1953b: 325).

This grammaticalization appears to be an instance of a more general process whereby certain body parts, on account of their relative position, are first used as structural templates to express deictic location and then develop further into temporal markers; compare BACK > AFTER.

BACK (body part) > (6) UP (SPATIAL)

Akkadian *šērum* ‘back’ > *šēr* ‘on’ (Rubin 2005: 47). Susu *fari* ‘back’, ‘surface’ > ‘on’, ‘over’, ‘above’, postposition; *tebeli fari* ‘on the table’ (Friedländer 1974: 40). Mixtec *sī ki* ‘animal back’ > ‘over’, ‘on top of (for horizontal surfaces off the ground)’ (Brugman and Macaulay 1986; Lakoff 1987: 316). Ex.

Mixtec (Brugman and Macaulay 1986: 318)

Saà ndéčé sī ki itú.
bird fly animal:back cornfield
‘The bird is flying over the cornfield.’

Shuswap *ikní* ‘upper back’, ‘top’, ‘surface’ > TOP-REGION (Svorou 1994). This transfer has been described as being due to a zoomorphic metaphor, whereby the body of four-legged animals serves as a conceptual vehicle for spatial orientation (see Heine et al. 1991a: 126–7; Svorou 1988; 1994).

See also BACK > BEHIND; BELLY > IN.

BAD (‘bad’, ‘terrible’) > INTENSIVE

English *badly, terribly*: *I need it badly, He is terribly proud* (see Lorenz 2002). German *furchtbar* ‘terribly’ > intensive. Ex.

German

- (a) *Das ist furchtbar.*
that is terrible
‘That is terrible.’
- (b) *Der Pudding schmeckt furchtbar gut.*
the pudding tastes terribly good
‘The pudding tastes terribly good.’

Baka *sítí* ‘evil’, ‘malice’, ‘bad’, ‘malignant’ > intensive ‘very’, adverb. Ex.

Baka (Brisson and Boursier 1979: 431f.)

- (a) *ʔe ko sítí.*
3:SG very bad
‘That’s very bad.’
- (b) *bo ké bà meébèlà sítí na méè.*
person DEM do work bad INF DO
‘This man works very well.’

Siroi *ɲayo* ‘bad’, adverb > ‘very’, ‘extremely’, intensive. Ex.

Siroi (Wells 1979: 19)

<i>kuen</i>	<i>ɲayo</i>	<i>masken</i>	<i>ɲayo</i>
long	bad	far	bad
'extremely long'		'very far distant'	

Archaic Chinese *shen* 'severe, serious', adjective > *shen* 'very', intensive marker.

Cf. also Archaic Chinese *ku* 'cruel', adjective > Archaic Chinese *ku* 'excessive', adjective > Medieval Chinese *ku* 'very', intensive marker. Wanrong dialect of Chinese *ʂaŋ*⁵¹ 'hurt' > *ʂaŋ*⁵¹ 'very', intensive marker; *si*⁵⁵ 'dead' > *si*⁵⁵ 'very', intensive marker (Long et al. 2012).

This grammaticalization illustrates a more general process whereby adverbs denoting negatively valued qualities may become intensives; compare English *awfully*, *fearfully*, *frightfully*, *terribly*. In the course of this process they tend to lose their negative connotation and the emotional force they once had. This pathway differs from many others in that it may be short-lived, not uncommonly arising in a young generation of speakers and falling into disuse when these speakers grow older (Lorenz 2002: 143).

See also TRUE > INTENSIVE.

'Be', see COPULA

BEAT ('to beat', 'to hit', 'to strike') > PRO-VERB

Medieval Chinese *da* 'hit, beat', verb > Early Modern Chinese *da*, pro-verb (Long et al. 2012). Swahili *ku-piga* (INF-beat) 'beat', 'hit', verb > pro-verb. Ex.

Swahili

<i>ku-piga</i>	<i>picha</i>	<i>ku-piga</i>	<i>kelele</i>
to-beat	picture	to-beat	noise
'to make a photo'		'to make noise'	

Ewe *fo* 'beat', 'strike', 'hit', verb > *fo*, pro-verb. Ex.

Ewe

<i>fo</i>	<i>nú</i>	<i>fo</i>	<i>ɖa</i>
beat	mouth	beat	hair
'to speak, talk'		'to plait hair'	

This grammaticalization, whereby a frequently used action verb turns into a semantically empty predicate marker, has been mainly attested in African languages; see also DO > PRO-VERB.

'Become', see CHANGE-OF-STATE

BEGIN ('to begin', 'to start') > (1) FIRST (NUMERAL)

The notion of an ordinal numeral 'first' may be expressed in a number of languages by means of constructions involving verbs meaning 'begin/start'. In

some languages this usage has given rise to conventionalized terms for the numeral, for example, Swahili *ku-anza* (INF-begin) 'to start', verb > *-a kwanza* (of to:begin) '(the) first', ordinal numeral. Ex.

Swahili

- (a) *a- na- taka ku- anza.*
 C1- PROG- want INF- start
 'He wants to start.'
 (b) *mw- ezi w- a kwanza*
 C3- month C3- POSS first
 'the first month', 'January'

More research is needed on the areal and genetic distribution of this process; compare BEGIN > FIRST (TEMPORAL).

BEGIN ('to begin', 'to start') > (2) FIRST (TEMPORAL)

Swahili *ku-anza* (INF-begin) 'to start' > *kwanza* 'the first', 'first'. Ex.

Swahili

- (a) *a- li- anza ku-sali.*
 he-PAST-begin to-pray
 'He began to pray.'
 (b) *u- sali kwanza!*
 you-pray first
 'You pray first!'

Kikuyu *-amba* 'start', 'begin', 'be first', transitive and intransitive verb > *amba* 'first', adverb. Ex.

Kikuyu (Barlow 1960: 183)

amba ũ-ikar-e thĩ!
 'First sit down!'

The examples of this grammaticalization are taken from one language family only (Niger-Congo), but instances of incipient grammaticalization appear to exist in quite a number of languages; compare English *to begin with* in certain uses.

BEGIN ('to begin', 'to start') > (3) INCEPTIVE

Tatar *bafla-* 'begin', auxiliary > *bafla-*, inceptive marker. Kazak *basta-* 'begin' > *basta-*, inceptive marker (Long et al. 2012). English *start to* > inceptive marker; for example, *They started to laugh* (Hopper 1991: 23). Lingala *-banda* 'start' > *-banda*, ingressive auxiliary. Ex.

Lingala (Mufwene and Bokamba 1979: 244–6)

Kázi a-ko- banda ko- béta ndembó.
 (Kazi he-will- start to- play soccer)
 'Kazi will start playing soccer.'

While being conceptually plausible, more examples are needed on the genetic and areal distribution of this process, especially examples suggesting that the

process has proceeded beyond the stages of incipient grammaticalization. Nevertheless, this grammaticalization appears to be an instance of a more general process whereby process verbs are grammaticalized to auxiliaries denoting tense or aspect functions; compare COME TO; DO; FINISH; GO TO; KEEP; LEAVE; PUT.

BEHIND (SPATIAL) > AFTER

Lezgian *güğüna* 'behind' > *güğüniž* 'after' (Haspelmath 1997b: 61). Udmurt *beryn* 'behind' > *bere* 'after' (Haspelmath 1997b: 61). Hebrew *me-ṣāḥarey* 'behind' > *ṣāḥarey* 'after' (Aaron Rubin, p.c.). Abkhaz *-štax* 'behind' > *-štax* 'g'ə 'after' (Haspelmath 1997b: 61). Chinese *hou* 'behind', localizer > *hou* 'after' (Alain Peyraube, p.c.; Long et al. 2012). For further details, see Haspelmath (1997b: 61).

For evidence of this pathway from first language acquisition, see Diessel (2011: 132).

This grammaticalization appears to be part of a more extended chain: BACK > BEHIND > AFTER; compare BACK. At the same time, it is also an instance of a more general process whereby spatial concepts are used also to express temporal concepts; compare ABLATIVE; ALLATIVE; IN; LOCATIVE.

BELLY ('belly', 'stomach') > (1) IN (SPATIAL)

Hengshan dialect of Xiang *tæu* 'belly', body part noun > *tæu li* 'inside'. Meixian dialect of Hakka *tu* 'belly' > *tu'r* 'inside'. Liancheng dialect of Hakka *pəə tai* 'belly' > *pəə tai* 'inside' (Long et al. 2012). Nama *!nāab* 'belly', 'abdomen' > *!nā* 'in' (postposition). Ex.

Nama (Krönlein 1889: 243)

Nē sa ≠ gaob !na hā ḫūna kha tarena?

'What things are in your heart?'

Hausa *cikī* 'stomach' > *cikī* 'interior/inside of house' + *-n*, masculine genitive marker > *cikin* 'in', 'inside (of)', 'within' (Skinner 1973: 13; Philip Jaggard, p. c.); *cikin littāfi* 'in the book' (Cowan and Schuh 1976: 58). Moré *pugha* 'belly', 'interior' > 'in', 'inside', postposition (Alexandre 1953b: 327–8). Supyire *funɔ* 'belly' > *funɔ-i*, postposition 'inside' (Carlson 1991: 205).

Bambara *kónɔ* 'belly', 'stomach' > 'in', 'inside', locative adverb, postposition (Kastenholz 1989: 24, 49). Swahili **nda* 'stomach' + *-ni*, locative suffix > *ndani* 'in', 'inside'. Acholi *ii(c)* 'belly' > (*i*) 'in, into', preposition (Crazzolara [1938] 1955: 153f., 236). Baka *bu-* 'belly', inalienable noun, *bubu*, alienable noun > *bu-* 'interior of', derivational prefix. Ex.

Baka (Brisson and Boursier 1979: 32)

(a) *ʔé à ké à bú-é*

3:SG ASP hurt LOC belly-3:SG:POSS

'His stomach is aching.'

- (b) *ʔanà bu nda!*
 sweep belly house
 'Sweep the (inside of the) house!'
ʔé à nɔ́w à bu ngo.
 3:SG ASP run LOC belly water
 'He is running in the water.'

Mixtec *ini* 'stomach' > 'in' (Brugman and Macaulay 1986). Ex.

Mixtec (Brugman and Macaulay 1986: 318)

ni-kāžáa ini ndúčá.
 CPL-drown stomach water
 'Someone drowned in the water.'

Colonial Quiché *pam* 'stomach', noun > *-pa(m)* 'in', 'into', locative adposition. Ex.

Colonial Quiché (Dürr 1988: 58ff.)

maui nu-hox +bal, ri go chi nu- pam.
 NEG 1:SG:ERG-fornicate +INSTRN DEF exist LOC 1:SG:ERG-stomach
 'It is not the result of fornication that is within me.'

In the Tibeto-Burman language Mongsen Ao of northeast India, the root of the relational noun *tā-pūk* 'stomach' is developing an introessive meaning and is predicted to eventually grammaticalize as a new postposition (Coupe 2007; 2016). Ex.

Mongsen Ao (Coupe 2007: 188; 2016)

luŋ-pùk nə za-ə.
 stone-STOMACH ALL enter-SEQ
 'After going inside a cave, ...'

Perhaps interestingly, the same relational noun *tā-pūk* 'stomach' of Mongsen Ao is also developing a subessive meaning 'under' and is predicted to eventually grammaticalize as a new postposition (Coupe 2007; 2016). Ex.

Mongsen Ao (Coupe 2007: 188)

mi.ɿ ʔaŋ-pùk ku li-a-ù?
 ant.sp. foot-STOMACH LOC be-VSF-DEC
 'There is a large ant under [your] foot.'

Conceivably, this grammaticalization can be accounted for with reference to a zoomorphic metaphor. In accordance with this metaphor, the body of four-legged animals serves as a conceptual vehicle for spatial orientation whereby 'back' is conceptualized as 'above' (see BACK > UP) and 'belly, stomach' as 'below' (see Heine et al. 1991a: 126–7; Svorou 1988; 1994).

Bowden (1992: 36) found eight Oceanic languages where terms for ‘belly’ or ‘stomach’ appear to have given rise to markers for IN. This grammaticalization is an instance of a more general process whereby certain body parts, on account of their relative location, are used as structural templates to express deictic location (see Heine 2011c); compare, for example, BACK; BELLY; EYE; FACE; HEAD.

BELLY (‘belly’, ‘stomach’) > (2) IN (TEMPORAL)

Acholi *ĩĩ* (c) ‘belly’ > (*ĩĩ*) ‘in’, ‘into’, ‘at the time of’ (Crazzolara [1938] 1955: 153f., 236; Stolz 1992a: 24). Albanian *bark* ‘belly’ > ‘inside’, noun. Ex.

Albanian (Buchholz et al. 1993: 50f.)

në bark të javës
in belly ART week
‘in the middle of the week’

This grammaticalization appears to be a metaphorical extension of BELLY > IN (SPATIAL), whereby locative concepts serve as structural templates for temporal ones; compare BACK; EYE; IN; LOCATIVE.

BENEFACTIVE > (1) A-POSSESSIVE⁷

Arabic *li-*, benefactive preposition > *l(i)-*, genitive case marker. Ex.

Modern Arabic (Fischer and Jastrow [1977] 1991: 21, 46–8)

- (a) *li-l-bayti*
‘for the house’
(b) *al-cima:ratu l-hadi:θatu li-l-ǧa:micati*
‘the modern building of the university’

Baka *na*, benefactive preposition > possessive marker. Ex.

Baka (Christa Kilian-Hatz, p.c.)

- (a) *Ma ndé bèlà na wósè.*
1:SG without work BEN woman
‘I have no work for women.’
(b) *ǒngɔ na dindó a kà?*
dress POSS baby in where
‘Where is the baby’s dress?’

The marker *ɾæ*³³ of the Muya language of China serves both as a benefactive and an A-possessive marker (Long et al. 2012).

In a number of English-based creoles, prepositions derived from English *for* have given rise to A-possessive markers; for example, Nigerian PE (‘Anglo-Nigerian Pidgin’) *fɔ* ‘for’, benefactive/locative preposition (< English *for*) > ‘of’, marker of attributive possession. Ex.

⁷ A-POSSESSIVE (= marker of attributive possession; Heine 1997a) stands for what is commonly translated in English by ‘of’.

Nigerian PE (Mann 1993: 59)

Anti Karo bi di juniɔ sístà fɔ̃ mai papa.
 (aunt Karo is the younger:sister POSS my father)
 ‘Aunt Karo is my father’s younger sister.’

Historical evidence for this pathway comes, e.g. from the pidgins and creoles, in that the languages from which they are genetically derived use prepositions (English *for*, French *pour*), developing into possessive markers in the pidgins and creoles. French *pour* ‘for’, benefactive preposition > Tayo CF *pu*, marker of attributive possession. Ex.

Tayo CF (Kihm 1995: 239)

De frer pu mwa le ni mor
 two brother for me TAM CPL dead
 ‘My two brothers are dead.’

This is an example of a more general process whereby participant marking within the clause is extended to the syntax of the noun phrase. For more examples, see Heine (1997a); compare ABLATIVE > A-POSSESSIVE; LOCATIVE > A-POSSESSIVE; RECIPIENT > A-POSSESSIVE.

BENEFACTIVE > (2) PURPOSE

Archaic Chinese *wei* ‘help’, verb > *wei*, benefactive preposition > *wei*, marker of purpose (Long et al. 2012). Liancheng dialect of Hakka *vitu* ‘*yau?*’ serves as both a benefactive preposition and a purpose conjunction (Long et al. 2012). Bulgarian *za* ‘for’, benefactive marker > *za*, purpose marker. Ex.

Bulgarian

- (a) *Kupix mljako za decata.*
 buy:1:SG:AOR milk for children:DEF
 ‘I bought milk for the children.’
 (b) *Ima li nešto za jadene?*
 have:3:SG:PRES Q something for eating
 ‘Is there something for eating/to eat?’

English *for*, benefactive preposition > purpose preposition. Ex.

English

- (a) *I bought the mirror for Mary.*
 (b) *I bought the mirror for the bedroom.*

Yaqui *bečibo* ‘for’ > *bečibo*, purpose marker. Ex.

Yaqui (Lindenfeld 1973: 100)

- (a) *i- me baaʔam hu- me usi- m bečibo*
 this- PL water this- PL child- PL for
 ‘This water is for the children.’

- (b) *ini- me baaʔam hu- me usi-*
 this- PL water this- PL child-
m hiʔ i- ne beʕibo.
 PL drink- EXPECTED:ASP for
 ‘This water is for the children to drink.’

Rapanui (Easter Island) *mo*, benefactive preposition > purpose marker. Ex.

Rapanui (Chapin 1978: 145ff.)

- (a) *ina au ekō avai atu i te kai mo korua.*
 NEG I NEG give away ACC the food for you
 ‘I won’t give you any food.’
- (b) *He patu mai i te puaka mo*
 PAST corral here ACC the cattle PURP
ma’u kiruga ki te miro.
 carry into to the boat
 ‘(They) corralled the cattle in order to carry (them) onto the boat.’

Ewe *ná*, benefactive coverb (<*ná* ‘give’) > purpose preposition before inanimate complements.

Baka (Christa Kilian-Hatz, p.c.)

- (a) *ma ndé bèlà na wósé.*
 1:SG without work BEN woman
 ‘I have no work for women.’
- (b) *ma nè na látì ode.*
 1:SG here PURP sleep:VN NEG
 ‘I am not here (in order) to sleep.’

Benefactive markers may develop into dative (RECIPIENT) markers (*see* BENEFACTIVE > RECIPIENT). In a number of languages there is a polysemy set including allative, benefactive, purpose, and recipient functions, or some part of these functions; for example, all these functions are covered by the postposition *the* of the Palula language of northern Pakistan (Liljegren 2016: 186–7). We hypothesize that underlying this set there is a chain of grammaticalization typically having the following form: ALLATIVE > BENEFACTIVE > RECIPIENT/PURPOSE.

McGregor (in prep.: 18–19) found that in the Eastern Nyulnyulan languages Yawuru and Nyikina of northwestern Australia a verbal morpheme with the same shape as the dative postposition occurs as a marker of subordinate clauses for purpose. Furthermore, he observes that a grammaticalization from an original dative postposition to nominal purpose marker (among other things) has occurred in a number of other Australian languages. Whether these observations are relevant to the present pathway, or might be suggestive of a pathway RECIPIENT > PURPOSE, is a question that is in need of further research.

Wherever there is more evidence available it appears that the present grammaticalization is triggered by context expansion, whereby the use of benefactive markers is extended from human complements to inanimate or verbal complements (see Heine et al. 1991a); nevertheless, more diachronic data are needed to substantiate the directionality proposed (see also Yamaguchi 2004; Narrog 2014: 76–7).

BENEFACTIVE > (3) RECIPIENT

This grammaticalization, whereby benefactive markers develop into markers for typically human referents assuming the function, for example, of indirect objects, has been proposed in a number of works on grammatical evolution (see, e.g., Lehmann 1982; Heine and Reh 1984: 270; Heine et al. 1991a; cf. Lord 1993: 31–45).

Ewe *ná* ‘give’, verb > benefactive marker > recipient marker. Ex.

Ewe (Hünнемeyer 1985: 59)

- (a) *é- fi ga ná- m.*
 3:SG- steal money give- 1:SG
 ‘He stole money for me.’
- (b) *é- gblɔ- e ná- m.*
 3:SG say- 3:SG give- 1:SG
 ‘He said it to me.’ (*‘He said it for me.’)

In the Kabba language of the Central African Republic, the verb *kàrə* ‘give’ has been grammaticalized to a benefactive marker after transitive verbs like ‘crush’, ‘find’, or ‘sift’, but to a recipient marker when the preceding verb denotes ‘give’, ‘say’, ‘ask’, ‘tell’, ‘send’, or ‘want’ (Moser 2005: 284).

In a number of languages there is a polysemy set including allative, benefactive, purpose, and recipient functions, or some part of these functions. For example, all these functions are covered by the postposition *the* of the Palula language of northern Pakistan (Liljegren 2016: 186–7). We hypothesize that underlying this set there is a chain of grammaticalization typically having the following form: ALLATIVE > BENEFACTIVE > RECIPIENT/PURPOSE.

Much the same applies to the many languages showing benefactive–recipient polysemy: in accordance with this chain, we hypothesize that the former preceded the latter in time. For example, in the Tunchang dialect of Min, the form *sau*³⁵ introduces both benefactive and recipient participants, and the same applies to the form *koyŋ*²⁴² of the Fuzhou dialect of Min (Long et al. 2012).

The present process may be described as involving desemanticization, whereby one meaning component (‘to do something for the benefit of’) is bleached out, with the effect that the relevant marker comes to accept complements other than benefactive ones, including malefactive participants. Typical contexts for this process appear to be verbs of speech (‘say to’, ‘tell’, etc.) or

transaction (e.g. ‘sell’). Compare ALLATIVE; GIVE > BENEFACTIVE; GIVE > RECIPIENT.

Beneficiary, *see* BENEFACTIVE

BODY > (1) INTENSIFIER⁸

Vai *bùu wá* ‘body itself’ > emphatic reflexive marker (Welmers 1976: 52ff.; Heine 2000b). Ibibio *ídém* ‘body’ > reflexive, emphatic reflexive marker (Essien 1982: 96ff.). Didinga *ele* ‘body’ > reflexive, emphatic reflexive marker (Heine 2000b). Moru *ró* ‘body’ > reflexive, emphatic reflexive, and reciprocal marker (Tucker and Bryan 1966: 45f.; Heine 2000b). Bagirmi *ro*, PL *roge* ‘body’ > emphatic reflexive, and reflexive, middle marker (Stevenson 1969: 45–6; Heine 2000b). Shilluk *re* ‘body’ > reflexive, emphatic reflexive, and reciprocal marker (Westermann 1912: 19f.; Kohnen 1933: 75–6; Heine 2000b). Lango *kom-* ‘body’, noun > reflexive, emphatic reflexive marker (Heine 2000b). Pări *rok* ‘body’ > reflexive, emphatic reflexive, and reciprocal marker (Simeoni 1978: 41f.; Heine 2000b). Lele *kùs* ‘body’, noun > reflexive, emphatic reflexive, and reciprocal marker (Frajzyngier 1997b).

See Kemmer (1993); Heine (2000b); König and Siemund (2000); Schladt (2000) for more details. See also Moravcsik (1972: 272) for further examples. Compare HEAD; OWNER.

BODY > (2) MIDDLE

Krongo *òonó* ‘body’ > *òonó*, middle marker. Ex.

Krongo (Reh 1985: 172–3)

- (a) *n- áakúbí à?àŋ òonó.*
1/2- IMPFV:dry I body
‘I dry my body.’ / ‘I dry myself.’
- (b) *n- ùwó à?àŋ òonó.*
1/2- PFV:enter I body
‘I’ve gone in.’

Duala *ńólò* ‘body’, noun > ‘oneself’, reflexive, middle pronoun. Ex.

Duala (Ittmann 1939: 177)

bwelé bó dóm ńólò.
‘the tree split’ (lit.: ‘the tree split itself’)

Bagirmi *ro*, PL *roge* ‘body’, noun > emphasizing, reflexive, and middle marker. Ex.

⁸ For a discussion of intensifiers, frequently referred to as emphatic reflexives, see König and Siemund (2000).

Bagirmi (Stevenson 1969: 45)

ma nju g''o ro(m)-a.
 ‘I wash myself.’

Lamang *ghvà* ‘body’, noun > -*và*, reflexive, middle marker (Wolff 1983: 120ff.; Heine 2000b). Since quite frequently middle markers go back to reflexive markers, we may be dealing with a more general development: BODY > REFLEXIVE > MIDDLE; see Haspelmath (1990); Kemmer (1993: 151ff. 197); Heine (2000b); and Schladt (2000) for more details.

BODY > (3) RECIPROCAL

Yoruba *ara* ‘body’, noun > *ara*, reflexive, reciprocal marker (Awoyale 1986: 4; Heine 2000b). Moru *rù* ‘body’, noun > reflexive, emphatic reflexive, and reciprocal marker (Tucker and Bryan 1966: 45f.; Heine 2000b). Shilluk *re* ‘body’, noun > reflexive, emphatic reflexive, and reciprocal marker (Westermann 1912: 19f.; Kohlen 1933: 75f.; Heine 2000b). Bura *dzá* ‘body’, noun > -*dzí*, reflexive, reciprocal, antipassive (Hoffmann 1963: 157; Haspelmath 1990: 44). Luo *riŋg-ruok* ‘body’, noun > -*ruok(-rwok)*, verbal reflexive and/or reciprocal suffix (Tucker 1994a: 83, 159). Pări *rok* ‘body’ > reflexive, emphatic reflexive, and reciprocal marker (Simeoni 1978: 41f.; Heine 2000b). Gidar *zá* ‘body’ > reflexive, reciprocal marker (Frajzyngier 1997b; Heine 2000b). Xdi *vṛá* ‘body’ > reflexive, reciprocal marker (Frajzyngier 1997b; Heine 2000b). Margi *údzú* ‘body’, noun > reflexive, reciprocal marker (Hoffmann 1963: 157; Heine 2000b).

This grammaticalization appears to be an instance of a more general process whereby certain body parts serve to express more abstract discourse functions. One of the sources for reciprocal markers consists of reflexive markers, and since nouns meaning ‘body’ appear to form the most common source for reflexive markers, the present pathway is likely to be part of a more general process: BODY > REFLEXIVE > RECIPROCAL. For more details, see Heine (2000b) and Schladt (2000); see also Kemmer (1993: 151ff.). Compare REFLEXIVE > MIDDLE.

BODY > (4) REFLEXIVE

The Archaic Chinese form *shen* first appeared as a noun meaning ‘body’ before acquiring reflexive uses (Long et al. 2012). Korean *caki* ‘body’, noun > -*caki*, reflexive marker (Rhee 2016c). Bugeng (Bugan) *mbaŋ*⁴⁴ ‘body’ > *mbaŋ*⁴⁴ *mbi*⁴⁴ ‘self’, reflexive (Long et al. 2012). Ibibio *ídém* ‘body’, noun > reflexive, emphatic reflexive marker (Essien 1982: 96ff.). Ex.

Ibibio (Essien 1982: 107)

<i>ímé</i>	<i>ámà</i>	<i>átígha</i>	<i>idem</i>	(<i>amò</i>).
Ime	?	shot	body	his

‘Ime shot his body (as opposed to his head).’ Or ‘Ime shot himself.’

Yoruba *ara* ‘body’, noun > reflexive, reciprocal marker (Awoyale 1986: 4; Heine 2000b). Ex.

Yoruba (Awoyale 1986: 4)

Nwosu rí ara ré.
Nwosu saw body his
‘Nwosu saw himself.’

Órón *ile* ‘body’, noun > reflexive marker (Essien 1982: 98). Ebira *en^wu* ‘body’, noun > reflexive marker (Awoyale 1986: 4). Bassa *ními* ‘body’, noun > reflexive marker (Awoyale 1986: 4; Heine 2000b). Ûsàk Èdèt *únem* ‘body’ > reflexive marker (Essien 1982: 98; Heine 2000b). Baka *ngòbò-* ‘body (of)’, inalienable noun > reflexive marker. Ex.

Baka (Christa Kilian-Hatz, p.c.)

- (a) *ngòbò-lè bà kè.*
body-my ASP pain
‘I am sick.’
(b) *ʔá à wɔ ngòbó-é.*
3:SG ASP hide body-3:SG:POSS
‘He is hiding.’

Duala *ńólò* ‘body’, noun > ‘oneself’, reflexive, middle pronoun; *bwáníólò* ‘to kill oneself’, ‘to commit suicide’ (Ittmann 1939: 177). Moré *měga* ‘body’, relational noun > ‘self’, reflexive pronoun. Ex.

Moré (Alexandre 1953b: 249–50)

A kū a mēga.
He kill his body
‘He has killed himself.’

So *baak* ‘body’, noun > reflexive marker (Carlin 1993: 48). Didinga *ele* ‘body’, noun > reflexive, emphatic reflexive marker (Heine 2000b). Shilluk *re* ‘body’ > reflexive, emphatic reflexive, and reciprocal marker (Westermann 1912: 19–20; Kohnen 1933: 75–6; Heine 2000b). Anywa *dèet-* ‘body’, noun > reflexive marker. Ex.

Anywa (Reh 1996: 166–7)

dèeD-wá *ā-jĀĀl-wá.*
body:PL:modified:noun:form-1:PL:EXCL PAST-blame-1:PL:EXCL
‘We blamed ourselves.’

Päri *rok* ‘body’, noun > reflexive, emphatic reflexive, and reciprocal marker (Simeoni 1978: 41–2; Heine 2000b). Lango *kom-* ‘body’, noun > reflexive, emphatic reflexive marker (Heine 1997c). Luo *riŋg-ruok* ‘body’, noun > *-ruok* (*-rwok*), verbal reflexive and/or reciprocal suffix (Tucker 1994a: 83, 159). Bagirmi *ro*, PL *roge* ‘body’, noun > emphasizing, reflexive, and middle marker (Stevenson 1969: 45). Moru *ró* ‘body’, noun > reflexive, emphatic reflexive,

and reciprocal marker (Tucker and Bryan 1966: 45–6; Heine 2000b). Margi *údzú* ‘body’ > reflexive, reciprocal marker (Hoffmann 1963: 157; Heine 2000b). Lele *kús* ‘body’, noun > reflexive, emphatic reflexive, and reciprocal marker (Frajzyngier 1997b; Heine 2000b). Gidar *zâ-* ‘body’, noun > reflexive, reciprocal marker (Frajzyngier 1997b; Heine 2000b). Gisiga *vo* ‘body’, noun > reflexive marker (Lukas 1970: 71; Heine 2000b). Mina *ksám* ‘body’, noun > reflexive marker (Frajzyngier 1997b; Heine 2000b). Pero *cíg* ‘body’, noun > reflexive marker (Frajzyngier 1989: 183; Heine 2000b).

In the Tundra Nenets language of northern Russia, the noun *pi(x)^odâ-* ‘body’ appears to have given rise to the reflexive stem *pi(x)^odâ-* (Nikolaeva 2014: 49). Yagaria *ouva* ‘body’, noun > ‘self’, reflexive pronoun. Ex.

Yagaria (Renck 1975: 148)

d-ouva-di *begi-d-u-e*.
my-body-my beat-PAST-1:SG-IND
‘I hit myself.’

Cahuilla *tax* ‘person’, ‘body’, noun > *tax-*, reflexive marker, verbal prefix (Haspelmath 1990: 44).

Rubin (2005: 21) lists the following Ethiopian Semitic languages that appear to have undergone the ‘body’-pathway: Chaha (*gäg-*), Selti (*gäg-*), Wolane (*gäg-*), Zay (Zway, *gäg-*), as well as Akkadian (*pagr-*).

The Kavalan language of northeastern Taiwan has unmarked reflexives, where personal pronouns are used to express reflexivity. Nevertheless, reflexivity can also be expressed by the noun *izip* ‘body’ (Long et al. 2012).

In African languages, nouns for ‘body’ are the most frequent source for reflexive markers. In a sample of roughly 150 languages, Schladt (2000: 112) found that nouns meaning ‘body’ constitute by far the most common source for reflexive markers. For more details, see Schladt (2000) and Heine (2000b); see also Kemmer (1993: 151ff.).

This grammaticalization (‘body’ + possessive attribute > reflexive marker) has taken place quite frequently in Romance-based and other creole languages; for example, French *le corps* ‘the body’ > Seychelles CF (possessive attribute +) *lekor*, reflexive marker. Ex.

Seychelles CF (Papen 1978: 398)

I ti apel sô lekor Tom.
(he TNS call his body Tom)
‘He called himself Tom.’

In creole language studies, the evolution BODY > REFLEXIVE is in fact a much-discussed issue (see, e.g., Corne 1973; 1988a; 1988b; 1989; Carden and Stewart 1988; 1989; Heine 2005).

This grammaticalization appears to be an instance of a more general process whereby certain concrete nouns develop into referential pronouns;

for a sociolinguistic approach to developments from compound noun to pronoun in English, see Raumolin-Brunberg (1994); Nevalainen and Raumolin-Brunberg (2003). Compare HEAD; MAN; PERSON.

BOTTOM > DOWN (SPATIAL)

Korean *mith* 'bottom, anus, buttocks', noun > *-(uy)mithey* 'under, below, beneath', inferior postposition (Rhee 2016c). Korean *ha* 'bottom', noun > *-haey* 'under', inferior postposition (Rhee 2016c). Lianzhou (West Bank) dialect of Chinese *te*⁵⁵ *heu*²² 'bottom' > *te*⁵⁵ *heu*²² 'under' (Long et al. 2012). Adyghe *č'e* 'bottom', nominal > *č'e-* 'under the landmark', locative preverb (Arkadiev and Maisak 2018: 123).

Kpelle *mũ* 'bottom side', relational noun > 'under', postposition (Westermann 1924: 12). Susu *bui*, *bunyi* 'lower part', 'bottom side', 'under-side' > *bun*, *bunma* 'below', 'under', postposition.

Susu (Friedländer 1974: 40)

a na tebeli bun(ma).

'He is under the table.'

Kwami *tilli* 'bottom', noun > 'below', locative adverb (Leger 1991: 29).

Lezgian *k'an* 'bottom', spatial noun > *k'anik* 'under', 'below', postposition (Haspelmath 1993: 219–20). Hungarian **al* 'bottom (region)' > *al* 'under-', 'lower-', derivational prefix, e.g. *al-kar* 'forearm' (Halász 1973: 29, 440).

Aranda *kwene* 'bottom', relational noun > *kwene* 'below', 'beneath', 'under', adposition. Ex.

Aranda (Wilkins 1989: 316)

- (a) *Artwe ampwe-le inte-lhile-ke pwerte kwene-ke.*
 man old-ERG design(lie-CAUS)-PAST:CPL rock bottom-DAT
 'The old man made a design on the bottom of the rock.' (lit.: 'cause something to lie on')
- (b) *Artwe ampw-le inte-lhile-ke pwerte-nge kwene*
 man old-ERG design(lie-CAUS)-PAST:CPL rock-ABL beneath
(ahelhe-ke)
 (ground-PAST:CPL)
 'The old man made a design beneath the rock (in the dirt).'

This grammaticalization is suggestive of a more general process whereby relational nouns (including nouns for body parts) give rise to relational (typically spatial or temporal) grammatical markers; compare BACK; BOTTOM; FOOT; HEAD; INTERIOR; SIDE; TOP.

BOUNDARY ('border', 'boundary') > UNTIL

Swahili *m-paka* (c3-border) 'border', 'boundary', noun > *mpaka* 'until', temporal preposition, conjunction. Ex.

Swahili

- (a) *m- paka w- a Kenya*
 c3- boundary c3- POSS Kenya
 'the border of Kenya'
- (b) *mpaka kesho mpaka a- taka- po- rudi*
 until tomorrow until c1- FUT REL- return
 'until tomorrow' 'until she comes back'

Moré *têka* 'boundary', 'end', noun > *têka* 'until', 'since', temporal postposition (Alexandre 1953b: 390). Korean *kaz* 'boundary, edge' noun > *-kkaci* 'until, to, up to' spatial and temporal postposition (Ryu 1962; Han 2003; Narrog and Rhee 2013; Rhee 2016d)

Only examples from Africa have been found so far. Nevertheless, this appears to be another instance of a more general process whereby relational nouns give rise to relational (typically spatial or temporal) grammatical markers; compare BOTTOM; HOME; SIDE; TOP.

BOWELS ('bowels', 'guts', 'intestines') > IN (SPATIAL)

Ancient Egyptian *m-q3b* 'in the midst of' is presumably derived from *q3b* 'intestine', and so is Hebrew *bə-qéreb* 'in the midst of' (cf. *qéreb* 'interior, intestine'). Furthermore, Ugaritic (*b-*)*qrb* 'in the midst of' and Akkadian *ina qereb* 'in the midst of' seem to go back to a root for 'intestine' (Rubin 2005: 46).

Adyghe *k'wec'ə* 'intestines', nominal > *k'wec'ə-* 'inside the landmark', locative preverb (Arkadiev and Maisak 2018: 123). Namakura *na-p'alau* 'bowel' > locative IN (Bowden 1992: 65). Hungarian *bél* 'intestines', 'guts'; 'interior', body part noun > *bel-* 'inside' (Szent-Iványi 1964: 44; Halász 1988: 178).

Compare English *the bowels of the earth*. Bowden (1992: 36) found five Oceanic languages where terms for 'bowels' appear to have given rise to IN markers.

More data is needed on the genetic and areal distribution of this process. Nevertheless, there is hardly any doubt that we are dealing with another instance of a more general process whereby certain body parts, on account of their relative location, are used as structural templates to express deictic location; compare, for example, BACK; BELLY; EYE; FACE; FOOT; HEAD; SHOULDER.

BRANCH ('branch', 'twig') > CLASSIFIER

Archaic Chinese *mei* 'branch, twig', noun > *mei*, classifier (Long et al. 2012). (Modern) Chinese *tiáo* 'branch' > classifier for one-dimensional objects (Bisang 1999: 133). Concerning the rise and development of classifiers in Chinese, see Peyraube (1998).

Ulithian *se-raa* ‘branch’, noun > numerative classifier (Sohn and Bender 1973 [1984]: 202, 243). Kilivila *sisila* ‘branch’ > *sisi*, classificatory particle for bough, cut off part of a tree, division of a magical formula (Senft 1996: 29, 175).

This grammaticalization appears to be part of a more general process whereby certain nouns, on account of some specific semantic characteristic, are recruited as structural templates for a folk taxonomic classification of nominal concepts; *see also* CHILD; MAN; PIECE; SONG; TREE; WOMAN. More research is needed on the genetic and areal distribution of this process.

BREAST > FRONT

Welsh *bron* ‘breast’ > *ger bron* (lit.: ‘near breast’) ‘in front of’, ‘near’; *ger fy mron* ‘in front of me’ (Wiliam 1960: 36). Proto-Bantu **mu-*, noun class 18 + *-bede* ‘breast’, ‘tit’, noun > Swahili *mbele* ‘in front (of)’.

This is a common instance of grammaticalization (see Heine et al. 1991a: 126; Bowden 1992: 69). Especially among the Bantu languages of the southern half of Africa, it is perhaps the most frequently employed source for markers of FRONT. Instead of words for ‘breast’ it may also be words for ‘chest’ that develop into FRONT markers (cf. Heine et al. 1991a: 126). This is another instance of a more general process whereby certain body parts, on account of their relative location, are used as structural templates to express deictic location (Heine 2011c); compare, for example, BACK; BOWELS; EYE; FACE; FOOT; HEAD; SHOULDER.

BUTTOCKS > (1) BEHIND

Dogon *bòlɔ* ‘buttock’, noun > ‘behind’, adverb (Calame-Griaule 1968: 44). Chamus (Maa dialect) *siadi* ‘buttocks’, ‘anus’, noun > ‘behind’, adverb (Bernd Heine, field notes). Tzotzil *chak(il)* ‘buttock’ > ‘behind (animal)’, locative marker (de León 1992: 573, 578).

We are dealing here with an instance of a more general process whereby certain body parts, on account of their relative location, are used as structural templates to express deictic location; compare, for example, BACK; BREAST; EYE; FACE; FOOT; HEAD; SHOULDER.

BUTTOCKS > (2) DOWN

Archaic Chinese *tun* ‘buttock’ > *tun* ‘bottom region’. The noun *zhou* ‘buttock’ of Archaic Chinese acquired DOWN meanings in a number of modern varieties of Chinese even though the lexical meaning was not lost. Thus, all of the following forms combine the meanings of ‘buttocks’ and ‘down’: Anqing dialect of Jianghuai Mandarin *təu*⁵⁵*xa*³³, and Tongling dialect of Wu *to*¹³*tɿ*⁵¹ ‘buttock, down’ (Long et al. 2012).

Korean *mith* ‘bottom, anus, buttocks’, noun > *-(uy)mithey* ‘under, below, beneath’, inferior postposition (Rhee 2016c). Kakataibo *tsipúmi* ‘end,

buttocks', noun > *tsipúmi* 'below', postposition (Zariquiey 2018: 368). Shuswap *ep* 'buttocks' > *-ep* BOTTOM-REGION (Svorou 1994: 254). Halia *i* 'in', 'at' + *kopi* 'buttocks', 'bottom' + *-na* (ADV SUF) > BOTTOM-REGION (Svorou 1994: 254). Bambara *jù* (+ *kórw* 'basis', 'ground') 'buttocks' (Ebermann 1986: 106) > *jùkɔrw* 'under', 'below', locative adverb, postposition. Ex.

Bambara (Kastenholz 1989: 100)

Wùlu donna tábali jùkɔrw
(dog entered table below)
'The dog went under the table.'

This is a common pattern of grammaticalization especially in African languages (see Heine et al. 1991a: chapter 5). We are dealing here with an instance of a more general process whereby certain body parts, on account of their relative location, are used as structural templates to express deictic location; compare, for example, BACK; BOWELS; BREAST; EYE; FACE; FOOT; HEAD; SHOULDER.

CAUSE > ADVERSATIVE

Gialcone Ramat and Mauri (2008) characterize this pathway in the following way with reference to the Italian marker *però*:

The evolution of *però* thus shows a functional reversal: whereas in its first occurrences it introduced the cause or the result of a causal sequence, now it signals the *denial* of an expected causal sequence, that is, what is commonly classified as *counterexpectative contrast*. (Gialcone Ramat and Mauri 2008: 303)

From its earliest occurrences in the twelfth century, *però* had a causal function (*però che* 'since, because') or a resultive function (*però* 'therefore'), and only in the seventeenth century is it attested for the first time with an unambiguously adversative meaning (Gialcone Ramat and Mauri 2008: 303; see also Mauri and Gialcone Ramat 2009). An important enabling factor in this functional shift was provided by negative contexts.

Whether CAUSE > ADVERSATIVE is in fact a crosslinguistically significant process remains to be established. Furthermore, there may be bi-directionality involved in the coding of contrastive and causal relations. For example, in Japanese there seems to be some indeterminacy between concessive and causal subordinators, and cases of development from concessive to causal markers have been reported (Narrog 2016a: 259).

CENTRE ('centre', 'middle') > (1) BETWEEN

Korean *cwung* 'middle', noun > *cwungey* 'within, among, between', inessive postposition (Rhee 2016c). Korean *kawuntey* 'middle, centre', noun >

-*kawuntey* 'among, between', postposition (Rhee 2016c). Chinese *zhongjian* 'middle', 'centre' > 'between' (Alain Peyraube, p.c.).

Vai *tɛ* 'middle', 'midst', 'centre', noun > -*tɛ* 'between', suffix (Koelle [1854] 1968: 218). Bambara and other Manding varieties *cé* 'waist', 'middle', noun > *cé* 'between', postposition (Creissels in prep.b).

Bulu *zañ* 'centre', 'middle', noun > 'in the middle', 'between', adverb and preposition (Hagen 1914: 313). Kupto *tállé* 'centre', 'middle' > 'between', locative marker (Leger 1991: 22). Ndebele *i-phakathi* 'centre', 'middle', noun > *phakathi* 'inside', 'in', 'in the middle', adverb (Pelling 1971: 54).

Albanian *midis* 'centre', relational noun > *midís*, 'between', locative preposition. Ex.

Albanian (Buchholz et al. 1993: 323)

midis *Tiranës e Elbasanit*

'between Tirana and Elbasan'

Aranda *mpwepe* 'middle', 'centre', noun > *mpwepe* 'in between', 'amongst', adposition (Wilkins 1989: 315). Ex.

Aranda (Wilkins 1989: 315)

Alyweke unte kwerne-me yenpe-nge tyelke-nge mpwepe-ke.

'You insert the knife between the skin and the flesh.'

This grammaticalization is suggestive of a more general process whereby relational nouns (including nouns for body parts) give rise to relational (typically spatial or temporal) grammatical markers; compare BOTTOM; INTERIOR; SIDE; TOP.

CENTRE ('centre', 'middle') > (2) IN (SPATIAL)

Korean *cwung* 'middle', noun > *cwungey* 'within, among, between', inessive postposition (Rhee 2016c). Chinese *zhong* 'middle' > 'in' (Alain Peyraube, p.c.). Lingala *ntéi* 'middle', 'centre' > 'in', preposition (van Everbroeck 1958: 152). Dullay *kítte* 'middle', locative genitive > *kittacé*, *kittaté* 'between', 'within', 'in', postposition. Ex.

Dullay (Amborn, Minker, and Sasse 1980: 102)

h állecé kittacé wórše na-áka

calabash within beer it-is

'There is beer in the calabash.'

We are dealing with another instance of a more general process whereby relational nouns (including nouns for body parts) give rise to relational (typically spatial or temporal) grammatical markers; compare BOTTOM; INTERIOR; SIDE; TOP.

CHANGE-OF-STATE ('become') > (1) COPULA

Ngalakan -*men* 'become', inchoative verbalizing suffix > 'be', ('semi-copula') in the imperfective past. Ex.

Ngalakan (Hengeveld 1992: 253)

- (a) ϕ - *ɲolko-men- ϕ .*
 3:SG-big- become-PRES
 'He is getting big.'
- (b) ϕ - *ɲolko-men- iĩ.*
 3:SG-big- COP- PAST:IMPFV
 'He was big.'

Evidence for this grammaticalization is provided by Hengeveld (1992: 253–4), who also mentions Turkish *olmak* 'be', 'become', 'happen', 'mature' as an example. Note, however, that we seem to be dealing with an incipient, context-dependent evolution that is confined to specific verbal tenses; see also Anderson (1975). There are some examples, such as Proto-Indo-European **bhū* 'become', that have given rise to copula-like markers; for example, German *bin* '(I) am', English *been* (Lehmann 1982: 137).⁹

CHANGE-OF-STATE ('become') > (2) FUTURE

German *werden* 'become', (auxiliary) verb > future tense auxiliary. Ex.

German

- (a) *Er wird Arzt.*
 he becomes doctor
 'He becomes a doctor.'
- (b) *Er wird kommen.*
 he becomes come:INF
 'He'll come.'

Russian *budu* 'I will be' + infinitive > future marker (Binnick 1976: 43). Ex.

Russian

Ja budu tancevat' segodnja večerom.
 1:SG be:1:SG:FUT dance:INF today evening:INSTR
 'I will dance tonight.'

The present pathway has also been shown to result from 'forced grammaticalization' (*Zwangsgrammatikalisierung*; Nau 1995: 121–2), imposed by language planners on the model provided by some other language. The early ethnically German language reformers of Standard Estonian appear to have introduced the use of the Estonian quasi-auxiliary *saama* 'get, become' to be used for future reference, with the main verb taking the *ma*-infinitive. As argued by Metslang (2017), this weakly grammaticalized future tense construction is the result of contact-induced replication on the model of the German *werden*-future, which itself was built on the grammaticalization of the change-of-state verb *werden* 'become'.

Silvia Luraghi (p.c.) observes, however, that there may be problems with the reconstruction of Proto-Indo-European **bhū* as meaning 'become'.

This grammaticalization appears to require the main verb to be in a nonfinite (possibly a purposive) form. The conceptual nature of the present process is still far from clear. More data, especially from other languages, are needed.

For a discussion of this pathway, see Vykypěl (2010: 135).

CHANGE-OF-STATE ('become') > (3) PASSIVE

Archaic Chinese *wei* 'to become', verb > passive auxiliary (Alain Peyraube, p.c.).

Persian *šodan* 'become' > passive auxiliary (Haig 2018: 73).

Korean *toy-* 'become', verb > *-(key)toy-* passivizer, derivational suffix on verbs and adjectives, and Korean *toy-* 'become', verb > *-toy-* passivizer, derivational suffix on nouns (Rhee 2016c; Rhee and Koo 2014).

Latin *fieri* 'to become', verb > passive auxiliary. Ex.

Late Latin (Per. Aeth. 35, 6; Cennamo 2015)

<i>interpositae</i>	<i>orationes</i>	<i>fiunt.</i>
intersperse:PP:F:PL:NOM	prayer:PL:NOM	become:PRES:IND:3:PL
'Prayers are being/get interspersed.' (lit. 'become interspersed')		

This pathway is attested in Latin by the fourth century AD, where it alternates with the canonical synthetic passive and the [*esse* + past participle] passive. It occurred only in the present indicative and the subjunctive, initially with inanimate and only later with animate subjects (Cennamo 2015).

German *werden* 'to become', verb > passive auxiliary. Ex.

German

<i>Das Buch</i>	<i>wurde</i>	<i>gekauft.</i>
the book	become: PAST	buy:PASS:PARTCP
'The book was (being) bought.'		

Latvian 'to become' + preterit participle > auxiliary of dynamic (processual) passive (Vykyepěl 2010: 136–7). Ex.

Latvian (Vykyepěl 2010: 137)

<i>Grāmata</i>	<i>tika</i>	<i>pirkta.</i>
book:NOM	AUX('become')	buy:PASS:PARTCP
'The book was (being) bought.'		

On the basis of data from Late Latin and other Romance varieties, Cennamo (2015) argues that the grammaticalization of the Latin construction [*fieri* 'become' + past participle verb] to [passive auxiliary + main verb] involved, on the one hand, a transition in the complement of *fieri* from adjective or noun to verbal adjective and finally to verbal participle. On the other hand, it involved context extension of the complement encoded in the past participle from achievement and accomplishment verbs to either activity or active accomplishment verbs.

For a discussion of this pathway, see Haspelmath (1990), Vykypěl (2010: 136–8), Wiemer (2011: 537). Note that the evidence for this pathway is restricted to European languages of the Indo-European family: “Auxiliaries deriving from non-motional inchoative verbs seem to be attested only in German (*werden* < Old High German *uuerdan*), Swedish (*bliva*), Latvian (*tikt*), Polish (*zostać*), and Late Latin” (Wiemer 2011a: 539).

‘Chest’, *see* BREAST

CHILD > (1) CLASSIFIER

Zhuang *lwk*⁸ ‘son’ > *lwk*⁸, classifier. In many Tai-Kadai languages, *luk*⁸ means ‘younger one, descendant’. In Tai languages, *luk*⁸ is a classifier for mountains, fruits, or ball-shaped things (Long et al. 2012).

Vietnamese *con* ‘child’ > classifier for living beings conceptualized as moving objects, frequently for females of inferior status (Löbel 1996: 138, 172). Kilivila *gwadi* ‘child’ > *gudi*, classificatory particle for child, immature human (Senft 1996: 20, 352). This grammaticalization appears to be part of a more general process whereby certain nouns, on account of some specific semantic characteristic, are recruited as structural templates for a folk taxonomic classification of nominal concepts; *see also* BRANCH; MAN; PIECE; SONG; TREE; WOMAN. More research is needed on the genetic and areal distribution of this process.

CHILD > (2) DIMINUTIVE

Medieval Chinese *er* ‘little person, child’ > Early Modern Chinese *-er*, diminutive suffix (Long et al. 2012). Chaozhou dialect of Min *kiā*³ ‘younger person, son’ > *kiā*³, diminutive marker. Leizhou and Hainan dialects of Min *kia*³ ‘younger person, son’ > *kia*³, diminutive marker. Xiamen and Taipei dialects of Min *kiā*³ ‘younger person, son’ > *a*³, diminutive marker. Hui’an dialect of Min *kā*³ ‘younger person, son’ > *kā*³, diminutive marker. Lingxi dialect of Min *kā*³ ‘younger person, son’ > *kā*³, diminutive. Fuzhou dialect of Min *kian*³ ‘younger person, son’ > *kian*³, diminutive marker (Long et al. 2012). Luodai dialect of Hakka *tsɿ*³¹ ‘younger person, son’ > *tsɿ*³¹ or *tsɿ*¹¹, diminutive marker (Long et al. 2012).

Korean *aki* ‘baby, child’, noun > *-aki/-aci*, diminutive derivational suffix (Koo 2004; Koo and Rhee 2016; Rhee 2016c). In the Tibeto-Burman language Mongsen Ao of north-east India, a diminutive suffix *-zā* has transparently grammaticalized from the relational noun *tā-zā* ‘REL-child’ [< Proto-Tibeto-Burman **za* ‘child’], which is no longer used independently as a lexical noun, but still occurs in an elaborate expression *tā-zā tā-nū* (REL-child + REL-child) ‘children’. It is fully grammaticalized, occurring on both animate and inanimate nouns, e.g. *āhān-zā* (fowl-DIM) ‘chick’ (Coupe 2007: 272; 2016).

Awtuw *yæn* ‘child’, noun > *-yæn*, diminutive suffix, denoting the young of an animal or a small token denoted by the bare noun. Ex.

Awtuw (Feldman 1986: 43)

<i>piyren-yæn</i>	<i>æymen-yæn</i>
dog-child	knife-child
‘puppy’	‘small knife’

Ewe *q̣eví*, *vi* ‘child’, noun > *-vi*, diminutive derivative suffix. Ex.

Ewe (own data)

- (a) *ɲútsu-ví*
man-child
‘boy’
- (b) *kpé-ví*
stone-DIM
‘small stone’, ‘pebble’

Dagaare *bile*, PL *bili* ‘offspring’, noun > *-bile* or *-le*, PL *-bili* or *-li*, diminutive suffix (Mwinlaaru 2017). Dogon *í*: ‘child’, ‘nephew’, ‘fruit’, ‘seed’, noun > *-í*., diminutive suffix (Calame-Griaule 1968: 123). Susu *dí* ‘child’, ‘seed’ > *-di*, diminutive marker, nominal suffix; *kira-di* (lit.: ‘street-child’) ‘path’; *taa-di* (lit.: ‘town-child’) ‘village’ (Friedländer 1974: 79). Mandinka *dij* ‘child’, noun > *-dij*, *-riij*, or *-ndij*, diminutive suffix (Creissels in prep.b). Baka *lè* ‘child’, ‘descendant’, ‘fruit (of)’, ‘race’ > *lè -*, diminutive prefix. Ex.

Baka (Brisson and Boursier 1979: 198)

- (a) *mò te lè pe?*
2:SG with child how:many
‘How many children do you have?’
- (b) *lè-nda*
DIM-house
‘small house’

Londo *nw-ána* ‘child’, noun > *nw-ána-*, diminutive marker. Ex.

Londo (Güldemann 1999b; quoted from Kuperus 1985: 228)

- (a) *nw- áná- mù- inà*
c1- child- c1- male
‘boy’
- (b) *nw- áná- mò- kòrí*
c1- child- c3- hill
‘small hill’

Lingala *mwána* ‘child’, noun > *mwâ* (+ noun), diminutive marker (van Everbroeck 1958: 35; 150). !Xun (N1 dialect) *ma*, PL *mhêe* ‘child’, ‘small one’, noun > *-ma*, PL *-mhêe*, nominal diminutive suffix. Ex.

!Xun (N1 dialect; Heine and König 2015)

<i>khëndä-</i>	<i>mâ</i> , PL	<i>khëndä-</i>	<i>mhêe</i>
cup-	DIM	cup-	DIM:PL
‘small cup’			

g!áún- mà, PL g!áún- mhèe
 tree- DIM tree- DIM:PL
 ‘small tree’

||Ani /*oan* ‘child’, noun > /*oan* ‘young’ when used with animate nouns, ‘small’ when used with inanimate nouns, derivative suffix. Ex.

||Ani (Heine 1999: 55)

ngú- /oan
 house- child
 ‘small house’

In many southern Bantu languages, such as Venda, Tonga-Inhambane, or Herero, there is a diminutive suffix typically of the form *-ana*, which is derived from the Proto-Bantu nominal root **-yana* ‘child’ (see Güldemann 1999b for details); for example, Venda *-ana* diminutive suffix. Ex.

Venda (Poulos 1990: 87)

tshi- kali tshi- kal:ana
 C7:DIM- clay:pot C7:DIM- clay:pot:DIM
 ‘small clay pot’ ‘very small clay pot’
 (somewhat broadish)’

For a more detailed discussion of the present pathway, see Heine and Hünemeyer (1988), and especially Jurafsky (1996); for more examples, see also Matisoff (n.d.). This appears to be an instance of a process whereby a noun, on account of some salient semantic property (in this case, relative size), gives rise to a grammatical marker highlighting that property; compare, for example, BRANCH; CIRCLE; PLACE; TREE.

CHILD > (3) PARTITIVE¹⁰

Lingala *mwána* ‘child’ > *mwâ* (+ noun), marker of a partitive construction; *mwâmái* ‘a bit of water’; *mwâ mikolo* ‘a few days’ (van Everbroeck 1958: 35). Ewe *súkli* ‘sugar’, *súkli-ví* (lit.: ‘sugar-child’) ‘piece of sugar’, ‘sugar cube’. Regarding various alternative grammaticalizations that the concept CHILD has undergone in Ewe, see Heine and Hünemeyer (1988); Heine et al. (1991a: 79–86; 2016).

More examples from other language families are needed to substantiate this grammaticalization, especially since both languages cited belong to the Niger-Congo phylum.

See also ABLATIVE, A-POSSESSIVE > PARTITIVE.

¹⁰ Dedicated partitive markers such as case suffixes, expressing the notion ‘a part of’ or ‘partly affected’, seem to be crosslinguistically rare (see Luraghi and Kittilä 2014). The present treatment is not restricted to dedicated partitives but also discusses constructions containing some morphological exponent that has or includes a partitive function.

CHILDREN > PLURAL

Ik *wik^a* ‘children’, noun > *-ik^a*, nominal plural suffix (Heine 1983). Boni *ijáàl* ‘(small) children’, noun > *-(i)yaalə*, plural suffix of animate nouns (most of them kinship terms; Heine 1982a: 49–50, 98).

While these two examples stem from different language families, they both concern East African languages. More examples are needed to establish whether we are dealing with a crosslinguistically relevant process. Conceivably, this process is related to (>) PEOPLE > PLURAL, where the plural form of a human noun has been grammaticalized to a plural marker.

CIRCLE > AROUND (SPATIAL)

Latin *circus*, accusative *circum* ‘circle’, ‘race course’, ‘circus’ > *circum* ‘around’, ‘on both sides of’. Ex.

Latin (Kühner and Holzweissig [1912] 1966: 935; Stolz 1991a: 7; Thomas Stolz, p.c.)

Terra se convertit circum axem suum.

earth REFL turn:3:SG around axle:ACC POSS:3:SG:ACC

‘The earth turns around its own axle.’

Russian *vokrug* (< *v* ‘in’ + *krug* ‘circle’) ‘around’ (Martin Haspelmath, p.c.). Albanian *rreth* ‘circle’, noun > ‘around’, preposition. Ex.

Albanian (Stolz 1991a: 7)

rreth tryezë- s

PREP table- ABL

‘around the table’

Icelandic *hringur* ‘ring’, ‘circle’, noun > *kring* ‘around’. Ex.

Icelandic (Stolz 1991a: 7)

Í kring um hús-in

PREP around PREP house-DET:ACC:PL:NEUT

‘around the houses’

Welsh *cylch* ‘circle’, ‘ring’, ‘area’, ‘class’, *amgylch* ‘circulation’ > *o(am)gylch* ‘around’ (Stolz 1991a: 8). German *Ring* ‘ring’, *Ring(e)s* ‘ring’ (genitive singular, masculine), noun > *rings* ‘around’. Ex.

German (Stolz 1991a: 9)

rings um den Dom

around DET:ACC:SG:M cathedral

‘round about the cathedral’

Compare also Basque *inguru* or *ingiru* ‘vicinity’, which derives from Latin *in gyru* ‘in a circle’, ‘in a ring’, that is, it is a borrowing. Whether the grammaticalization occurred prior to or after the borrowing is unclear. Ex.

Basque (anonymous reader)*etxearen inguruan**etxe- a-(r)en inguru- an*

house- DET-GEN vicinity- LOC

‘around the house’, ‘in the vicinity of the house’

This grammaticalization has so far been found to occur in European languages only. Nevertheless, it is an instance of a more general process whereby a noun, on account of some salient semantic property, gives rise to a grammatical marker highlighting that property; compare, for example, *BRANCH*; *CHILD*; *PLACE*; *TREE*.

COME > (1) IMPERATIVE

Following an imperative verb phrase, the verb *lai* ‘come’ developed into a hortative marker in Medieval Chinese (Long et al. 2012). In the Tetun language of Timor, the verb *mai* ‘come’ is employed as a general directive marker for first person plural referents (Mauri and Sansò 2014a: 177). Ex.

Tetun (Mauri and Sansò 2014a: 177)*mai ita hamulak.*

come 1:PL:INCL pray

‘Let’s pray!’

In the Indonesian language Leti, directives addressing first person plural referents use the verb *ma*, directive form of the verb ‘come’, inflected for second person, plus =*po* ‘and then’, and the following main verb is inflected for the inclusive first person plural (Mauri and Sansò 2014a: 178).

German *kommen* ‘come’, verb >*komm* ... ! (solidarity imperative marker). Ex.

German*Komm, denk darüber nach! Komm, geh jetzt!*

come think about:it after come go now

‘Come on, think about it!’ ‘Come on, go now!’

Compare English *Come on!*, which is often used to urge a person or a team to make a greater effort or to succeed (see also Mauri and Sansò 2014a: 180). In some of its uses, Spanish *venga* (come.HORT) ‘come on!’ serves as a hortative marker on the following verb (Daniels 2014: 228–30). Ex.

Spanish (Daniels 2014: 228–30)*Venga, piensa.*

come:HORT think:2:SG:IMP

‘Come on, think.’

In the Ewe language of Togo and Ghana, the singular imperative form *vá* ‘come!’, followed by an optional linker (*né*) and the main verb in the first person plural imperative or subjunctive, is used to encode orders to first and

second person referents (Mauri and Sansò 2014a: 178). Baka *dɔ* ‘come’, verb > *dɔ*, marker of a mitigated imperative. Ex.

Baka (Brisson and Boursier 1979: 66; Christa Kilian-Hatz, p.c.)

- (a) *ʔá dɔ-ɛ na sià lè.*
 3:SG:NAR come-PAST INF see 1:SG:OBJ
 ‘He has come to see me.’
- (b) *dɔ́ gɔ!*
 come go
 ‘(Come on,) go!’

Ngbaka Ma’Bo *dɔ* ‘come’, verb > marker of solidarity imperative. Ex.

Ngbaka Ma’Bo (Thomas 1970: 599, 601)

- (a) *ʔī dɔ-ʔā- mólò yéè.*
 she come-INF-kill them
 ‘She came to kill them.’
- (b) *dɔ́-hā náā!*
 come-take wood
 ‘(Come on) take the wood!’

Nama *há* (*haa*) ‘come’, verb > *ha*, hortative marker (Krönlein 1889: 1, 141–2).

!Ora (Korana) *hā* ‘come’, verb > hortative/optative marker (called “imperative” by Meinhof 1930: 60). Ex.

Korana (Meinhof 1930: 54)

hā-kham !ũ
 ‘Let’s go!’

Furthermore, Maisak (2015) says that in Lezgetic languages the verb for ‘come’ is used as a hortative marker (‘let’s do!’).

For a worldwide survey, see Mauri and Sansò (2011; 2012; 2014a), who observe that this pathway typically serves to form first person plural directives. Rather than introducing an imperative concept, the ‘come’-verb quite commonly serves to strengthen or qualify an existing imperative form, to draw attention to the following predication, or to mitigate a command.

As far as the data available suggest, at least in a number of languages concerned the ‘come’-verb form might have been an extra-clausal constituent in the terminology of Dik (1997) or an imperative thetical in the sense of Kaltenböck et al. (2011) and Heine et al. (2013). On this view, the development of this imperative category involves cooptation, i.e. a shift from a sentence grammar unit to a marker serving specific discourse purposes of speaker–hearer interaction before undergoing grammaticalization (cf. Heine 2013).

This appears to be a process whereby certain verbs assume an interpersonal function in specific contexts involving commands and related interpersonal functions; compare GO > IMPERATIVE; LEAVE > IMPERATIVE; LEAVE > PERMISSION.

COME > (2) NEW-EVENT

According to this pathway, the deictic movement verbs ‘go’ and/or ‘come’ have in some languages assumed the function of a new-event marker, that is, a grammatical marker expressing a function that can be paraphrased roughly as ‘watch out, now something new is going to happen that is relevant to what follows’, where the new event is expressed by the verb following the movement verb (Heine 2000a; Luraghi 2017).

In the extinct Hitite language of Anatolia, the verb *uwa-* ‘come’ has in specific contexts been grammaticalized into a new-event marker in what Luraghi (2017) calls “the *uwa-* plus agreeing verb construction”. The grammaticalized function indicates that the new event, expressed by the following verb, immediately follows the preceding one, and is brought about intentionally by an agent.

Khwe *yàá* ‘come’, verb > *ya(a)*, new-event marker (paraphrasable by ‘watch out, now something new is going to happen that is relevant to what follows’) (Heine 2000a). Ex.

Khwe (Heine 1997e: 8, 19)

- (a) *xà- lùà yáa-tè úàn-m dà ll'áe ki.*
 DEM- 3:M:SG come-PRES hare-3:M:SG POSS home LOC
 ‘And they came to the hare’s home.’
- (b) *tákò ya /x'ánn k'úú- á- hin*
 then come very be:angry- JUNC- PAST
taá-lúún- ci ki.
 grandmother- 3:F:SG LOC
 ‘There he [crocodile] got very angry with his grandma.’

Akie *nyo*, PL *pwan* ‘come’, verb > *nyo*, PL *pwan*, auxiliary used to present new events in discourse (König et al. 2015: 111; see also Heine 2000a). Godié *yi* ‘come’, verb > sequential clause marker. Ex.

Godié (Marchese 1986: 144)

- ɔ yì nú- ɔ yi li.
 he come:FACT then he come eat
 ‘He came and ate.’

In the Kera language of Chad and Cameroon, the deictic movement verb *bì* ‘come’ also occurs in contexts where it does not express motion and does not take direct complements but rather heralds a new event as relevant for the subsequent discourse (Ebert 1987).

Korean *o-* ‘come’, verb > *-eo-*, continuative aspect auxiliary (Rhee 2016). Netherhollands CD (Boretzky 1983: 212) *kō* ‘come’, verb > new-event marker after *kō* ‘come’. Ex.

Negerhollands CD (Boretzky 1983: 212)

Am a kō fo kō nē slāvun.
 (he ? come PURP come take slave)
 ‘He came to take slaves.’

New-event markers introduce new information and as such they have been described occasionally as involving verbal focus (Heine 2000a). In narrative discourse of some African languages, verbs for ‘come’ and ‘go’ also tend to assume a CONSECUTIVE function.

This grammaticalization appears to be an instance of a more general process whereby deictic process verbs for ‘come’ and ‘go’ give rise to markers of text continuity, being grammaticalized into markers used to establish cohesion in narrative discourse. For a more detailed account of some aspects of this process, see Heine (2000a); Bourdin (2008); Luraghi (2017); compare COME > NEW EVENT.

COME > (3) PASSIVE

For a detailed description of this pathway, see especially Giacalone Ramat and Sansò (2014). The verb *venire* ‘come’ is attested as a passive auxiliary already in Latin of the fourth century AD, although rarely used. The process involved led from *venire* as a main verb taking verbal complements constructed in the past participle, where the latter developed into the new main verb. The rise of a passive interpretation of this movement verb might have been due to context extension of the verbal complement from achievement and accomplishment verbs to activity or active accomplishment verbs (Cennamo 2005; 2006; 2015).

Furthermore, *venire* ‘come’ is also found in simple tenses of several early northern Italian vernaculars, such as Venetian, Emilian, and Lombard (Cennamo 2005; 2006; 2015). In Old Emilian, a *venire* ‘come’ passive is attested already in the fourteenth century (Giacalone Ramat and Sansò 2014).

Essentially the same process from a construction using the movement verb for ‘come’ to passive auxiliary can be observed in Rhaeto-Romance, Italian, Pomatteritsch, and the Bavarian dialect of German, which all share a periphrastic passive construction where the passive auxiliary is historically derived from ‘come’. Ramat (1998) proposes the term “Alpine ‘come’-passive” for this grouping of languages (see also Wiemer 2011a: 537). Ex.

Ladin (Rhaeto-Romance; Ramat 1998: 227–8)

Cō vain fabricheda la scuola nuova.
 here comes built the school new
 ‘Here the new school is built.’

Pomatteritsch (Walser German; Giacalone Ramat and Sansò 2014: 36)

Der salam chun rōwä gässä.
 ART salami come:PRES:3:SG raw eat:PP
 ‘Salami is eaten raw.’

This seems to be an example of contact-induced areal clustering, rarely found outside Europe. Presumably contact-induced is also the ‘come’-passive in Maltese that appears to have been replicated on the model of Italian (Drewes 1994: 95–6; Stolz 2003; Heine and Kuteva 2005: 129). But Giacalone Ramat and Sansò (2014: 37–9) also find evidence for this grammaticalization in other European languages, such as Romanian, Spanish, and Latvian. Ex.

Latvian, Tamiian dialect spoken in Svētiems (Giacalone Ramat and Sansò 2014: 39)

Pēc tam nāk adic papēc.
 after that come:PRES:3:SG elevate:PP heel
 ‘Then the heel is elevated.’

In Old Romanian, a passive based on the verb *veni* ‘come’ is attested in the late seventeenth century, and there are various forms of this passive in different varieties of Romanian (see Dragomirescu and Nicolae 2014 for a detailed account of the Romanian passive).

And there are also non-European languages showing this pathway, even if they mostly belong to the Indo-European family. Kashmiri forms the passive with the auxiliary verb *yun* ‘come’ and the ablative form of the infinitive, while the passive in Kurmanjî Kurdish consists of the verb *hatin* ‘come’ followed by the infinitive of the main verb (Giacalone Ramat and Sansò 2014: 35; Haig 2018: 73).

The initial stage of the process has been accounted for with reference to metaphorical transfer from ‘change of place’ to ‘change of state’ (Dragomirescu and Nicolae 2014; Devos and van der Wal 2014: 325). Concerning the role of deontic modality in this pathway, see Bourdin (2014).

According to Giacalone Ramat and Sansò (2014: 39), this pathway tends to have an intermediate stage of CHANGE-OF-STATE. In fact, for a number of languages, the authors reconstruct a grammaticalization chain COME TO > CHANGE-OF-STATE > PASSIVE.

Note that there are also occasional examples of related constructions involving ‘go’-verbs giving rise to passive constructions (see GO > PASSIVE). Compare COME TO > CHANGE-OF-STATE; EAT; FALL; GET; GIVE; GO; SEE; SUFFER > PASSIVE.

COME > (4) PROGRESSIVE

Medieval Chinese *lai* ‘come’, verb > Medieval Chinese *lai*, verbal adverbial > Early Modern Chinese *lai*, continuous marker (Long et al. 2012).

Spanish *venir* ‘come’ + present participle > progressive aspect marker (Bybee and Dahl 1989: 58). Tatar (gerund + *kil-* ‘come’) > progressive (Bybee and Dahl 1989: 58).

More examples are needed to substantiate this reconstruction. Nevertheless, this appears to be another instance of a more general process whereby process

verbs are grammaticalized to auxiliaries denoting tense or aspect functions; cf. BEGIN; COME TO; DO; GO TO; FINISH; KEEP; LEAVE; PUT.

COME > (5) VENITIVE (Venitive)

Xaracuu *mê* ‘come’, verb > *mê*, venitive directional ‘here’ when used as the second of two verbs in combination (Moyse-Faurie 2018: 289). Toqabaqita and Fijian *mai* ‘come’ > venitive marker (Lichtenberk 1991a: 481–2). Lahu *là* ‘come’ > *la*, venitive (“cisative”) particle. Ex.

Lahu (Matisoff 1991: 395–6)

- (a) *mû-yè là ve*
‘It’s raining.’ (lit.: ‘rain comes’)
- (b) *mô ?la*.
‘Blow in this direction.’ ‘Blow hither.’

Aranda **intye-* ‘come’, verb of motion > *-intye* ‘associated motion’ (do the action denoted in the verb stem while coming), suffix (Wilkins 1989: 275, 277). Ex.

Aranda (Wilkins 1989: 275)

alpe-rłtiw-ø-aye! Ularre uthne rr-intye-tyele!
‘(You mob) go home! Don’t come fighting with each other in this direction!’ (Old dog speaking to a pack of other dogs.)

Mandarin *lái* ‘come’, verb of motion > *-lái* ‘towards the speaker’ (final component of a resultative verb phrase; Li and Thompson 1981: 59). Ex.

Mandarin (Li and Thompson 1981: 59)

tā sòng-lái-le yì-ge xiāngzi.
3:SG send-come-PFV one-CLASS suitcase
‘S/He sent over (toward the speaker) a suitcase.’

Proto Kuki-Naga **ra* ‘come’ > Jingpho *r-*, directional (venitive) marker (Long et al. 2012).

The verb of motion *ac* ‘come’ of the So language of northeastern Uganda can be attached to virtually any verb to form a derivational venitive suffix (*-ac* ‘movement towards the speaker’). Ex.

So (Heine 1987)

- (a) *kot- ac íca.*
FUT- come s/he
‘He’ll come.’
- (b) *ɪ-ráB-ác néB.*
PERF-hunt-VEN person
‘The person has been hunting and has come back with prey.’ (Cf. *ráB* ‘to hide with a weapon in order to kill an animal’)

Proto-Chadic **wat* ‘come’, ‘come in’, ‘return’, verb > Hausa *-oo*, venitive extension (Frajzyngier 1987c: 32). Haitian CF *vini* (< French *venir*) ‘come’ > ‘here’, ‘toward here’. Ex.

Haitian CF (Sylvain 1936: 135)

Li ralé šèy-la vini.
 (3:SG pull chair-DEF here)
 ‘He pulled the chair here.’

English *come*, verb > Tok Pisin PE *-kam*, directional marker (Givón 1991a: 89). In Nigerian Pidgin (English), the verb *come* ‘come’ has a venitive function when used as the second verb in verb serialization with specific verbs, e.g. *carry come* ‘bring’. Ex.

Nigerian Pidgin PE (Mazzoli 2017: 237)

Na jos two I carry come.
 FOC ADV two I carry come
 ‘I only brought two of them.’

Negerhollands CD *ko(o)* (< Dutch *komen*) ‘come’, motion verb > directional (venitive) adverb (Stolz 1986: 192, 216).

This is an instance of a process whereby a verb on account of some salient semantic property gives rise to a grammatical marker highlighting that property; *see also* COME FROM; COME TO; CROSS; EXCEED; PASS; RESEMBLE; *see also* VENITIVE > CHANGE-OF-STATE.

COME FROM > (1) ABLATIVE (LOCATIVE, TEMPORAL)

Archaic Chinese *lai* ‘come’, verb > Medieval Chinese *zi* ... *yilai* (‘from ... to come’) > Medieval Chinese (*zi*) ... (*yi*)*lai*, ablative marker introducing a temporal starting point (Long et al. 2012).

Ewe *tsó* ‘come from’, verb > ‘from’, preposition (Westermann 1907: 97). Swahili *ku-toka* (INF:come:out) ‘come out, come from’, intransitive verb > *kutoka* ‘from’, locative or temporal preposition; *kutoka Nairobi mpaka Mombasa* ‘from Nairobi to Mombasa’. Tswana *go tswa* (INF come:out) ‘come from, come out’, verb > *go tswa* ‘from’, preposition (Creissels in prep. a). Lingala *-úta* ‘come from’, verb > *útá, út’ó* ‘since’, ‘from’. Ex.

Lingala (van Everbroeck 1958: 72, 158)

útá lóbi naléi náino te.
 ‘Since yesterday I haven’t eaten anything.’

French *sortir* ‘come out’, verb > Haitian CF *sòt(i)* (‘out) from’. Ex.

Haitian CF (Hall 1953: 55)

Yo pòté bagay sa yo sòt nâ-mòn.
 (they bring thing DEM PL from LOC-hill)
 ‘They bring these things from the hills.’

This is an instance of a process whereby a verb, on account of some salient semantic property, gives rise to a grammatical marker highlighting that property (Heine 2011c); compare, for example, COME TO; CROSS; EXCEED; GO TO; PASS; RESEMBLE.

COME FROM > (2) NEAR PAST

Medieval Chinese *lai* ‘come (from)’, verb > Early Modern Chinese *lai*, auxiliary indicating near past time (Long et al. 2012). Jiddu (Somali dialect) *-ooku* ‘come’, verb > near past tense marker. Ex.

Jiddu (Marcello Lamberti, p.c.)

- (a) *y-ooku*.
3:M-come
‘He comes.’
- (b) *y-aam-ooku*
3: M-eat-come
‘He has just eaten.’

Teso *-bu*, PL *-potu* ‘come’, verb > past (perfective) auxiliary. Ex.

Teso (Hilders and Lawrance 1956: 14; Heine and Reh 1984: 104)

a- bu ke-ner.
I- come I-say
‘I said.’

Sotho *-tsōa* ‘come from’ > *-tsōa-*, immediate past tense prefix. Ex.

Sotho (Doke and Mofokeng [1957] 1985: 204)

kē- tsōa- rēka.
‘I have just bought.’ (lit.: ‘I have come from buying’)

Klao *dε* ‘come’, verb > *dε*, past tense marker. Ex.

Klao (Marchese 1986: 124)

ɔ dε dε di.
he come thing eat
‘He just ate.’ (lit.: ‘He came from eating’)

Nyabo *wɔ* ‘come’ > marker of past actions. Ex.

Nyabo (Marchese 1986: 124)

ɔ wɔ gblà pi- ε.
s/he come rice cook- NOMIN
‘S/he’s been cooking rice.’

Margi *ghàdǎ* ‘come from’, verb > ‘to have done before’, ‘in the past’ (Hoffmann 1963: 220).

Compare also the following examples, where instead of a (near) past tense marker, a “perfect” morpheme has evolved: French *venir de* ‘come from’ > perfect. Ex.

French

- (a) *Il vient de Paris.*
he comes from Paris
‘He comes from Paris.’

- (b) *Il vient d' aller à Paris.*
 he comes from go to Paris
 'He has just gone to Paris.'

Yoruba *ti* 'come out of', verb > "perfect tense" marker. Ex.

Yoruba (Ward 1952: 139)

- O ti lɔ.*
 he come:out go
 'He has gone.'

Malagasy *avy* 'come', verb > *avy*, near past marker. Ex.

Malagasy (Bourdin 1999: 1; 2002: 181)

- (a) *ni- lalao aho.*
 PAST- play I
 'I played.'
 (b) *avy ni- Lalao aho.*
 come PAST- play I
 'I (have) played just now.'

Bourdin (2002) suggests that motion verbs for 'come (from)' are used in some languages as temporal modulators to signal "interval contraction" for reducing the time between speech time and reference time. Thus, in the Malagasy example above, by using the morpheme *avy* 'come' in the past tense, the speaker reduces the perceived temporal distance between speech time and event time (i.e. the moment of playing; Bourdin 2002: 181).

This grammaticalization appears to be an instance of a more general process whereby process verbs are grammaticalized to auxiliaries denoting tense or aspect functions; compare BEGIN; COME TO; DO; FINISH; GO TO; KEEP; LEAVE.

COME TO > (1) BENEFACTIVE

The conceptual label 'COME TO' stands for 'come'-verbs expressing goal-directed movement. This is a process that appears to have occurred repeatedly in Senufo languages and dialects. Pilara *pã* 'come', verb > benefactive marker. Ex.

Pilara (Carlson 1991: 212)

- (a) *Wi pã ga.*
 3:SG come here
 'S/He came here.'
 (b) *Ki kã u pã.*
 it give him/her to
 'Give it to him/her.'

là 'come', verb > *là*, benefactive particle (indicating that the verbal action is for the benefit of or impinges upon a nonthird person). Ex.

Lahu (Matisoff 1991: 395–6)

- (a) *lâ*.
‘Come.’
- (b) *chɔ lâ*.
‘Chop for me/us/you.’

This grammaticalization, still weakly documented, appears to be an instance of a more general process whereby verbs denoting location or motion serve as structural templates to express relational (adpositional) concepts; compare ARRIVE; COME FROM; GO TO; PASS.

COME TO > (2) CHANGE-OF-STATE

The conceptual label ‘COME TO’ stands for ‘come’-verbs expressing goal-directed movement. This grammaticalization includes processes leading to what tends to be described as resultative markers, for example, in Fijian, Vangunu, and Toqabaqita (Lichtenberk 1991a: 487–8). Toqabaqita *mai* ‘come’ > *-mai*, ingressive/resultative marker. Ex.

Toqabaqita (Lichtenberk 1991a: 487)

fanua’e rodo na- mai.
place it:PFV:be:dark PERF- come
‘It has become dark.’

In another Oceanic language, Tuvaluan, the verb *mai* ‘come’ expresses changes of state such as from sleeping to waking, from childhood to adulthood, from nonbeing or death to life, from darkness to light, from poor to good health, etc. (Besnier 2000; Moyse-Faurie 2018: 290).

Korean *o-* ‘come’, verb > *-eo-*, aspect auxiliary of change-of-state (Rhee 2016c).

Perhaps related to this grammaticalization is the development of Chinese *lai*, which throughout Chinese history was used as a verb meaning ‘come’. In Early Mandarin (around the twelfth century) it developed uses of a perfect marker, its function being to relate “two time points, a point in the past and speech time”, possibly being a marker of “currently relevant state” (Sun 1996: 98). Ex.

Early Mandarin (Jingde chuandenglu; quoted from Sun 1996: 98)

Daxiong shan-xia cai junzi lai.
Daxiong mountain- below pick fungi LAI
‘I have been to the foot of the Daxiong mountain to pick mushrooms.’

Hani *la*⁵⁵ ‘come (to)’ > *la*⁵⁵, marker of change-of-state (Long et al. 2012).

English *come*, verb > linking verb; for example, *come true*, *come undone*. Sango *ga* ‘come to’, verb > ‘become’ (inchoative marker; Thornell 1997: 122). Ex.

Sango (Thornell 1997: 118)

- (a) *Ë ge ge.*
1:PL come:to here
‘We come here.’

- (b) *Tënë à:gã polêlê.*
 word AGR:become clear
 ‘The speech became clear.’

This grammaticalization appears to be particularly common in pidgin and creole languages: Guyanese CF *vini* ‘come (from)’, verb > change-of-state marker. Ex.

Guyanese CF (Corne 1971: 90)

- i vini malad.*
 (3:SG come sick)
 ‘He has become sick.’

Seychelles CF *vin(i)* ‘come’, verb > ‘become’. Ex.

Seychelles CF (Corne 1977: 63, 80)

- (a) *i demânde si mô a kapab vini.*
 (3:SG ask if 1:SG FUT be:able come)
 ‘He asks if/whether I will be able to come.’
- (b) *mô pu vin ris ê zur. i n vin larpâter.*
 (1:SG FUT come rich one day) (he CPL come surveyor)
 ‘I shall be(come) rich one day.’ ‘He became a surveyor.’

Fa d’Ambu CP *bi* ‘come’, verb > resultative aspect marker. Ex.

Fa d’Ambu CP (Post 1992: 159)

- Tyipa bi sxa dual eli kumu pasa.*
 stomach come PART hurt 3:SG eat surpass
 ‘His stomach hurt; he had eaten too much.’

Ghanaian PE *come* ‘come’, verb > ingressive aspect marker (Huber 1996). Chinook Jargon *čákwa* or *čáku* ‘come’ is found before stative verbs and occasionally before active verbs in any of the forms *čaku*, *čaw*, *č(u)* with the meaning ‘become X’, ‘get to be X’; for example, Grand Ronde Chinook Jargon *dákta čawsik* ‘the doctor becomes sick’ (Grant 1996: 236).

According to Giacalone Ramat and Sansò (2014: 39), this pathway may constitute an intermediate step on the way from COME to PASSIVE. This grammaticalization appears to be an instance of a more general process whereby process verbs are grammaticalized to aspectual auxiliaries; compare DO; FINISH; GO; GO TO; LEAVE; COME > PASSIVE.

COME TO > (3) FUTURE

The conceptual label ‘COME TO’ stands for ‘come’-verbs expressing goal-directed movement. Early Modern Chinese *lai* ‘come (to)’ > *lai-*, prefix for future time. Meixian dialect of Hakka *loi*²² ‘come (to)’ > *loi*²²⁻, auxiliary before a predicate expressing a future plan of the speaker (Long et al. 2012).

In the Wintu language of Northern California, the verb *wEr* ‘come, bring’ is the source of a future intentional marker (Mithun 2018: 314). Bambara *nà* ‘come’, verb > *ná*, remote future marker. Ex.

Bambara (Donald A. Lessau, p.c.)

- (a) *Û te ná.*
3:PL NEG:AUX come
‘They don’t come.’
- (b) *À ná sà.*
3:SG FUT die
‘He will die.’ (= Everyone has to die some day)

Bambara *bé* auxiliary + *nà* ‘come’, verb > *bená*, near future marker. Ex.

Bambara (Donald A. Lessau, p.c.)

- (a) *Û bé ná.*
3:PL AUX come
‘They come.’
- (b) *À béna sà.*
3:SG FUT die
‘He will die (soon and/or surely).’

Kono *nà* (+ *-à*) ‘come’ > *náà*, near future tense marker. Ex.

Kono (Donald A. Lessau, p.c.)

- (a) *Í ná-á fén mà?*
2:SG come-TAM what for
‘What have you come for?’
- (b) *mbé náà ñ kó-à.*
1:SG:TAM NFUT 1:SG wash-TAM
‘I’m going to wash myself (right now).’

Akan *ba* ‘come’, verb > *bɛ*, *bé*, *bɔ*, *bó*, future tense marker. Ex.

Akan (Welmers 1973: 353–4; Marchese 1986: 123)

ɔ-bɛ-bá.
he-FUT-come
‘He’s going to come.’

Wapa (Jukun dialect) *bi* ‘come’, verb > future tense marker. Ex.

Wapa (Welmers 1973: 354; Marchese 1986: 123)

ku ri bi ya.
he PROG come go
‘He’s going to go.’

Efik *-di-* ‘come’, verb > future tense marker. Ex.

Efik (Welmers 1973: 354–5; Marchese 1986: 123)

ń-dí-dép mbòró.
1:SG-come-buy bananas
‘I’m going to buy bananas.’

Neyo *i/yi* ‘come’ > future tense marker (Marchese 1986: 75). Godié *yi* ‘come’ > future tense marker (Marchese 1986: 75). Bété *yi* ‘come’ > future tense marker (Marchese 1986: 75). Dida *ci* ‘come’ > *ci*, future tense marker (Marchese 1986: 75). Tepo *di* ‘come’ > future tense marker (Marchese 1986: 75). Koyo *yi* ‘come’ > future tense marker. Ex.

Koyo (Marchese 1986: 75)

- (a) *Abi yi du.*
Abi come:FACT town
‘Abi came home.’
- (b) *Abi yi du mo.*
Abi AUX town go
‘Abi will go to town.’

Gwari *bé* ‘come’, verb > *ḃá*, future tense marker (Hyman and Magaji 1971: 59, 147; Heine and Reh 1984: 198). Duala *ya* ‘come’ > *-ya*, immediate future marker (Ittmann 1939: 93–5; Heine and Reh 1984: 132). Ex.

Duala (Heine and Reh 1984: 132)

- a mǎ-yǎ nanga wàsè.*
he PRES-FUT lie ground
‘He will lie down right now.’

Ganda *-jjá* ‘come’ > indefinite future marker. Ex.

Ganda (Welmers 1973: 355; Marchese 1986: 124)

- Ájjá kúgéndá.*
he:come INF:go
‘He is going to go (sometime).’

Sotho *-tla* ‘come’, verb > *-tla-*, future tense marker; *-tlilehō-* ‘have come to’ > *-tlil’o-*, future tense marker (Doke and Mofokeng [1957] 1985: 206–7). Zulu *-za* ‘come’ > *-za-*, marker of immediate future. Ex.

Zulu (Mkhatshwa 1991: 96)

- (a) *Ngi-ye- za.*
(1:SG-?- come)
‘I’m coming.’
- (b) *U-za-ku- fika.*
(2:SG-FUT-INF- arrive)
‘He’ll arrive.’

Acholi *bino* ‘come’, verb > *-bi-*, future tense marker. Ex.

Acholi (Malandra 1955: 76; Bavin 1983: 151; Heine and Reh 1984: 92)

- (a) *lyec o-bino.*
elephant 3:SG-came
‘The elephant came.’
- (b) *an a-bi-camo.*
1:SG 1:SG-FUT-eat:INF
‘I’ll eat.’

Teso *abunere* (ko) ‘come’, verb > -*bun-*, future tense marker. Ex.

Teso (Hilders and Lawrance 1956, 1958)

e- bun- i a- anyun.
(3:SG- come- PRES INF- see)
‘He will see.’

Lotuko ‘*tuna* ‘come’, verb > future tense marker. Ex.

Lotuko (Muratori 1938: 161ff.; Heine and Reh 1984: 131–2)

a-ttu ni leten.
1:SG-come I go
‘I’ll leave immediately.’

Swedish *komma* ‘come’ > *komma att*, auxiliary expressing unplanned future (Werner 1986: 102–3; see Hilpert 2008: 49–69 for detailed analysis of this process). Tamil *vaa* ‘come’, verb of motion > auxiliary marking intended future actions. Ex.

Tamil (T. Lehmann 1989: 217)

naan kumaar-ai-k keet-k-a varu-kir- een
1:SG Kumar- ACC ask- INF come-PAST- 1:SG
‘I am going to ask Kumar.’

Chinese *lái* ‘come’ > marker of intended future actions and of purpose clauses (Matisoff 1991: 401–2).

The process COME TO > FUTURE has been discussed in a number of different works; for more details, see especially Welmers (1973: 354–5), Ultan (1978a), Fleischman (1982a, 1982b), Bybee et al. (1991, 1994). For a collostructural reconstruction, see Hilpert (2008). For a cognitive interpretation of the process, see Emanatian (1992).

This grammaticalization appears to be an instance of a more general process whereby process verbs are grammaticalized to auxiliaries denoting tense or aspect functions; compare BEGIN; COME FROM; DO; FINISH; GO TO; KEEP; LEAVE; PUT.

COME TO > (4) PROXIMATIVE

The conceptual label ‘COME TO’ stands for ‘come’-verbs expressing goal-directed movement. Hani *la*⁵⁵ ‘come (to)’ > *la*⁵⁵, proximative marker (Long et al. 2012). Lahu *là* ‘come’ > (*la* venitive >) proximative aspect marker ‘almost coming to’, ‘nearly’. Ex.

Lahu (Matisoff 1991: 395–6)

- (a) *mû-yè là ve.*
‘It’s raining.’ (lit.: ‘rain comes’)
- (b) *ši-la*
‘be close to death’

Tchien Krahn *gi*, verb ‘come’ > ‘almost’. Ex.

Tchien Krahn (Marchese 1986: 121)

pidē gi kwə la.
 plantain come spoil NOMIN
 ‘The plantain is almost spoiled.’

Compare NEAR; LOVE; WANT. This process, which is in need of more evidence, is often confused with the development (>) COME TO > FUTURE. While the latter process leads to the rise of a verbal tense, the present one results in an aspect function. The process appears to be an instance of a more general process whereby process verbs are grammaticalized to auxiliaries denoting tense or aspect functions; compare BEGIN; COME FROM; DO; FINISH; GO TO; KEEP; LEAVE; PUT.

COME TO > (5) PURPOSE

The conceptual label ‘COME TO’ stands for ‘come’-verbs expressing goal-directed movement. Chinese *lái* ‘come’ > subordinating conjunction of purpose clauses. Ex.

Chinese (Matisoff 1991: 401–2)

nǐ néng yòng shénme fāngfǎ lái bāngzhù tā ne.
 2:SG can use what method (come) help 3:SG PART
 ‘How are you going to help him?’

Sapo *di* ‘come’, verb > goal/purpose clause marker (Marchese 1986: 144). In the nearly extinct Nlɿng language of South Africa, the verb *sii* ‘come’ is used to point to purposive or intentional motion when used as the first in a series of two verbs (Ernszt 2012: 123). Ex.

Nlɿng (Ernszt 2012: 123)

Ng sii ng n!uu oom Jan.
 I come I visit uncle Jan
 ‘I come (with the intention) to visit uncle Jan.’ (*‘I come and visit uncle Jan.’)

Since BENEFACTIVE markers may also be derived from COME TO (*see* COME TO > BENEFACTIVE) and may themselves develop into PURPOSE markers (*see* Heine et al. 1991a), it is possible that PURPOSE is not immediately derived from COME TO but rather has BENEFACTIVE as an intermediate stage. In Chinese, however, the development from *lai* (*lái*) ‘come to’ to purpose marker does not appear to have involved an intermediate BENEFACTIVE stage (Alain Peyraube, p.c.); more research is needed on this point.

The development from a verb for ‘come to’ to case marker is also attested in the Papuan languages Blagar, Makasae, and Teiwa, where the Proto-Timor-Alor-Pantar verb **mai* ‘come here, come towards deictic centre’ was grammaticalized to a general adposition (> Makasae, Teiwa *ma*, Blagar = *ma*) encoding oblique participants (Klamer 2018: 247ff.).

This grammaticalization appears to be an instance of a more general process whereby verbs denoting location or motion serve as structural templates to express relational adpositional or subordinating concepts; compare ARRIVE; COME FROM; GO TO; LEAVE; PASS.

COMITATIVE > (1) AGENT

In this grammaticalization process comitative markers ('(together) with') are pressed into service to introduce agents in passive constructions. Shona *na* 'with', comitative and instrumental preposition > agent marker in passive constructions (Fleisch 2005: 97–8). Swahili *na* 'with', comitative preposition > agent marker in passive constructions. Ex.

Swahili

- (a) *a-li-ondoka na mke-we.*
C1-PAST-leave with wife-his
'He left (together) with his wife.'
- (b) *a-li-it-wa na mke-we.*
C1-PAST-call-PASS by wife-his
'He was called by his wife.'

(French *avec* 'with' >) Seychelles CF *(av)ek* 'with', general preposition > marker of the agent in passive constructions. Ex.

Seychelles CF (Corne 1977: 71)

- (a) *mô koz ek u.*
(1:SG speak with 2:SG)
'I speak to you.'
- (b) *ban brâs i n kase ek divâ.*
PL branch 3:SG CPL broken with wind
'The branches are/have been broken by the wind.'

(French *avec* 'with' >) Rodrigues CF *(av)ek* 'with', general preposition > agent marker in passive constructions. Ex.

Rodrigues CF (Corne 1977: 164–5)

- lisiẽ i gaỹ morde ek pis.*
(dog 3:SG get bite with flea)
'Dogs get bitten by fleas.'

This grammaticalization needs further exemplification. As it stands, it is found mostly in languages spoken in the western Indian Ocean region. Martin Haspelmath (p.c.) suggests that this may not be a process leading straight from COMITATIVE to AGENT; rather, it might involve an intermediate INSTRUMENT stage. According to Silvia Luraghi (p.c.), comitative–agent polysemies are crosslinguistically rare (see also Luraghi 2001b). Note, however, that the preposition *na* of Swahili has comitative and agent but no instrumental function, which might be suggestive of a direct process from the former to the latter.

More research is needed on this pathway; *see also* INSTRUMENT > AGENT.

COMITATIVE > (3) NP-AND

That the directionality proposed here is correct is suggested by evidence from Chinese. For example, the Chinese verb *gong* ‘to share (with)’ was grammaticalized in Late Archaic Chinese (fifth–second century BC) to an adverb meaning ‘together’, and from the Early Medieval period (second–sixth century AD) it developed into a comitative preposition. Ex.

Early Medieval Chinese (Bai yu jing; quoted from Peyraube 1996: 189)

gong duo ren zhong zuo yu shi zhong.
 with many people crowd sit at room in
 ‘(We) sat inside the room with a crowd of many people.’

The first attested example of *gong* as an NP-AND conjunction is found in the Song period. Ex.

Song period Chinese Qi guo chunqiu pinghua 7; quoted from Peyraube 1996: 189–90

wu lai jiu Sunzi an die gong Yuan Da.
 I come help Sunzi I father and Yuan Da
 ‘I came to help Sunzi, my father, and Yuan Da.’

Thus, *gong* experienced the following evolution: verb > adverb ‘together’ > preposition ‘with’ > conjunction ‘and’. Furthermore, Peyraube (1996: 189) argues that Chinese *he* was a verb meaning ‘to mix (up)’ and later ‘to stick together’. From the beginning of the Tang period it came to mean ‘included’ and later on to be used as a comitative preposition ‘with’. Already around the Mid-Tang period, *he* is said to have become an NP-AND conjunction (Peyraube 1996: 190). In a similar fashion, the Chinese verb *tong* meaning ‘to share with’, ‘to accompany’ was grammaticalized probably during the Tang period to a comitative preposition. In Contemporary Chinese (i.e. from the nineteenth century onward), *tong* began to function as a coordinating conjunction (Peyraube 1996: 190–1).

Archaic Chinese *ji* ‘be together with’, verb > *ji*, comitative preposition > *ji*, coordinator (Long et al. 2012). In the Bailongjiang region varieties of Chinese, *lian* serves as both a comitative preposition and a coordinator (Long et al. 2012).

Toqabaqita *bia*, *bii* ‘with’, comitative preposition > ‘and’, NP-conjoining conjunction (Lichtenberk 1991b: 44, 61). Sarcee *mih* ‘with’ > ‘and’ (Mithun 1988: 349; Giacalone Ramat and Mauri 2011: 657). The Limbu comitative suffix *-nu* is used, inter alia, to coordinate nominal groups as a conjunction ‘and’, whereby it is suffixed to all but the last noun in a series (Driem 1987: 49). Hausa *dà* ‘with’, comitative preposition > ‘and’, NP-conjoining conjunction (Ma Newman 1990: 10; Jaggard 2010: 64). Ga *kè* ‘with’, comitative marker > ‘and’, NP-conjoining conjunction (cf. Lord 1989: 117ff.). Ewe *kplé* ‘with’, comitative preposition > ‘and’, NP-coordinating conjunction. Ex.

Ewe (own data)

- (a) *é-yi kplé wo.*
 3:SG-go with 2:SG:OBJ
 ‘She went with you.’
- (b) *Kofi kplé Kosi vá égbé.*
 Kofi and Kosi come today
 ‘Kofi and Kosi came today.’

Dogon *-le* ‘with’, comitative suffix > ‘and’, NP-conjoining connective, added to each NP (Calame-Griaule 1968: 177). Baka *te* ‘with’, comitative preposition > ‘and’, NP-conjoining conjunction. Ex.

Baka (Christa Kilian-Hatz, p.c.)

wósè-o te mókòsè-o te bo kòpɛ wó ngò geè jo!
 woman-PL COM man-PL COM people all 3: PL should seek food
 ‘Women, men, and all other people should look for food!’

Ngbaka Ma’Bo *te* ‘with’, comitative preposition > ‘and’, NP-conjoining conjunction (Thomas 1970: 537). Lingala *na* ‘with’, comitative preposition > ‘and’, NP-conjoining conjunction. Ex.

Lingala (van Everbroeck 1958: 72)

- (a) *elɔngɔ na Bongo*
 together with them
 ‘together with them’
- (b) *bísó na yé*
 3:SG and 1:SG
 ‘he and I’

Moré *né* ‘with’, comitative preposition > ‘and’, NP-conjoining conjunction. Ex.

Moré (Alexandre 1953b: 268 –9).

ba né ma
 ‘father and mother’

Kupto *kán* ‘with’ > ‘and’, listing connective (Leger 1991: 27). Walman *-aro-* (‘take, touch, catch, grab, pick up’ >) ‘together with’, comitative marker > *-aro-* ‘and’, NP-conjoining conjunction (Brown and Dryer 2008; Heine 2014). Yagaria *-e’/-’ese’* ‘with’, ‘together with’, comitative suffix > ‘and’, NP-conjoining conjunction. Ex.

Yagaria (Renck 1975: 43f)

- (a) *avo-’a-’e’*
 father-his-COM
 ‘with his father’

Or

avo- 'a- 'ese'

father-his-COM

- (b) *dagae-* 'e' *yale-di-* 'e'
1:SG-and people-my-and
'I and my people'

Turkish *ile* 'with', comitative postposition > 'and', NP-conjoining conjunction. Ex.

Turkish (Lewis [1967] 1985: 86; Ergun Cehreli, p.c.)

- (a) *kim:in ile gittiniz?*
whom with go:PAST:3:PL
'With whom did you go?'
(b) *ben ile Ali cinemaya gidiyoruz.*
1:SG and Ali cinema:ALL go:PRES:1:PL
'Ali and I are going to the movies.'

This pathway is particularly richly documented in pidgin and creole languages. These languages have emerged within the last four centuries and in most cases we know the languages that contributed to the genesis of this process, allowing us to reconstruct grammatical processes better than in many other languages. For example, in a number of French-based creoles, the comitative preposition etymologically derived from French *avec* 'with' has been used to create an NP-AND conjunction, conjoining noun phrases. In accordance with the erosion parameter, French *avec* has been phonologically reduced to *ak* in Haitian creole; see (a). The comitative-derived conjunction is also used in listings of more than two NPs; see (b). Ex.

Haitian (French-based creole; Boretzky 1983: 213 Holm 1988: 206)

- (a) *papa-m ak mama-m te vini.*
father-my with mother-my have come
'My father and my mother came.'
(b) *šat, kabrit ak-šē*
cat goat with-dog
'cat, goat, and dog'

In Seselais, the French-based creole of the Seychelles Islands, French *avec* is still there in this form, but has optionally undergone erosion to *ek* when used as an NP-AND conjunction, e.g. *sô lebra ek lipie* (his arm **with** leg) 'his arms and legs' (Corne 1977: 58). In the by now extinct Dutch-based creole Negerhollands, the comitative preposition *mi* 'with' has been grammaticalized to an NP-AND conjunction (Boretzky 1983: 212), and similar instances of this evolution can be found in the Portuguese-based creole of Príncipe (*ki*), the Spanish-based Papiamentu (*ku*), and the English-based creole Sranan (*nanga*) (Boretzky 1983; Stolz 1986: 233–7; Heine 2014: 76–7).

The evolution from comitative markers to markers of noun phrase coordination appears to be well established; see especially Mithun (1988), Stassen (2000; 2001), Heine (2014: 77–81) for details. Stassen (2000) observes that “the grammaticalization of a comitative encoding pattern into a ‘coordination-like’ construction prototypically involves the creation of a single constituent, in which both the ‘with’-phrase and the non-comitative NP are included, and in which the two NPs gradually come to be regarded as being of equal structural rank”. *See also* TAKE > COMITATIVE; FOLLOW > COMITATIVE; FOLLOW > NP-AND.

COMITATIVE > (3) S-AND

Evidence for this pathway can be found, e.g. in creole languages. French *avec* ‘with’ > Haitian CF *ak* ‘and’, conjunction coordinating verb phrases (*see also* COMITATIVE > NP-AND). Ex.

Haitian CF (Sylvain 1936: 79)

Wè ak tādé pa mēm.
 see and hear NEG same
 ‘To see and to hear are not the same.’

Mauritius CF (*av*)*ek* ‘with’, ‘and’ > ‘and’, combining verb phrases (rarely used). Ex.

Mauritius CF (Boretzky 1983: 261)

Linze ti al Iden ek Zorz ti al Budyari.
 (Lindsay past go Eden and George PAST go Bhujharry)
 ‘Lindsay went to Eden (college) and George to Bhujharry.’

See Michaelis and Rosalie (2000) for a more general treatment of the grammaticalization of (*av*)*ek*.

Swahili *na* ‘with’, comitative preposition (> NP-AND) > S-AND. Ex.

Swahili

- (a) *a-li-ku-ja na mke-we.*
 3:SG-PAST-INF-come with wife-3:SG:POSS
 ‘He came with his wife.’
- (b) *a-li-ku-ja na ku-ondoka tena.*
 3:SG-PAST-INF-come and INF-leave also
 ‘He came and left again.’

NP-AND markers appear to provide one of the main sources for predicate- or clause-connecting markers (‘and’). Thus, we may be dealing with a more general evolution COMITATIVE > NP-AND > S-AND (see Heine 2014). Concerning evidence on this directionality, *see also* COMITATIVE > NP-AND.

COMITATIVE > (4) CAUSATIVE

Shibatani and Pardeshi (2002: 115ff., 166) point out that “in a fair number of languages, causative morphemes are associated with the applicative function of introducing a comitative, instrumental, or benefactive argument”.

In the Hausa language of northern Nigeria and southern Niger, the comitative-instrumental preposition *dà* ‘with’ has been grammaticalized as a transitive preposition, and one of its functions is to combine with derived morphological causative stems occurring with an overt complement (b). Ex.

Hausa (Jaggar 2017: 18ff)

- (a) *yaarò zâi kwântaa.*
 boy FUT:3:M:SG lie.down:GR1
 ‘The boy will lie down.’
- (b) *zaa tâ kwantaĩ dà yaarò.*
 FUT 3:F:SG lay.down:GR5 CAUS boy
 ‘She will lay the boy down.’

The derivational suffix *-nga-l* of the Yidiny language of Queensland, Australia, includes not only comitative and instrumental but also causative uses (Shibatani and Pardeshi 2002: 116). In the Machiguenga language of Peru, the affix *-ag-* is ambiguous between a comitative and a sociative causative interpretation.¹¹ Ex.

Machiguenga (Wise 1990: 95, cited in Guillaume and Rose 2010: 394)

- No-panki-t-ag-ak-e-ri.*
 1-SG-plant-EP-CAUS/COM-PFV-NONFUT-3:SG:M
 ‘I planted with him’ or ‘I ordered him to plant.’

Following Guillaume and Rose (2010), the following chain of grammaticalization can be tentatively proposed:

COMITATIVE/INSTRUMENTAL > SOCIATIVE CAUSATIVE/DIRECT CAUSATION MARKER > CAUSATIVE (INDIRECT CAUSATION MARKER)

In Sikuani, a Guahibo language of Colombia, for instance, the applicative affix *ka-* is reported (cf. Queixalós 1998; 2000; 2002) to function as an instrumental and a sociative causation marker, but also as a regular causation marker (Guillaume and Rose 2010: 393).

More research is needed to substantiate this hypothesis; compare also COMITATIVE > INSTRUMENT.

¹¹ According to Guillaume and Rose (2010: 384), “[s]ociative causation differs from regular causation in that the causer not only makes the causee do the action but also participates in it, which is usually paraphrased with sentences like *make someone do something by doing it with them* or *help someone do something*”.

COMITATIVE > (5) EXIST

Swahili *na* ‘with’, comitative preposition > (locative class +) *-na*, existential marker. Ex.

Swahili

ku- na asali nyingi.
 LOC- be:with honey plenty
 ‘There is plenty of honey.’

Baka *tɛ* ‘with’, comitative preposition > existential marker. Ex.

Baka (Kilian-Hatz 1992: 42)

ʔe tɛ bo dàdì A bè.
 3:SG COM people plenty LOC party
 ‘There are many people at the party.’

Note that this grammaticalization is confined to the Niger-Congo family of Africa; more examples from other continents are needed.

COMITATIVE > (6) INSTRUMENT

Linxia, Tangwang (Sinitic languages of northwestern China that possess cases): *la* (comitative case) > *la* (instrumental case); see Peyraube 2015.

Ancient Greek *metá* (with genitive case) ‘with’, comitative marker > Modern Greek *me* ‘with’, comitative and instrumental preposition (Luraghi 2001b: 390). Latin *cum* ‘with’, comitative preposition > *cum* ‘with’, comitative and instrumental preposition.

Ga *ké* comitative marker > instrument marker. Ewe *kplé* ‘with’, comitative preposition > instrument preposition. Ex.

Ewe (Claudi and Heine 1986: 321)

- (a) *é-yi kplé wo.*
 3:SG-go with 2:SG:OBJ
 ‘She went with you.’
- (b) *wó-tu-a βɔtrú kplé safui.*
 3:PL-open-HAB door with key
 ‘A door is opened with a key.’

Dogon *-le* ‘with’, comitative suffix > instrument suffix (Calame-Griaule 1968: 177). Baka *tɛ* ‘with’, comitative preposition > ‘with’, instrument preposition. Ex.

Baka (Kilian-Hatz 1992: 58)

Ma à konó wà tɛ ngbala.
 1:SG ASP cut firewood COM machete
 ‘I cut firewood with the machete.’

Ngbaka Ma’Bo *té* ‘with’, comitative preposition > instrument preposition. Ex.

Ngbaka Ma'Bo (Thomas 1970: 115)

ʔ'ɛ 'bōkò nzò-kàná-ngéè tɛ ndiká ...
 then:he hit head-mother-her with nuts
 'Then he hits his mother with nuts on the head ...'

Turkish *ile* 'with', comitative postposition > instrument postposition. Ex.

Turkish (Lewis [1967] 1985: 86)

- (a) *kim-in ile gittiniz?*
 'With whom did you go?'
- (b) *vapor ile gittiniz.*
 'You went by boat.'

Moré *né* 'with', comitative preposition > 'with', instrument preposition (Canu 1976: 153).

Albanian *me* 'with', comitative preposition > instrument preposition. Ex.

Albanian (Buchholz et al. 1993: 312)

- (a) *erdhi me të motrën.*
 (3:SG:AOR:come with ART sister)
 'He came with his sister.'
- (b) *e hapa me çelës.*
 (ART 1:SG:AOR:open with key)
 'I opened it with the key.'

Hungarian *-vel/-val*, suffix marking the comitative case > suffix marking instruments. Ex.

Hungarian (Tompá 1972: 120)

- (a) *barátja-val*
 friend- with
 'with the friend'
- (b) *hajó-val*
 ship-with
 'with a ship'

Bulgarian *s* 'with', adposition > instrumental adposition. Ex.

Bulgarian

- (a) *majkata s deteto*
 mother:DEF with child:DEF
 'the mother with the child'
- (b) *Toj piše s moliv.*
 he write:3:SG:PRES with pencil
 'He writes with a pencil.'

Imbabura Quechua *-wan* comitative marker > instrumental marker. Ex.

Imbabura Quechua (Cole 1982: 114)

- (a) *nūka wawki- wan kawsa- ni.*
 my brother- COM live- I
 ‘I live with my brother.’
- (b) *pamba- pi yunda- wan yapu- ni.*
 field- in pair:of:oxen- INSTR plow- I
 ‘I plow in the field with a pair of oxen.’

Mezquital Otomi *ko* ‘with’, comitative marker > *ko*, instrumental marker (Hess 1968: 83, 89). Yagua *-ta*, comitative suffix > instrumental suffix. Ex.

Yagua (Payne and Payne 1990: 404–5)

- (a) *sa- tiryq̣q- ta- rà.*
 3:SG- lie:down- TA- INAN
 ‘He lies down with it (e.g. a book).’
- (b) *sa- jichitiy- nū quiiṿq̣ quiichi-y ta.*
 3:SG- poke- 3:SG fish knife- INSTR
 ‘He pokes the fish with the/a knife.’

This is a crosslinguistically widely attested pathway. But its diffusion may also be contact-induced, as has been argued with evidence from European languages (Heine and Kuteva 2006: 183–203). Concerning the directionality COMITATIVE > INSTRUMENT, see, for example, Lakoff and Johnson (1980), Lehmann (1982: 111), Heine et al. (1991a: 163ff.); see also Luraghi (2001) for evidence for this pathway from Greek.

Note that there is comitative–instrument polysemy in many languages without there being any clear information on how the polysemy arose. For example, Archaic Chinese *yi* served as both a comitative and an instrument preposition, and the same applies to Bailongjiang region varieties of Chinese *lian* and to Uzbek *bilən* (Long et al. 2012).

Comitative markers may develop further into noun-phrase conjoining and clause-conjoining markers (Heine 2014); see COMITATIVE > NP-AND; COMITATIVE > S-AND.

COMITATIVE > (7) MANNER

Ancient Greek *metá* (taking the genitive case) of Herodotus was a comitative preposition (‘(together) with’). From Classical Attic on, *metá* started to be used as a manner preposition with abstract nouns (Luraghi 2001b: 391–3; 2003: 252). German *mit* ‘with’, comitative preposition > manner preposition. Ex.

German

- (a) *Er kam mit seinen Kindern.*
 he came with his:PL child:PL
 ‘He came with his children.’

- (b) *Er hat es mit Absicht getan.*
 he has it with purpose done
 'He did it on purpose.'

Hausa *dà* 'with', comitative preposition > manner preposition. Ex.

Hausa (*Ma Newman 1990: 93, 307; Jaggar 2010: 65*)

dà saurī
 with speed
 'fast'

Ngbaka Ma'Bo *té* 'with', comitative preposition > manner preposition. Ex.

Ngbaka Ma'Bo (*Thomas 1970: 591; glosses provided by Christa Kilian-Hatz, p.c.*)

ʔé pá ndàá té ká'bú... .
 he pass:at place:that with anger
 'Consequently he left that place full of anger. ...'

Albanian *me* 'with', comitative preposition > manner preposition (Buchholz et al. 1993: 312). Hungarian *-vel/-val*, suffix marking the comitative case > suffix marking manner (Tompá 1972: 120).

Tamil *-oofu*, suffix marking the comitative case ("sociative") > suffix marking manner (T. Lehmann 1989: 37–8).

Presumably, this process does not lead straight from COMITATIVE to MANNER uses but appears to have INSTRUMENT as an intermediate stage. In her reconstruction from Homeric to Classical Greek, Luraghi (2001: 393) reconstructs the following general pathway of grammaticalization for the preposition *metá* (taking the genitive case): animate location > comitative > inanimate accompaniment > attendant circumstances > non-prototypical instruments (with abstract nouns) > manner.

Note further that a crosslinguistic typological survey of case polysemy showed that of the 42 markers with comitative–manner polysemy identified, only 12 do not also include an instrumental function (Narrog and Ito 2007; Narrog 2010b).

See also INSTRUMENT > MANNER.

COMITATIVE > (8) PASSIVE

Baka *te* 'with', comitative preposition > passive marker (with impersonal agents). Ex.

Baka (*Kilian-Hatz 1992: 63*)

bèlâ à mɛ̀ɛ̀lɛ tɛ.
 work ASP do:PAST PASS:3:SG
 'The job was done.'

Lamang *ndà* 'with', comitative preposition > passive proclitic. Ex.

Lamang (*Wolff 1983: 171–2*)

ndá dà zùwì.
 'The rope is plaited.' (cf. *dà* 'plait')

These examples involve genetically and areally presumably unrelated African languages, but see also Wiemer (2011: 537).

COMITATIVE > (9) H-POSSESSIVE

Hausa (continuous aspect +) *dà* ‘with’, comitative preposition > ‘have’ (Ma Newman 1990: 119, 307; Jaggar 2010: 64–5). Swahili *na* ‘with’, comitative preposition, *-na* ‘be with’ > *-na* ‘have’. Ex.

Swahili

a-na gari.
C1-be:with car
‘He has a car.’

Baka *tɛ* ‘with’, comitative preposition > ‘have’, marker of verbal possession. Ex.

Baka (Kilian-Hatz 1992: 40)

ʔé tɛ jóko nda kè.
3:SG COM nice house DEM
‘He has a nice house.’

Lingala *-zala* ‘be’ + *na* ‘with’, comitative preposition > *-zala na* ‘have’, verbal possession (van Everbroeck 1958: 150, 160, 163). Arabic *ma’-* ‘with’ > ‘to have in hands’, actual possession (Kilian-Hatz and Stolz 1992: 4–5). Mongolian *-toj/-tej/-taj*, comitative case marker > ‘to own’, permanent possession; Welsh ‘to be’ + *gyda* ‘with’ > ‘to have’, permanent possession (Kilian-Hatz and Stolz 1992: 4–5).

This grammaticalization has been described as a process whereby possession is conceptualized and expressed in terms of accompaniment (see Heine 1997a).

COMITATIVE > (10) PROGRESSIVE

Umbundu *kasi* copula + *la, l’*, comitative preposition + *oku-* infinitive > progressive. Ex.

Umbundu (Valente 1964: 281; Blansitt 1975: 24)

tu-li l’okulya.
(we-are with eating)
‘We’re eating.’

Ngbaka Ma’Bo *té* ‘with’ > progressive marker (if followed by verbal nouns). Ex.

Ngbaka Ma’Bo (Thomas 1970: 17)

’é té ’ó’ó.
he with leaving
‘He is leaving.’

Baka *tɛ* ‘with’, comitative preposition > progressive aspect marker. Ex.

Baka (Kilian-Hatz 1992: 29)

wó tɛ na jo dandù.
3:PL COM INF eat honey
‘They are eating honey.’

Swahili *na* ‘with’, comitative preposition > *-na-*, verbal prefix marking progressive aspect (in some dialects) and present tense (in others).

Swahili

- (a) *a- li-fuat-ana na binti y-ake.*
 C1- PAST-follow-REC with C9:daughter C9-his
 ‘He followed his daughter.’
- (b) *wa- na-fuat-ana.*
 3:PL:C2- PROG-follow-REC
 ‘They are following each other.’

Progressive and other kinds of continuous markers may develop into markers for habitual aspect. It is not surprising, therefore, that COMITATIVE also has given rise to habitual aspect categories: Baka *te* ‘with’ (comitative preposition) > marker of habitual actions. Ex.

Baka (Kilian-Hatz 1992: 32)

Wàitò kè ʔé te na banà
 Waito DEM 3:SG COM INF care
atìni jókò!
 1:PL:INCL:OBJ well
 ‘Waito has always treated us well!’

Kala Lagau Ya *-pu*, comitative case marker > habitual aspect marker (Blake 1994: 183).

This grammaticalization appears to be an instance of a more general process whereby grammatical aspect functions are conceptualized and expressed in terms of locative or comitative constructions; *see also* LOCATIVE.

COMITATIVE > (11) TEMPORAL

Awtuw *-k*, instrumental/comitative marker > marker of temporal clauses (Feldman 1986: 113). German *mit* ‘with’, comitative and instrumental preposition > temporal preposition. Ex.

German

Mit achtzehn begann sie ein neues Leben.
 with eighteen began she a new:NEUT life:NEUT
 ‘At the age of eighteen she started a new life.’

The Basque comitative case suffix *-ekin* can be used to express time as a less usual alternative to the more common locative. Ex.

Basque (anonymous reader)

- (a) *Mikelekin bizi naiz.*
Mikel- ekin bizi n-a-iz.
 Michael- COM live 1:SG:ABS-PRES-AUX
 ‘I live with Michael.’

- (b) *Andre Mari eguna ostegunarekin erortzen da aurten.*

Andre Mari egun- a ostegun-a-(r)ekin
 lady Mary day- DET Thursday-DET-COM
eror-tze-n d-a aurten.
 fall- IMPFV-LOC PRES-AUX this:year
 ‘Mary’s Day falls on Thursday this year.’

Hausa *dà* ‘with’, comitative preposition > temporal preposition. Ex. *dà karfè ukù* ‘at three o’clock’ (Ma Newman 1990: 16, 307; Jaggar 2010: 65). Ngbaka Ma’Bo *té* ‘with’, comitative preposition > ‘in’, temporal preposition. Ex.

Ngbaka Ma’Bo (Thomas 1970: 67; glosses provided by Christa Kilian-Hatz, p.c.)

ʔé dɔ-mū mbéemb té tɔ:kpé.
 she come-see snail with morning
 ‘In the morning, she met the snail.’

Baka *tɛ* ‘with’, comitative preposition > temporal preposition (Christa Kilian-Hatz, p.c.). Hungarian *-vel/-val*, comitative marker > ‘at’, temporal suffix. Ex.

Hungarian (Tompá 1972: 120)

Ősszel (ősz + vel) Kijevbe utaz-om.
 (autumn:in Kiev travel-1:SG:PRES)
 ‘In the autumn I go to Kiev.’

Albanian *me*, comitative preposition > ‘at’, time preposition. Ex.

Albanian (Buchholz et al. 1993: 312)

me të dale dielli
 (at ART going sun)
 ‘at dawn/sunrise’

Bulgarian *s* ‘with’, adposition > temporal adposition. Ex.

Bulgarian

- (a) *majkata s deteto*
 mother:DEF with child:DEF
 ‘the mother with the child’
- (b) *Toj leža s meseci v bolnicata.*
 he lie:3:SG:AOR with months in hospital:DEF
 ‘He lay in hospital for months (on end).’

In addition to temporal noun phrase arguments, COMITATIVE markers also appear to have developed into temporal clause markers, that is, into temporal conjunctions. Baka *tɛ* ‘with’, comitative preposition > ‘while’, ‘as soon as’, temporal conjunction. Ex.

Baka (Kilian-Hatz 1992: 34)

tɛ ko ma lèkèè ʔémina ma à gɔ.
 COM SO 1:SG prepare:PAST load 1:SG:ASP go
 ‘As soon as I have packed my luggage I go.’

Sumerian *-da* (<*da* 'side'), comitative, instrument marker > 'while', temporal marker of simultaneity (Meißner and Oberhuber 1967: 33–5).

There appears to be sufficient evidence to support this grammaticalization, but more research is needed on the conceptual basis of the process. Conceivably, temporal markers are not derived straight from comitative markers but rather are part of a more extended pathway: COMITATIVE > INSTRUMENT > TEMPORAL (Martin Haspelmath, p.c.).

'Companion', see COMRADE

COMPARATIVE (+ NEGATION) > NO LONGER

English (*any*)*more*. Dutch *meer*, German *mehr* 'more' (when negated) > 'no longer' (van Baar 1997: 96). French *ne ... plus* 'not more' > 'no longer' (van Baar 1997: 96). Irish *níos mó* 'is not more' > 'no longer' (van Baar 1997: 96). Compare also Korean *te-isang* 'more on top' (lit.: 'more-limit') (van Baar 1997: 96).

This grammaticalization appears to require contexts involving negative predications (see van Baar 1997 for details). It is not really clear whether the 'more'-markers figuring as source concepts are in fact comparative markers. More research is needed on the nature of the process.

COMPLEMENTIZER > PURPOSE

Bulgarian *če* 'that', complementizer > *če da* (that to) 'so that', purpose clause marker. Ex.

Bulgarian

- (a) *Tja kaza, če šte dojde.*
 she said that FUT come:3:SG:PRES
 'She said that she would come.'
- (b) *Xajde, preobleči se, če da izlezem naj-posle!*
 come:on change:clothes:IMP REFL that to go:out:1:PL:PRES at:last
 'Come on, change your clothes so that we can go out at last!'

Kupto *gà* 'that', complementizer > 'so that', purpose clause marker (Leger 1991: 19). Dogon *-ga* 'that', complementizer > 'so that', 'in order to' (if the main verb is in the future tense or is nominalized) (Calame-Griaule 1968: 88–9).

See also Saxena (1988a). The directionality proposed here has not yet been established beyond reasonable doubt. More data to substantiate this hypothesis are needed.

'Complete, to', see FINISH

COMRADE > (1) COMITATIVE

The notion 'comrade' stands for a number of role relations, including 'companion', 'friend', 'neighbour', 'relative'. Balto-Finnic **kansa* 'people', 'society', 'comrade' > Estonian *kaas* 'together with', 'in the company of', comitative postposition >

Estonian *-ga* ‘with’, comitative case marker (Stoebke 1968: 274). Saami *gu(o)i* (‘b) ‘companion’, ‘comrade’ > *-guin*, comitative case marker (Stolz 1992b: 118–19). Lithuanian *draugas* ‘friend, comrade’ > *drauge* ‘together’ (originally the locative singular form of *draugas*; Vykypěl 2010: 142).

The Basque noun *kide* ‘companion’, ‘fellow’, ‘mate’, applied to both people and things, appears to be the source of the most widespread comitative case ending, *-ekin*.¹² Ex.

Basque (anonymous reader)

- (a) *oinetako bat eta bere kidea*
oin-(e)ta-ko bat eta ber-e kide-a
 foot-INDEF-N one and same-GEN mate-DET
 ‘a shoe and its mate’
- (b) *Anarekin*
Ana-(r)e-kide-n
 Anna-GEN-company-LOC
 ‘with Anna’

It remains unclear whether we are dealing here with an areally confined phenomenon. More data from non-European languages are needed to establish this pathway. The data supporting this pathway are not entirely satisfactory, but we seem to be dealing with an instance of a more general process whereby relational nouns give rise to relational grammatical markers.

COMRADE > (2) RECIPROCAL

The notion ‘comrade’ stands for a number of role relations, including ‘companion’, ‘friend’, ‘neighbour’, ‘relative’. One of the constructions of extinct Hittite to form reciprocals was based on the repetition of the inherently reciprocal noun *ara-* ‘fellow, comrade’ (Inglese 2017; Silvia Luraghi, p.c.). In Biblical Hebrew, one of the reciprocal expressions is formed by means of the construction *’iš* (‘man’) + preposition + *rē ’ēhû* (‘his companion’), e.g. *way-yakkû ’iš ’et rē ’ēhû* ‘they killed each other’ (Biblical Hebrew, 2 Kings 3:23; Rubin 2005: 22). Russian *drug* (comrade/friend:M:SG:NOM) + *drugā* (comrade/friend:M:SG:ACC) > reciprocal marker (Martin Haspelmath, p.c.; see also Vykypěl 2010: 142).¹³ Ex.

Russian

- Oni nenavideli drug drugā.*
 they hated comrade:M:SG:NOM comrade:M:SG:ACC
 ‘They hated each other.’

In the Tundra Nenets language of northern Russia, reciprocal markers are represented by the dual or plural forms of the noun *n’a* ‘companion, sibling, friend, relative’ (Nikolaeva 2014: 49).

¹² The origin of this form is a postpositional phrase meaning roughly ‘in the company of X’ (anonymous reader).

¹³ Silvia Luraghi (p.c.), however, questions this etymology.

Gola *dave* ‘comrade’, noun > *dave*, reciprocal particle. Ex.

Gola (Westermann 1921: 51)

a kpoma dave.
(they help comrade)
‘They helped each other.’

Fulfulde *band-* ‘relative’, noun stem > reciprocal marker (Klingenheben 1963: 142). Koromfe *dono*, PL *dombA* ‘comrade’ > *dombA* (*dono* when only two participants are involved), reciprocal pronoun. Ex.

Koromfe (Rennison 1996: 110)

Ba zāŋ dombA gaba.
3:PL:HUM take comrade:PL knife:PL
‘They take one another’s knives.’

Gabu *akúsi* ‘their neighbours’ > reciprocal marker. Ex.

Gabu (Santandrea 1961: 63, 1965: 87)

si dra sí akúsi.
(they insult them neighbours:their)
‘They insulted each other.’

Seychelles CF *kamarad* ‘friend’ > *kamarad* ‘one another’, reciprocal marker. Ex.

Seychelles CF (Corne 1977: 48; Papen 1978: 303)

- (a) *mô kamarad i n tom malad ier ...*
(my friend 3:SG CPL fall sick yesterday)
‘My friend fell sick yesterday ...’ (Corne 1977: 55)
- (b) *Nu a kapav trôp kamarad ê zur.*
(we FUT be:able cheat REC one day)
‘We’ll be able to cheat each other one day.’

More research is needed on the exact nature and the genetic and areal distribution of this process. This is an instance of a process whereby concrete nouns are grammaticalized to pronouns expressing relations among clause participants; compare BODY; HEAD.

CONDITIONAL > CONCESSIVE

This path of grammaticalization has been proposed by Hopper and Traugott (1993: 180); compare English *if* > concessive marker in specific contexts. Ex.

English (König 1986: 239)

This is an interesting, if complicated, solution.

Archaic Chinese *ji*, postulating (conditional) conjunction > *ji*, concessive conjunction (Long et al. 2012).

See König (1986) for details; more data from other language families are needed to substantiate this hypothesis.

‘Continuous’, *see* PROGRESSIVE

COPULA > (1) AGENT

Evidence for this pathway, where the agent in a passive construction is introduced by means of a general copula, has so far been found only in Bantu languages of Africa, thus Creissels (in prep.) concludes that “the grammaticalization of identificational copulas into prepositions marking agent phrases in passive constructions is well-attested across Bantu”. But the pathway seems to have evolved independently in some of these languages (Fleisch 2005: 100–1), possibly being due to genetically induced drift (Sapir 1921: 171–2; LaPolla 1994: 62). Paradigm examples are found in the Sotho-Tswana and Nguni languages of southern Africa, where the conceptual pattern involved can be paraphrased as ‘something is done, *it is* (by) the agent’. Zulu and Xhosa *ngu-/nga-* or *y-*, copulas > agent markers in passive constructions. Northern Sotho, Tswana *ke-*, copula > *ke-*, agent marker. Ex.

Northern Sotho (Fleisch 2005: 100)

- (a) *Maepa ke-mo.rutiši.*
 Maepa COP-C1:teacher
 ‘Maepa is a teacher.’
- (b) *Nôga ê-bôn-w-a ke-mo.sadi.*
 c9:snake c9-see-PASS-FV COP-C1:woman
 ‘The snake is being seen by a/the woman.’

But there are also a number of other Bantu languages, e.g. in Malawi, Mozambique, and Namibia (Herero), where this pathway has been identified (Fleisch 2005: 101).

Whether this grammaticalization is in some way induced by family-internal drift remains unclear. It can be seen as an example of a process whereby the use of clausal syntax, that is, that of a nominal copular clause, is extended for the expression of noun phrase-internal functions; see, for example, BENEFACTIVE > A-POSSESSIVE.

COPULA > (2) AVERTIVE

Russian *bylo* ‘be’ (3:SG:PAST:NEUT) + main verb (PAST) > avertive (‘was just about to do something but ...’, ‘nearly did something but ...’). Ex.

Russian (Kuteva 1998a: 122)

<i>Mašina</i>	<i>bylo</i>	<i>poexala,</i>	<i>no ...</i>
car:F	be:3:SG:PAST:NEUT	start:3:SG:PAST:F	but

‘The car nearly started out ...’ / ‘The car was just about to start but ...’

Romanian *era* ‘be’ (PAST) + conjunctive particle + main verb > averitive (‘was just about to do something but ...’ ‘nearly did something but ...’). Ex.

Romanian (Coseriu 1976: 104)

<i>era</i>	<i>să</i>	<i>cad.</i>
be:3:SG:IMPERF	CONJ:PART	fall
‘I nearly fell.’		

Finnish *olin* ‘be’ (PAST) + first infinitive > averitive (‘was just about to do something but ...’, ‘nearly did something but ...’). Ex.

Finnish (Kuteva 1998a: 117)

<i>Olin</i>	<i>kadota</i>	<i>kadulla.</i>
be:1:SG:PAST	fall:1:INF	in:the:street
‘I nearly fell (down) in the street.’		

As is the case with other AVERTIVE markers, this grammaticalization is confined to past tense uses of the main verb. It remains to be investigated what exactly the contribution of the copula in this process is; more details and examples from other languages are needed.

COPULA > (3) CONDITIONAL

Korean *i-*, copula > *-(i)laya*, emphatic conditional postposition (Rhee 2016c). Tawang Monpa *jin*³⁵, copula > *jin*³⁵ *ni*⁵³ ‘if’, conditional conjunction (Long et al. 2012).

Hopper and Traugott (1993: 179) observe that one of the sources of conditional connectives consists of copula constructions, and they give the following examples: Swahili *i-ki-wa* ‘it being that’,¹⁴ Japanese *nara* ‘if it is that’, and Chikasaw (*h)oo* ‘be’. Compare Russian *est’ li* ‘is it?’ > *esli* ‘if’ (Martin Haspelmath, p.c.). See also Haiman (1985b) and Traugott (1985b). Note, too, that Chinese *shi* ‘be’ has given rise to a conditional marker ‘if’ (Alain Peyraube, p.c.).

The conceptual nature of this process is still far from clear; conceivably, this process is related to the (>) S-QUESTION > CONDITIONAL pathway.

COPULA > (4) CONSECUTIVE

Vai *á mu* ‘it was’ > *ámu*, *ámo* ‘and’, ‘then’, continuity marker in narrative discourse. Ex.

Vai (Koelle [1854] 1968: 39, 138)

<i>áwā</i>	<i>dókeā,</i>	<i>ámo</i>	<i>ā</i>	<i>fā.</i>
3:SG	shoot	then	3:SG	die
‘He shot him, and (so that) he died.’				

Shona *ndi*, emphatic copula, clitic + infinitive > ‘and then’, same subject consecutive marker. Ex.

¹⁴ Swahili *i-ki-wa* (C9-if-be) actually means ‘if it is’, that is, conditionality is already marked in this form by the prefix *-ki-*.

Shona (Fortune 1955: 373–4; O’Neil 1935: 156)

- (a) *ndi-baba a-uya zino uno.*
 (COP-father REL:3:SG-come just now)
 ‘It is father who came just now.’
- (b) *va-ka-oneka ndo-ku-enda zvavo.*
 (3:PL-PAST-say:farewell COP-INF-go their:way)
 ‘They said farewell and then went their way.’

Khwe *na* ‘be’ + *ko* subordination marker (lit.: ‘being thus’) > *nákò* ‘and’, conjunction (see Köhler 1989: 97f.).

While this grammaticalization has been found in two different language phyla, more data are needed to substantiate it. Conceivably, this process is related to the (>) COPULA > FOCUS grammaticalization.

See also AFTER > CONSECUTIVE; FINISH > CONSECUTIVE.

COPULA > (5) FOCUS

Medieval Chinese *shi*, copula > *shi*, focus marker. Zaiwa *ɲut*⁵⁵, copula > *ɲut*⁵⁵, focus marker. Dong *ta:ɲ*³²³, copula > *ta:ɲ*³²³, focus marker. Maonan *tsiŋ*⁴⁴, copula > *tsiŋ*⁴⁴, focus marker. Dulong *e*³¹, copula > *e*³¹, focus marker. Yi *ɲui*⁵⁵, copula > *ɲui*⁵⁵, focus marker. Mien *tsei*²¹², copula > *tsei*²¹², focus marker. Li (Hlai) *man*¹, copula > *man*¹, focus marker. Hmong *zau*¹³, copula > *zau*¹³, focus marker (Long et al. 2012).

Cora *pĩrĩkĩ* ‘be’ following a sentence-initial pronoun or demonstrative > focus marker (Casad 1984: 173). Lamang -à, associative marker + copula ‘*yá* > -é, focus marker (Wolff 1983: 256–7; Heine and Reh 1984: 157). Rendille **aħi* ‘be’, copula > nominal suffix -é, term focus marker (Heine and Reh 1984: 165–8). Akie *ko*, copula > *ko*, focus marker of phrasal and clausal constituents (König et al. 2015: 93–4).

Similarly, the Japanese *Kakari-Musubi* construction is hypothesized to have involved the grammaticalization of a cleft construction to a focus construction. The *Kakari* particles can be traced back to forms of ‘be’ or of a verb functioning as ‘be’ (see Harris and Campbell 1995: 161 for a summarizing discussion).

French *c’est* ‘it is’ > Haitian CF *se*, focus marker. Ex.

Haitian CF (Muysken and Veenstra 1995)

Se sou chen mèt yo wè pis.
 FOC LOC dog thin 3:PL see flea
 ‘It’s on a thin dog that the fleas can be seen.’

Papiamentu CS *ta*, copula > *ta*, focus marker. Ex.

Papiamentu CS (Kouwenberg and Muysken 1995: 220–1)

- (a) *Mi ta Pedro/grandi/na kas.*
 1:SG COP Pedro/big/in house
 ‘I am Pedro/big/in the house.’

- (b) *Ta e buki m'-a duna-bu.*
 FOC the book 1:SG-PAST give-2:SG
 'I gave you the book.'

The focus function of copulas in creole languages has also been extended to question words (see Holm 1988: 180). Ex.

Papiamentu CS (Holm 1988: 180)

Ta kiko Wan ta hasi?
 (is what:thing John TAM do)
 'What is John doing?'

Saramaccan CE (Holm 1988: 180)

Na un-sé a bi wáka?
 (is which:side he TAM go)
 'Where did he go?'

For more examples from creoles, see Boretzky (1983: 220–3). What appears to characterize this evolution is that a copula having third person singular reference, functioning as the matrix predicate in a cleft construction, is reinterpreted as a marker of new information. However, since such constructions tend to involve a copular main clause plus a kind of relative clause, it may also happen that, rather than the copula, it is the relative clause marker that survives and is reinterpreted as a focus marker (see Harris and Campbell 1995: 155ff. for an example from Breton).

Since copulas can be derived from demonstratives, there are languages where the focus marker resembles a demonstrative; that is, we may be dealing with an evolution: DEMONSTRATIVE > COPULA > FOCUS (see Byrne and Winford 1993; see also Hengeveld 1992 for more details). In fact, Chinese *shi* might have undergone a development DEMONSTRATIVE > COPULA > FOCUS marker (Alain Peyraube, p.c.). However, the situation appears to be more complex, as Diessel (1999b: 148ff.) has shown; see DEMONSTRATIVE > FOCUS for details.

COPULA > (6) D-NECESSITY (obligation)

Mandarin Chinese *shì* 'be', copula > marker of modal distinctions. Ex.

Mandarin Chinese (Hengeveld 1992: 268; Li and Thompson 1981: 588)

Bāllā shì chī-de.
 guava COP eat-NOMIN
 'Guavas are to be eaten.' ('Guavas are (things) to be eaten.')

Latin *esse* 'be', copula verb; for example, *Mihi est eundum* 'I have to go' (Lehmann 1982: 30).¹⁵ English *be to*, marker of deontic modality. Yucatec *yan*

¹⁵ Silvia Luraghi (p.c.) notes, however, that the obligation meaning lies in the gerundive verb form rather than the copula.

in bin (exist 1:SG go) ‘I have to go’ (Lehmann 1982: 30). See also Hengeveld (1992: 268). More research is needed on the exact nature and the genetic and areal distribution of this process.

COPULA, LOCATIVE > (1) APPLICATIVE

Proto-Timor-Alor-Pantar **mi* ‘be in, at’, locational verb > Kamang, Klon, Makalero, Wersing *mi-* verbal applicative prefix. For example, Makalero *lolo* ‘say’ vs *mi-lolo* ‘say in language X’ (Klamer 2018: 241ff.). Ex.

Wersing (Klamer 2018: 243)

Wai aka mira mi-g-tati.
goat fence inside APPL-3-stand
‘The goat is inside the fence.’

What in some languages is expressed by verbal applicative extensions is conveyed in some other languages by multi-purpose adpositions covering a larger range of participant-marking functions. The locative copula *le* ‘be at’ of Ewe also serves as a preposition or coverb presenting spatial, temporal or manner participants. Ex.

Ewe (Hünemeyer 1985: 84)

- (a) *é-le avě-á me.*
3:SG-be.at forest-DEF in
‘He is in the forest.’
- (b) *é-wɔ-e le ɣayla me.*
3:SG-do-3:SG:OBJ be:at hide in
‘He did it secretly.’

More data are needed to establish this pathway, which appears to be another example of the evolution from verb to case marker. *See* COME FROM; COME TO; GO TO; TAKE.

COPULA, LOCATIVE > (2) EXIST

Cangluo Monpa *la*¹³ ‘be at’, locative copula > *la*¹³ ‘exist’ (Long et al. 2012). English *there is*. Ex.

English

- (a) *There is my beer.* (spatial)
(b) *There is beer at home.* (existential)

||Ani *tĩn* ‘be at’, locative copula > ‘exist’, existential copula. Ex.

||Ani (Heine 1999: 24f.)

Áxù tshàá tĩn rě? tĩn.
there water exist Q exist
‘Is there water?’ – ‘There is.’

Swahili *-ko* ‘be at’ > ‘exist’ when there is no locative complement. Ex.

Swahili

- (a) *Pombe y-angu i-ko nyumba-ni.* (spatial)
 beer c9-my c9-be:at home-at
 ‘My beer is at home.’
- (b) *Pombe i-ko.* (existential)
 beer c9-be:at
 ‘There is beer; beer exists.’

Nubi CA *fī* ‘be at’, locative copula > *fī*, existential copula. Ex.

Nubi CA (Heine 1982b: 40, 54)

- (a) *Ūo fī iini.*
 He be:at here
 ‘He is here.’
- (b) *Yáá fī ákílí ...*
 TOP exist food
 ‘and there was food ...’

An existential interpretation tends to arise when locative copulas are used without a locative complement. It would seem in fact that in a number of languages, locative copulas assume an existential function once the locative complement is recurrently omitted.

COPULA, LOCATIVE > (3) LOCATIVE¹⁶

Early Archaic Chinese (eleventh–sixth century BC) *zai* ‘to be located at’, ‘to reside in’, locative verb > Late Medieval Chinese (seventh–mid-thirteenth century AD) *zai* ‘at’, ‘in’, general locative preposition (Peyraube 1994; 1996: 182–5). Chinese *zài* ‘be at’ > ‘at’, ‘in’, preposition (Hagège 1975; see Peyraube 1996: 182–5 for details). Ex.

Chinese (Hagège 1975: 154)

- (a) *tā zài jiā li.*
 he be:at house inside
 ‘He is at home.’
- (b) *tā zài jiā li xǐ yīfu.*
 he in house inside wash clothes
 ‘He washes clothes at home.’

Ewe *le* ‘be at’ > ‘at’, preposition. Ex.

Ewe

- (a) *agbale-á le kplɔ́á dzí.*
 book:DEF be:at table:DEF on
 ‘The book is on the table.’
- (b) *me kpɔ́ lɔ́ri le mɔ́ dzí.*
 I:SG see lorry at street top
 ‘I saw a lorry on the street.’

¹⁶ There is a possible counterexample to this grammaticalization: the Chinese locative copula *zai* ‘to be at’ has been claimed to be derived from an adposition *zai* ‘at’ (see Peyraube 1996: 191).

Supyire *na* ‘be at’, locative copula > *na* ‘at’, ‘on’, locative postposition (Carlson 1991: 207–9). Kikuyu *kũ-rĩ*, *kwĩ* ‘be at’ > *kwĩ* ‘to’, ‘from’, locative preposition (Barlow 1960: 200, 236). Ex.

Kikuyu (Barlow 1960: 200)

Twara kwĩ mūdũ ũcio.
(take to man that)
‘Take (it) to that man.’

Proto-Timor-Alor-Pantar **mi* ‘be in, at’, locational verb > Blagar = *mi*, *mi* ‘in, to, into, from’. Proto-Timor-Alor-Pantar **mi* ‘be in, at’, locational verb > Western Pantar *me*, locative postposition, Kaera, Adang *mi* ‘in, at’, postposition, Klon *mi*, locative postposition (Klamer 2018: 242ff.).

Yao Samsao *yīə m* ‘be at’ > ‘in’, preposition (Matisoff 1991: 417–8). Hmong *nyob* ‘be at’ > *nyob*, “verposition”. Ex.

Hmong (Matisoff 1991: 418)

- (a) *kuv txiv tsis nyob hauv tsev.*
1:SG male NEG be:at inside house
‘My father is not at home.’
(b) *nws pw nyob hauv txaj.*
3:SG lie be:at inside room
‘He’s sleeping in the room.’

This path of grammaticalization has been much discussed in the relevant literature; see, for example, Heine (1993) and Bybee et al. (1994). It appears to be a classical instance of desemanticization, whereby the predicate function of the copula is bleached out, with the result that there remains a relational locative marker.

COPULA, LOCATIVE > (4) H-POSSESSIVE

Lezgian *gwa*, locative copula > marker of temporary possession (predicative). Ex.

Lezgian (Haspelmath 1993: 318)

- (a) *Ruxwa-jar-ni ruš-ar sad-ni ada-n pataw gwa-č*
son-PL- and daughter- PL one-even he-GEN near be:at-NEG
‘None of his sons and daughters are near him.’
(b) *Dušman-ri-w tup-ar gwa- č.*
enemy-PL-ADE canon-PL be:at- NEG
‘The enemies do not have canons.’

Lezgian *awa* ‘be in’, locative copula > ‘have’, marker of predicative possession.

Lezgian (Haspelmath 1993: 317f.)

- (a) *Tükwend- a gzaf mal awa.*
store- INE many goods be:in
‘There are many goods in the store.’

- (b) *Pul ada- qh gzaf awa.*
 Money he- POESS much be:in
 'He has a lot of money.'

Estonian (Lehiste 1969: 325)

- Isal on raamat.*
 (father:ADE 3:SG:be book:NOM)
 'Father has (a) book.'

Modern Irish (Orr 1992: 252)

- LOCATIVE.tá leabhar agam.
 is book at:me
 'I have a book.'

The source structure that can be held responsible for this grammaticalization process has been described by Heine (1997a) as the Location Schema, which has the form [*Possessee is located at the possessor's place*]; see also LOCATIVE.

COPULA, LOCATIVE > (5) PROGRESSIVE

Godié *kù* 'be at', copula > progressive aspect. Ex.

Godié (Marchese 1986: 63)

- (a) ɔ kù sùkú.
 he be:at school
 'He is at school.'
 (b) ɔ kù ðli-dA.
 he be:at sing-place
 'He is singing.'

Tyurama *na* 'be at', copula > *na*, progressive marker. Ex.

Tyurama (Prost 1964: 105; Heine and Reh 1984: 117)

- me na me wu.*
 1:SG be:at 1:SG eat
 'I am eating.'

Maninka *yé ... lá* 'be ... at' > progressive or durative aspect marker. Ex.

Maninka (Spears 1972: 15–16)

- (a) *Á yé bòn lá.*
 (he be house at)
 'He is in the house.'
 (b) *Á yé nà lá.*
 (he PROG come PROG)
 'He is coming.'

Lingala *-zala* 'be at', copula > durative auxiliary. Ex.

Lingala (Mufwene and Bokamba 1979: 244–6)

- (a) *Kázi a-zal- í na ndáko.*
 Kazi he-be- NPERF at house
 'Kazi is at home.'

- (b) *Kázi a-zal- í ko- lía.*
 Kazi he-be- NPERF INF- eat
 ‘Kazi is eating.’

The Basque locative copula *egon* ‘be (in a location or a state)’ has a limited amount of use as a continuous marker. Ex.

Basque (anonymous reader; King 1994: 384)

- (a) *Bilbo-n dago.*
Bilbo- n da- go.
 Bilbao- LOC PRES- be
 ‘He’s in Bilbao.’
- (b) *Telebista ikusten dago.*
Telebista- a ikus-te-n da- go.
 TV- DET see-IMPFV-LOC PRES- be:in
 ‘He’s watching TV.’

Burmese *nei* ‘be at’ > continuative/progressive marker. Ex.

Burmese (Matisoff 1991: 416)

- (a) *θu ʔeĩ nei te.*
 3:SG house be:at PART
 ‘He is at home.’
- (b) *θu zə gâ pyô nei te.*
 3:SG words speak be:at PART
 ‘He is speaking.’

Thai *jùu* ‘be at’ > continuative/progressive marker. Ex.

Thai (Matisoff 1991: 416)

- (a) *Khun phôc mâj jùu bân.*
 HON father NEG be:at home
 ‘Father is not at home.’
- (b) *Khăw rian phasâa ʔaŋrit jùu.*
 3:SG study language English be:at
 ‘He is still studying English.’

Chinese *zài* ‘be at’ > continuative/progressive marker (Matisoff 1991: 416). Ex.

Chinese (Alain Peyraube, p.c.)

- (a) *Ta zai Beijing ta zai nar chifan.*
 he be:at Beijing he be:at there eat
 ‘He is in Beijing.’ ‘He eats there.’
- (b) *Ta zai chifan.*
 he CONT eat
 ‘He is eating.’

Lord (1993: 216) notes that “[a] locative verb is the probable source for an incomplete aspect marker in the Kwa languages Igbo, Yoruba and Ewe, but also in Mandarin Chinese, Thai, Irish, and Finnish . . .”.

All evidence available suggests that, in this process, it is not the locative copula on its own that turns into a PROGRESSIVE marker; rather, the locative copula is part of locative proposition, called the Location Schema in Heine (1993); cf. Lord (1993) and Bybee et al. (1994); *see also* LOCATIVE.

This grammaticalization appears to be an instance of a more general process whereby grammatical aspect functions are conceptualized and expressed in terms of locative concepts.

CROSS ('to cross') > (1) EXPERIENTIAL

Experientials are aspect markers dedicated to coding "that an event has taken place at least once at some point in the past" (Chappell 2001c: 57; *see also* Comrie 1976: 58; Dahl 1985: 141).¹⁷ The present pathway has so far been documented in Sinitic languages only, hence it is conceivably genetically induced.

Mandarin *kuo*⁵¹ 'cross, pass', verb > *-kuo*⁵¹, experiential marker when following the main verb (Chappell 2001c: 60).¹⁸ Changsha dialect of Xiang *ko*⁴⁵ 'cross, pass', verb > *-ko*⁴⁵ postverbal experiential marker (Chappell 2001c: 60). Hong Kong Cantonese *kwo*³³ 'cross, pass', verb > *-kwo*³³ postverbal experiential marker (Chappell 2001c: 60). Guangdong Hakka *ko*⁵⁵ 'cross', verb > *-ko*⁵⁵ postverbal experiential marker (Chappell 2001c: 60). Nanchang dialect of Gan *kuo*⁵⁵ 'cross', verb > *-kuo*⁵⁵ postverbal experiential marker (Chappell 2001c: 60).

Vostrikova (2007) observes that in a number of African and Asian languages an auxiliary is used to encode an experiential function and that this auxiliary frequently has a verb meaning 'cross over, pass by' or 'get used to' as its lexical source.

See also EVER, KNOW, PASS, TASTE, TOUCH > EXPERIENTIAL.

CROSS ('to cross') > (2) PERLATIVE ('across')

Mandarin *guò* 'cross', verb of motion > *-guò* 'over', 'across', directional marker (Li and Thompson 1981: 59–60). Ex.

Mandarin Chinese (Li and Thompson 1981: 59–60)

tā tiào-guò nèi-tiáo hé le.
3:SG jump-cross that-CLASS river CRS
'S/He jumped over that river.'

Korean *kenne-* 'cross', verb > *-kenne* 'across', postposition (Rhee 2016c). Ese'eja (*y*)*eje-* 'cross X', motion verb > perlative marker = *je* (Vuillemermet 2015). Thai *khâam* 'cross over' > 'across', preposition ("verposition"). Ex.

¹⁷ Chappell (2001a) also uses the term "evidential" for them.

¹⁸ Randy LaPolla (p.c.) observes that "in Mandarin, the experiential marker is transparently derived from the verb *guò* 'to (sur)pass, cross (over)'".

Thai (Matisoff 1991: 434)

phûuwjîŋ dæn khâam thənŏn paj lɛ̌w.
 woman walk cross street go already
 ‘The woman went off across the street already.’

Tamil *taan̩tu* ‘cross’, verb of motion > *taan̩t-i* ‘across’, participle, ‘beyond’, locative postposition. Ex.

Tamil (Lehmann 1989:130)

enka.l vii.tu koovil-ai.t taan̩t-i iru- kkir- atu.
 we:OBL house temple-ACC across be- PRES- 3:SG:N
 ‘Our house lies across the temple.’

!Xun, W2 dialect *lxàì* ‘cross, come’, verb of motion > *lxàì* ‘through, across’, preposition (Heine and König 2015: 225).

Conceivably, the development from CROSS to an adposition ‘through’ or ‘by means of’ (Hagège 1993: 211) should also be considered here (cf. PASS > PATH).¹⁹ This grammaticalization appears to be an instance of a more general process whereby verbs denoting location or motion serve as structural templates to express relational (adpositional) concepts; compare COME FROM; COME TO; FOLLOW; GO TO; LEAVE; PASS.

D

Dative, *see* RECIPIENT

‘Defeat, to’, *see* EXCEED

DEFINITE > (1) ERGATIVE

One of the ways in which ergative case markers may arise is via the grammaticalization of markers of definite reference. König (2008; 2011: 511) reconstructs the following pathway: definite marker > marked-nominative case marker > ergative case marker. Evidence for this pathway is found in Pāri, Anywa, and Jur-Luwo of the Republic of Sudan. In these closely related Western Nilotic languages, an earlier definite marker *-CI* is hypothesized to have developed into a (marked) nominative and further into an ergative marker. Furthermore, the ergative case marker *-ma/m* of Georgian has been reconstructed back to the demonstrative pronoun ‘that, he’ (Harris and Campbell 1995: 341); note that definite articles can frequently be reconstructed to demonstratives (*see* DEMONSTRATIVE > DEFINITE).

While this hypothesis is conceptually plausible, more evidence is needed in its support.

¹⁹ Alain Peyraube (p.c.) doubts, however, whether such a reconstruction is empirically justified.

DEFINITE > (2) SUPERLATIVE

This process requires specific contexts to take place. Consider the following example from French, where definiteness is the only means of distinguishing superlative from comparative predications:

French

- (a) *Marie est devenue plus sage.*
 Mary is become more wise
 'Mary is wiser.'
 (b) *Marie est devenue la plus sage.*
 Mary is become the more wise
 'Mary is the wisest.'

Jensen (1934: 111) cites a number of languages in which definiteness appears to be the only means of marking superlatives, where an expression of the form 'X is the big one' has been grammaticalized to a superlative construction (= 'X is the biggest'), and Ultan (1972: 124, 142) highlights that, crosslinguistically, superlatives tend to be associated with definite marking; note that, like definite participants, referents of superlative expressions are assumed to have unique reference (Heine 1997b: 126). In some languages, a personal pronoun, rather than a definite article, may be added to a predication to express the notion of a superlative. Ex.

!Ani (Heine 1999a: 63)

- (a) *khó- mà /éú-mà.*
 person- M:SG big-M:SG
 'He is big.'
 (b) *khó-mà /éú-m' xà-má.*
 person-M:SG big-M:SG DEM-M:SG
 'He is the biggest.' (lit. 'he big he')

More research is needed on the exact conceptual nature of this process.

DEMONSTRATIVE > (1) COMPLEMENTIZER

English *that*, demonstrative > complementizer. German *das* 'that', 'the', demonstrative pronoun and definite article of the neuter gender > *dass* 'that', complementizer. This process appears to be due to the reanalysis of certain patterns of direct speech (e.g. *She said that: there is no money*) as a main clause + complement clause combination (*She said [that there is no money]*), where the demonstrative object of the matrix clause, referring cataphorically to the next clause, is reanalysed as a marker introducing a complement clause. Lockwood (1968) discusses this evolution using the following example from Faroese, where the demonstrative *tadh* 'that', illustrated in (a), developed into the complementizer *at*; compare (b).

Faroese (Lockwood 1968: 222–3; see also Heine et al. 1991: 180)

- (a) *eg sigi tadh: hann kemur.*
 I say that he comes
 ‘I say this: he comes.’
- (b) *eg sigi at hann kemur.*
 I say that he comes
 ‘I say that he comes.’

See Traugott (1972) and Hopper and Traugott (1993: 185–9) for the evolution of English *that*, and Harris and Campbell (1995: 287–8) on German *das/dass* ‘that’; see also the case of Kunwinjku (Gunwinggu) as discussed by Hopper and Traugott (2003: 185), and Vykypěl (2010: 140) on Slavic languages. So far, examples of a fully conventionalized grammaticalization have been found mainly in Germanic languages, but according to Lehmann (1982: 64), Welsh *a*, Akkadian *ša* (<*šu*), and Nahuatl *in* provide further instances, and there appear to be cases of incipient uses of demonstratives for presenting complete clauses in a number of other languages.

The process has been described in some detail for Germanic languages such as English, German, and Faroese (Lockwood 1968: 222–3; Heine, Claudi, and Hünemeyer 1991a: 180; Hopper and Traugott 1993: 185–9; Harris and Campbell 1995: 287–8).

This is an instance of a crosslinguistically widespread process whereby the use of markers belonging to the noun phrase is extended to introduce subordinate clauses; compare DEMONSTRATIVE > RELATIVE; NOMINALIZER > RELATIVE.

DEMONSTRATIVE > (2) CONJUNCTION

Discussion of the present process is based on Diessel (1997; 1999a; 1999b: 125–7), who observes that sentence connectives “are frequently formed from a pronominal demonstrative and some other element (e.g. an adverb or adposition) that indicates the semantic relationship between the conjoined propositions” (Diessel 1999b: 125).

In Hixkaryana, for example, a combination of the pronominal demonstrative *ireke* (DEM because:of) and the causal postposition *ke* serves as a causal link between two propositions (‘therefore’; Derbyshire 1985a: 57, 1985b: 157), and in the Epena Pedee language of Colombia, the most common temporal relator linking propositions is *mapái* ‘and’, ‘so then’, consisting of the demonstrative *ma* ‘that’ and *-pái* ‘only’ (Harms 1994: 144). Khasi has a set of sentence connectives that are formed from a distal demonstrative and a bound morpheme; in the following example, the two clauses are linked by *nan̄ta* ‘then’, which consists of the adpositional marker *nan̄-* and the demonstrative root *-ta*. Ex.

Khasi (Diessel 1999b:126)

- u khla u la ba:m nan̄ - ta U la thyú.*
 ART tiger ART PAST ate PREP- DEM ART PAST slept
 ‘The tiger ate and then he slept.’

Archaic Chinese *ran*, demonstrative > *ran*, adversative conjunction. Archaic Chinese *shi yi* (demonstrative + preposition) or *shi gu* (demonstrative + ‘reason’) > *shiyi/shigu*, causal conjunction. Furthermore, German has a number of adverbs acting as clause connectives, such as *damit* ‘with that’ and *darum* ‘therefore’, which are historically derived from the pronominal demonstrative *das* ‘that’ plus an adposition (Diessel 1999b: 126). A more detailed treatment of this pathway across genetic and areal boundaries is needed.

DEMONSTRATIVE > (3) COPULA

Archaic Chinese *shi*, demonstrative > *shi*, copula (Long et al. 2012). Ancient Egyptian *pw* ‘this’, proximal demonstrative > copula verb. Ex.

Ancient Egyptian (Gardiner 1957:103ff.)

Nwn pw jt ncřw.
Nun this father gods
‘The father of the gods is Nun.’

Vai *mε* ‘this’, demonstrative pronoun > *-mε* ‘here is’, nominal suffix. Ex.

Vai (Koelle [1854] 1968 : 42, 186, 200)

sí:na:-mε.
seat-here:is
‘Here is a seat.’

In a number of pidgin and creole languages, demonstrative pronouns appear to have given rise to copulas. Nubi CA *dé*, demonstrative/definite article > copula (Boretzky 1988: 73). English *there* > Sranan CE *de(e)*, *dε* ‘be (somewhere)’, ‘exist’, existential copula. Ex.

Sranan CE (Boretzky 1983: 158)

Taig mi, pε den dε.
(tell me where they COP)
‘Tell me where they are.’

Sranan CE *da* (< Engl. *that* > *dati*) ‘that’, ‘it’, demonstrative/definite article, weak third person pronoun > *da*, *na*, *a* ‘it is’, equative, qualifying copula. Ex.

Sranan CE (Arends 1986: 107)

da somma da wan boen somma.
that person is a good person
‘That’s a good person.’

See also Boretzky (1983: 159).

As these examples suggest, demonstratives in their pronominal uses may give rise to various copular functions, such as existential, identifying, and qualifying functions. The development from resumptive pronoun to copula is described by Li and Thompson (1977; see also Eid 1983; Schuh 1983; Hengeveld 1992; Gildea 1993; Devitt 1994; Stassen 1997: 76–91).

Hengeveld (1992: 250) observes that this evolution “goes hand in hand with a reinterpretation of the theme-clause construction as a subject-predicate construction.” Diessel (1999b: 145) argues that nonverbal copulas derived from demonstratives have identificational demonstratives, rather than pronominal demonstratives, as their source. Demonstratives may develop further into personal pronouns, which themselves may give rise to copulas. Thus, we seem to be dealing with a more extensive grammaticalization chain DEMONSTRATIVE > PERS-PRON > COPULA – even though the development from identificational demonstrative to copula differs from that leading from personal pronoun to copula, as Diessel (1999b: 145ff.) convincingly argues (contra Li and Thompson 1977). *See* PERS-PRON, THIRD; *see also* COPULA > FOCUS.

DEMONSTRATIVE > (4) DEFINITE

The present pathway appears to be restricted to demonstrative forms having an anaphoric function (see below). English *that*, nonproximal demonstrative > *the*, definite article (Traugott 1980: 49). Bizkaian Basque *a* ‘that’ (< **har*, distal demonstrative) > *-a*, definite article. Ex.

Bizkaian Basque (anonymous reader)

- (a) *gizon a*
man that
‘that man’
- (b) *gizona*
gizon-a
man-the
‘the man’

Vai *me*. ‘this’, proximal demonstrative > *-me*. ‘the’, definite article, nominal suffix. Ex.

Vai (Koelle [1854] 1968 : 42, 106, 200)

án'da nĩ-me. gbi fa.
(3:PL:TAM bullock-DEF all kill)
‘They killed all the bullocks.’

Hungarian *az/a* ‘this’, ‘that’, demonstrative > ‘the’, definite article. Ex.

Hungarian (Tompá 1972: 148)

Az idős-ebb fiú
the old-COMPAR boy
‘the older boy’

In Romani as well, the anaphoric demonstrative gave rise to definite articles, possibly on the influence of Greek (Matras 2011: 280).

Rubin (2005: 65–90) shows that the definite articles of the Central Semitic languages (Hebrew *ha-*, Aramaic *-ā*, Arabic (*'a*)*l-*, Sabaic *-(h)n*, etc.) can all be derived from demonstratives. The distal demonstrative *haw* (M:SG), *hāy* (F:SG)

‘that’ of the extinct Syriac language is retained as a definite article, *u* (M:SG), *i* (F:SG), respectively, in the Modern Aramaic language Turoyo, e.g. Syriac *haw kalbā* ‘that dog’ > Turoyo *u kalbo* ‘the dog’ (Rubin 2005: 87).

In the Beijing dialect of Mandarin Chinese, the demonstrative *zhe* may function as a definite article (Long et al. 2012).

Many instances of this grammaticalization have been reported from pidgins and creoles. For example, (French *là* ‘there’, locative adverb >) Haitian CF *-la* demonstrative > *-la* (which tends to be reduced to *-a* following vowels) demonstrative/definite article. Ex.

Haitian CF (Sylvain 1936: 55)

pè-a

‘the priest’

Turku PA *da* ‘this’, proximal demonstrative > definite marker (Tosco and Owens 1993: 206–7). Chinook Jargon *úkuk* ‘this’, ‘that’, deictic pronoun > Grand Ronde Chinook Jargon *uk-*, definite article used as an NP-prefix. Ex.

Grand Ronde Chinook Jargon (Grant 1996: 234)

uk-háya-haws

(this-big-house)

‘the big house’

The present pathway constitutes the most frequent way in which definite articles evolve (see, e.g., Krámský 1972; Greenberg 1978; Vogel 1993; Himmelmann 1997; Laury 1997). Diessel (1999b: 115) points out that the particular pathway a demonstrative takes is crucially determined by the syntactic context in which it occurs:

Pronominal demonstratives develop into grammatical items that are either still used as pronouns (or have at least some of the properties of a pronominal). Adnominal demonstratives give rise to grammatical items that function as operators of nominal constituents. Adverbial demonstratives evolve into operators of verbs or verb phrases. And identificational demonstratives develop into grammatical markers that interact with nominal constituents derived from predicate nominals. (Diessel 1999b: 115)

The process from demonstrative attribute to definite article, as it can be observed in the history of most languages of western and central Europe, has been described as case of contact-induced grammaticalization (Heine and Kuteva 2006: 100–19). Furthermore, a number of instances to be found outside Europe are described in Heine and Kuteva (2005) as also being suggestive of contact influence. For example, the Western Oceanic language Takia of Karkar Island, Papua New Guinea, has acquired a new definite marker by grammaticalizing the demonstrative form **a*, and this process is hypothesized to have been induced by contact with the Papuan language Waskia (Ross 2001: 142; Heine and Kuteva 2005: 158–9).

Detailed diachronic evidence comes in particular from Semitic languages (see Rubin 2005: 65–90) based on sound historical reconstructions in a large range of Semitic languages.

Rather than a conventionalized definite article, a number of languages have incipient definite markers derived from demonstrative modifiers. Such a language is spoken Taiwan Mandarin, where the demonstrative *nage* ‘that’ has features of an article for definite reference (Huang 1999; Liu 2010: 286).

The present process can be assumed to involve adnominal demonstratives; it is confined to attributive uses of demonstratives. In Greenberg’s (1978) seminal discussion, the following extended pathway is proposed: demonstrative > definite article > specific article > noun marker. This grammaticalization can be interpreted as being part of a more general process whereby markers having typically spatial reference are grammaticalized to markers for textual or discourse reference (see de Mulder and Carlier 2011). Compare DEMONSTRATIVE > RELATIVE; see also HERE; THERE.

The present pathway has been also shown to result from ‘forced grammaticalization’ (*Zwangsgrammatikalisierung*; Nau 1995: 121–2; Metslang 2011; 2017), imposed by language planners on the model provided by some other language. For example, the early ethnically German language reformers of Latvian and Standard Estonian introduced the use of the proximal demonstratives (Latvian *tas*, Estonian *see* ‘this’) for use as definite articles on the model of German, thereby contributing to or being responsible for the growth of incipient definite articles in these two languages (for a detailed account, see Metslang 2017).

As observed above, the rise of the pathway DEMONSTRATIVE > DEFINITE appears to be restricted to anaphoric uses of demonstratives, and only at a more advanced stage of grammaticalization can the process be extended to marking known but discourse-new referents. According to Rubin (2010b) there is an alternative pathway that arises in the latter context, where the referent has not been explicitly mentioned in the previous discourse, namely PERS-PRON, THIRD > DEFINITE. In the course of the process, however, this pathway as well may be generalized to also include the marking of anaphoric reference.

When demonstrative determiners develop into definite markers, plural demonstratives may become markers of definite plural nouns. It seems that in some languages this development has had the effect that the erstwhile demonstrative determiner becomes the primary means of expressing plurality, at least in contexts where definiteness is not or no longer at issue, and, hence, assumes the function of a nominal plural marker (see Frajzyngier 1997a for examples); see also Harris (1980) and Klausenburger (2000).

Compare PERS-PRON, THIRD > DEFINITE.

DEMONSTRATIVE > (5) FILLER

Fillers, like English *uh* and *um*, also called interjective hesitators, planners, or filled pauses, are short information units that serve text planning functions, signalling, e.g., hesitation and/or delay (Clark and Fox Tree 2002: 92; Hayashi and Yoon 2006; 2010; Tottie 2011; 2014). Being mainly restricted to spoken language use, fillers tend to be classified as either interjections or discourse markers (see Clark and Fox Tree 2002: 76–80 for a discussion).

In many European languages, fillers are not etymologically transparent elements (e.g. Dutch *uh*, *um*, German *äh*, *ähm*, French *eu*, *euh*, *em*, *eh*, *oe*, *n*, *hein*; see Clark and Fox Tree 2002: table 1). In other languages, by contrast, fillers can be traced back to lexical or other grammatical sources, and the most important source seems to be provided by demonstratives. Koreans use the adnominal forms of the medial (*ku*), the distal (*ce*), and the locative (*ceki* ‘that (far away)’) demonstratives, Mandarin speakers the proximal demonstrative (*zhe-ge*) and the distal demonstrative (*na-ge*) as common fillers, and Japanese use the adnominal form of the distal demonstrative *ano* ‘that’ (Hayashi and Yoon 2006; 2010). Ex.

Japanese (Hayashi and Yoon 2010)

<i>iya</i>	<i>konkai</i>	<i>ano</i>	<i>hashittemo</i> . . .
well	this:time	DEM	run:even:if
‘Well, this time, ano [= um], even if ((you)) run ((in a race)), . . .’			

In addition to the etymologically opaque fillers *eh* and *em*, fillers in Spanish include the marker *este*, which can be traced back to the near demonstrative *este* ‘this’ (Clark and Fox Tree 2002: table 1).

The rise of fillers cannot be described exhaustively in terms of grammaticalization. As argued in Heine et al. (2013; 2017), it also involves cooptation, a discourse strategy whereby a unit of sentence grammar, such as a demonstrative, is deployed for specific discourse purposes like expressing functions of text organization, attitudes of the speaker, and/or speaker–hearer interaction. Whereas grammaticalization typically leads to semantic and morphosyntactic integration, cooptation has the opposite effect, that is, the unit is semantically and morphosyntactically unattached, frequently also being prosodically marked off. Thus, unlike most of the other data discussed in this book, the evolution of discourse markers and interjections is more complex, being the result of cooptation followed by grammaticalization (Heine 2013).

DEMONSTRATIVE > (6) FOCUS

There appears to be a crosslinguistic grammaticalization chain – DEMONSTRATIVE > PERS-PRON > COPULA > FOCUS (see under the relevant items) – that can be held responsible, with or without an intermediate PERS-PRON stage, for the fact that some focus markers can ultimately be traced back to, and may be polysemous with, demonstratives. However, there is also an alternative chain

according to which the present process does not involve any intermediate stages but rather proceeds straight from what Diessel (1999b: 148–9) calls “identificational demonstratives” to focus markers. Diessel argues that in at least two different languages there is evidence that focus markers may develop straight from identificational demonstratives since the former show no obvious relationship to copulas. Thus, in Ambulas the distal demonstrative *wan* ‘that’ is frequently used as a focus marker. Ex.

Ambulas (Wilson 1980: 157; Diessel 1999b:149)

véte dé wak a wan méné kaapuk yéménén.
 see:and he said ah FOC you not you:went
 ‘He saw him and said, “Ah, so *you* did not go”.’

In a similar fashion, Diessel (1999b: 149) argues that the Mokilese focus marker *ioar* can be traced back to an old deictic form that is cognate to a demonstrative identifier in Ponapean, an Oceanic language closely related to Mokilese. Ex.

Mokilese (Harrison 1976: 311; Diessel 1999b:149)

ioar Wilson ma pwehng ih mehu.
 FOC Wilson REL told him that
 ‘It was Wilson who told him that.’

In Cahuilla, the demonstrative *?i?* ‘this’ appears to function as a focus (“emphatic”) marker in certain contexts. Ex.

Cahuilla (Seiler 1977: 115–16)

- (a) *?i nétas*
 this my:uncle
 ‘this my uncle’
 (b) *?i man híwqal ?ípa?*
 (this ? live here)
 ‘He lives here.’ (lit.: ‘(it is) this and he lives here.’)

Archaic Chinese *zhi/shi*, demonstrative > *wei* . . . *zhi* (‘only’ . . . demonstrative)/*wei* . . . *shi* (‘only’ . . . demonstrative), focus marker (Long et al. 2012). Note, however, that there is also an alternative pathway documented within Archaic Chinese whereby the demonstrative form *fú* ‘that’ turned first into a topic marker and subsequently into the particle *fú* used to introduce new topics (Long et al. 2012). This whole situation can be assessed satisfactorily only by means of a more fine-grained functional analysis.

We appear to be dealing with a process that can often be observed in grammatical evolution, according to which a process $X > Y > Z$ proceeds straight from X to Z ; that is, it may but need not involve an intermediate stage Y .

Conceivably, the present pathway can be held responsible for an additional grammaticalization pathway whereby focus markers derived from identificational demonstratives give rise to expletive markers, that is, empty pro-forms,

such as French *ce* ‘this’ plus *être* ‘be’, serving as matrix predicates in complex sentences (cf. Diessel 1999b: 149–50). Ex.

French

C’ est lui que j’ ai vu.
 this is 3:SG whom 1:SG have seen
 ‘He is the one that I saw.’

DEMONSTRATIVE > (7) PERS-PRON, THIRD

According to Givón (1984: 353–60), this process is part of a more general grammaticalization chain: DEM PRON > third person PRON > clitic PRON > verb agreement (see also Diessel 1999b: 120). See also Vykypěl (2010: 140) on Slavic languages.

Archaic Chinese *yi*, demonstrative > Medieval Chinese *yi*, third person pronoun. Archaic Chinese *zhi*, demonstrative > *zhi*, third person pronoun. In the Yongshou dialect of Zhongyuan Mandarin, the distal demonstrative *uə* is also used as a third person pronoun (Long et al. 2012). Mention may also be made of the Archaic Chinese set of markers *er/nai/ruo/ru*, demonstratives for medial distance (‘neither near nor far’), which gave rise to the second person pronouns *er/nai/ruo/ru* (Long et al. 2012). Notice, however, that according to Alain Peyraube (p.c.), *er/nai/ruo/ru* were in use as second person pronouns before their infrequent use as demonstratives. If there is any derivation, it has been in the opposite direction.

Korean *ce* ‘that’, demonstrative > *ce*, third person pronoun (Rhee 2016c). Korean *ku* ‘that’, demonstrative > *ku*, third person pronoun (Rhee 2016c). According to Matras (2011: 280), the Romani anaphoric demonstrative gave rise to third person pronouns in this language. In the Turkic language Western Yugur, the third person pronouns *gol*, *ol*, and *a* are cognate with corresponding distal demonstratives (Long et al. 2012).

Latin *ille* ‘that’, distal demonstrative (M) > French *il* ‘he’, third person masculine (M) pronoun. Egyptian *pw* ‘this’, proximal demonstrative > ‘he’, ‘she’, ‘it’, ‘they’, third person pronoun. Ex.

Egyptian (Gardiner 1957: 85f, 103)

- (a) *ḥ-k3y* *pw*
 magician this
 ‘this (= thou) magician’
 (b) *Rc* *pw.* *ḥ-wrw* *pw.*
 Re this wretches this
 ‘This/He is Re.’ ‘They are wretches.’

In the Skolt Saami language of northern Norway and Finland, demonstrative pronouns are commonly used in place of personal pronouns in discourse, particularly when used anaphorically (Feist 2015: 108). Lezgian *a* ‘that’, demonstrative > *am* (*a* + absolutive) ‘he’, ‘she’, ‘it’, third person singular pronoun. Ex.

(a) *a diünja*
DEM world
'that world'

(b)	<i>Gila</i>	<i>za</i>	<i>wa-</i>	<i>z</i>	<i>ax̣tin</i>	<i>Alawa</i>	<i>tars</i>
	now	I:ERG	you-	DAT	such	additional	lesson
	<i>gu-</i>	<i>da</i>	<i>x̣i</i>	<i>hič</i>	<i>sadra-ni</i>	<i>wi</i>	<i>rik'e-</i>
	give-	FUT	PART	PART	once- even	you:GEN	heart-
	<i>laj</i>	<i>am</i>	<i>alat-</i>	<i>da-č.</i>			
	SREL	it	fall:off-	FUT-NEG			

‘Now I’ll give you such a remedial lesson that you’ll never forget it.’

Eastern Australian PE (Baker 1995: 10)

Dat make all black pellow get plenty bark.
'He made the Aborigines collect a lot of bark.'

Sranan CE *da* (< Engl. *that* > *dati*) 'that', demonstrative > 'it', weak third person pronoun (Arends 1986).

Diessel (1999b: 115) points out that the particular pathway a demonstrative takes is crucially determined by the syntactic context in which it occurs:

Pronominal demonstratives develop into grammatical items that are either still used as pronouns (or have at least some of the properties of a pronominal). Adnominal demonstratives give rise to grammatical items that function as operators of nominal constituents. Adverbial demonstratives evolve into operators of verbs or verb phrases. And identificational demonstratives develop into grammatical markers that interact with nominal constituents derived from predicate nominals. (Diessel 1999b: 115)

The significance of spatial deixis for the rise of third person pronouns has been pointed out in a number of studies (e.g. Diessel 1997; 1999a; 1999b; Heine and Song 2010; 2011), typically involving the following general pathway: deictic demonstrative > anaphoric demonstrative > third person pronoun.

At the initial stage of the process there is normally ambiguity between the function of a demonstrative and a personal pronoun in many contexts. The Uto-Aztecan language Cora appears to present such a stage in that “all third person free pronouns are demonstratives. In the role of pronouns, then, demonstratives show up as subjects, direct objects, and objects of postpositions” (Casad 1984: 247). Another example is provided by the Australian Pama-Nyungan language Yindjibarndi, where Wordick (1982: 71) observes that all of the third person pronouns are also used as demonstratives. Similarly, in Ancient Egyptian the

proximal demonstrative pronoun *pw* ‘this’ was also used as a general third person pronoun (‘he’, ‘she’, ‘it’, ‘they’; Gardiner 1957: 85f., 103), and in earlier Korean, the demonstratives *i* ‘this’ (speaker-proximal), *ku* ‘that’ (hearer-proximal), and *ce* ‘that’ (speaker/hearer-distal) were also used as third person pronouns (Heine and Song 2011: 596). At a more advanced stage, the demonstrative and the personal pronoun become distinct functional categories in that the latter undergoes desemanticization by losing its meaning of spatial deixis, decategorialization, and frequently also erosion.

Evidence for this pathway might also be available in sign languages, where Pfau and Steinbach (2006; 2011: 688) reconstruct the following grammaticalization chain: pointing gesture > locative > demonstrative pronoun > personal pronoun > agreement marker.

The present process is an instance of a pronominal demonstrative: the process is confined to the use of demonstratives as pronouns. See Traugott (1980: 48); Heine and Reh (1984: 271); Campbell (1997); Klausenburger (2000).²⁰ See also Bhat (2013) for a world-wide survey of the synchronic relationship between demonstratives and personal pronouns.

Compare PERS-PRON; THIRD > AGREEMENT.

DEMONSTRATIVE > (8) RELATIVE

Archaic Chinese *zhi* ‘this, that’ > Archaic Chinese *zhi*, relativizer, nominalizer, possessive marker (Long et al. 2012). Yongshou dialect of Zhongyuan Mandarin *uə*, distal demonstrative > *uə*, relative clause marker. Beijing dialect of Modern Chinese *zhe*, demonstrative > *zhe*, relative clause marker (Long et al. 2012).

Canela-Krahô *ita*, demonstrative > *ita*, relative pronoun. Ex.

Canela-Krahô (Popjes and Popjes 1986:171)

- (a) *rop ita*
dog this
‘this dog’
- (b) *i- te hūmre te rop curan ita pupun.*
1- PAST man PAST dog kill DEM see
‘I saw the man who killed the dog.’

Dogon -*gɔ*, anaphoric demonstrative > relative pronoun (Calame-Griaule 1968: 108). Baka *kè* ‘this’, proximal demonstrative > *kè*, relative clause marker. Ex.

²⁰ It would seem that Louisiana CF (“Negro-French”) provides a counterexample to this grammaticalization. In this creole, the markers *-la*, PL *-je* serve as demonstratives and definite articles (Lane 1935: 10). Now, there is reason to assume that *-je* is historically derived from the French third person plural pronoun *eux* ‘they’. If this reconstruction is correct, then we would be dealing with a development from personal pronoun (*eux*) to demonstrative (*-je*), hence with a reversal of the unidirectionality principle.

Baka (Brisson and Boursier 1979: 137)

- (a) *tò peè ndó kè!*
 give:IMP DAT:1:SG banana this
 ‘Give me this banana!’
- (b) *Bo kè ma mungi lè ngili nè, ʔá gɔɛ.*
 man REL 1:SG see:PAST 3:SG:OBJ yesterday REL 3:SG:NAR go:PAST
 ‘The man I saw yesterday has left.’

Ik nà, PL *nì* ‘this’, proximal demonstrative > *na*, PL *ni*, relative clause markers (Heine 1983: 97, 110; Heine and Kuteva 2007: 227–8). Ex.

Ik (Heine 1983: 97,110)

- (a) *ceka nà cikamá nì*
 woman this women these
 ‘this woman’ ‘these women’
- (b) *itél- ʔa ima ná nk’ák’a.*
 see- 1:SG child:NOMS REL:SG eat
 ‘I see a child who is eating.’

Akie nàà, PL *chàà* ‘this’, proximal demonstrative > *nàà*, PL *chàà*, relative clause markers (König et al. 2015: 71, 102–3).

Buang ken, postposed demonstrative > relativizer. Ex.

Buang (Sankoff 1979: 35–6)

- (a) *Ke mdo byan ken.*
 I live house this
 (‘I live in this house.’)
- (b) *Ke mdo byan ken gu le vkev.*
 I live house that you saw yesterday
 (‘I live in the house that you saw yesterday.’)

In the Palula language of northern Pakistan, there are no distinct relative pronouns; rather, it is the demonstratives and the indefinite-interrogative pronouns that are used in relative constructions (Liljegren 2016: 145).

For an account of the grammaticalization of English *that* from demonstrative to relative clause marker see, e.g., van Gelderen (2004: 81ff.). In Old Swedish, the transition from paratactic to hypotactic forms of clause combining is well documented. It was the masculine form *sā* of the demonstrative pronoun of Old Norse that was reinterpreted as a relative pronoun (Zeevaert 2006: 20–1; Heine and Kuteva 2007: 225–6).

Diessel (1999b: 115) points out that the particular pathway a demonstrative takes is crucially determined by the syntactic context in which it occurs:

Pronominal demonstratives develop into grammatical items that are either still used as pronouns (or have at least some of the properties of a pronominal). Adnominal demonstratives give rise to grammatical items that function as operators of nominal constituents. Adverbial demonstratives evolve into operators of verbs or verb phrases. And

identificational demonstratives develop into grammatical markers that interact with nominal constituents derived from predicate nominals. (Diessel 1999b: 115)

Diessel (1999b: 132) furthermore notes that demonstrative modifiers also give rise to boundary markers of post-nominal relative clauses.

Evidence for this pathway also comes from a sign language, namely Israeli Sign Language (ISL). Initially, mostly exophoric demonstratives (indistinguishable from general pointing gestures) were used by the older generation of ISL users, where the demonstrative sign (or gesture) points at the object in the immediate reality. The change in the syntactic position of the demonstrative is triggered and enabled by the gradual prosodic condensation of the nominal head with the relative clause into one, prosodically delineated, nominal constituent. In the process of this functional change the demonstrative sign becomes reduced. In some cases it even loses its referential function, being directed at a non-specified, neutral point in space. In such cases, it becomes ambiguous between the relative pronoun and the invariant relativizer, similar to *that* in English (Svetlana Dachkovsky, p.c.).

For more details of this process, see Hopper and Traugott (2003: 197–9); Van Gelderen (2004); Heine and Kuteva (2007: 225–9). The process can be assumed to be an instance of the grammaticalization of pronominal demonstratives; it constitutes probably the most frequent way in which relative clause markers evolve; see Sankoff and Brown (1976: 645), Downing (1978), Heine and Reh (1984: 271), Frajzyngier (1997a: 204) for details. For pidgin and creole languages, see especially Byrne (1988) and Bruyn (1995a).

This grammaticalization can be interpreted, first, as being part of a more general process whereby markers having typically spatial reference are grammaticalized to markers for textual or discourse reference; compare DEMONSTRATIVE > DEFINITE; see also HERE; THERE. And second, this grammaticalization is also suggestive of a crosslinguistically widespread process whereby the use of markers belonging to the noun phrase is extended to introduce subordinate clauses; compare DEMONSTRATIVE > SUBORDINATOR; DEMONSTRATIVE > COMPLEMENTIZER; NOMINALIZER > COMPLEMENTIZER.

DEMONSTRATIVE > (9) SUBORDINATOR

!Xun, N1 dialect *ká-’ŋ* (c4-DEM) ‘this’, proximal demonstrative of noun class 4 > subordinating marker of adverbial clauses. Ex.

!Xun (N1 dialect, Bernd Heine, field notes)

- (a) *g’áún ka-’ŋ*
 tree c4-DEM
 ‘this tree’
- (b) *ká-’ŋ yà ke tci-à me kula tc’ù.*
 when c1 PAST come-R 1:SG:PAST exist:NEG home
 ‘When he came I was not at home.’

Sango *só* 'this', 'that', demonstrative > marker of temporal and reason clauses. Ex.

Sango (Byrne 1988: 358)

- (a) *Yáká só í sára só*
garden that we make that
'the garden that we made'
- (b) *Só ndo avokó awe, lo goe na kóli só.*
when place blacken PFV she go with man that
'When night comes, she goes with that man.'

Saramaccan CE *dísi* 'this', demonstrative > *di* 'when', subordinate conjunction, marker of temporal clauses. Ex.

Saramaccan CE (Byrne 1988: 347–8)

- a gó dí a bi tá fèfi dí wósu.*
he go when he TNS ASP paint the house
'He went when he was painting the house.'

Haitian CF *-la* (demonstrative >) definite article > *-(l)a* marker used to nominalize clauses (Hall 1953: 60). Ex.

Haitian CF (Hall 1953: 60)

- (a) *soté látouraj-la yo*
(fence-jumping-DEF PL)
'the fence-jumpings'
- (b) *pádâ m-malad-la*
(during 1:SG-be:sick-DEF)
'during [the time] I was sick'

This grammaticalization can be interpreted, on the one hand, as being part of a more general process whereby markers having typically spatial reference are grammaticalized to markers for textual or discourse reference; compare DEMONSTRATIVE > RELATIVE; see also HERE; THERE. On the other hand, it is a crosslinguistically widespread process whereby the use of markers belonging to the noun phrase is extended to introduce subordinate clauses; compare DEMONSTRATIVE > SUBORDINATOR; DEMONSTRATIVE > COMPLEMENTIZER; NOMINALIZER > COMPLEMENTIZER.

Deontic modality, see D-NECESSITY, D-POSSIBILITY

DESCEND ('descend', 'go down', 'fall') > DOWN

Mandarin Chinese *xià* 'descend' > *-xià*, directional marker 'down' as a final element of a resultative verb phrase. Ex.

Mandarin Chinese (Li and Thompson 1981: 59–60)

- wǒ fàng-xià wǒ-de shūbāo le.*
I put-descend I-GEN satchel CRS
'I laid down my satchel.'

Besleney Kabardian *-xə-* ‘go down’ plus dative applicative prefix (*j)e-/r-*, verb > *-je-* ... *-xə-* ‘down’, directional prefix (Arkadiev and Maisak 2018: 125–126). Ute *-rukwa* ‘descend’, verb > *-ruk* ‘under’, case suffix (Givón 2006: 24).

Ewe *ɔi* ‘go down’, ‘descend’, verb > ‘down’, ‘beforehand’, adverbial (Hünemeyer 1985; Lord 1989: 367). Ex.

Ewe (Hünemeyer 1985: 108)

- (a) *me- ɔi le sɔ dzi.*
1:SG- descend at horse on
‘I dismounted the horse.’
- (b) *me- tsɔ e da ɔi.*
1:SG- take 3:SG put (descend)
‘I put it down.’

Ijo *kóro* ‘fall’, verb > ‘down’ (Svorou 1994: 111–12). Imonda *peha* (‘go down’), verb > ‘down’, locative marker (serial verb). Ex.

Imonda (Seiler 1985: 109)

piha- peha fe- u!
shoot- go:down do- IMP
‘Shoot down!’

Manambu *da-* ‘go down’, directional motion verb in combination with the verb *sə-* ‘put, plant’ > *-da-* ‘down’, directional marker on verbs (Aikhenvald 2013: 28). Ambulas/Wosera *da-* ‘go down’ > *-da-* ‘down’, e.g. *yat-sa-da* (throw-‘put’-go:down) ‘throw down’ (Aikhenvald 2013: 28).

For evidence from Oceanic languages, see Bowden (1992: 38–40). This is an instance of a process whereby a verb, on account of some salient semantic property, gives rise to a grammatical marker highlighting that property (Heine 2011c); compare COME FROM; COME TO; CROSS; EXCEED; FALL; PASS; RESEMBLE.

‘Desire, to’ see WANT

DO (‘to do’, ‘to make’) > (1) CAUSATIVE

Dulong *wá*⁵³ ‘do’, verb > *wá*⁵³, analytic causative marker. Zaiwa *loɿ*⁵⁵ ‘do’, verb > *loɿ*⁵⁵, analytic causative marker (Long et al. 2012). Korean *mantul-* ‘make’, verb > *-keymantul-*, causative derivational suffix (Rhee 2016c). Korean *sikhi-* ‘make, order’, verb > *-sikhi-*, causative derivational suffix (Rhee 2016c). Waŋkumara *munkV* ‘make’, ‘do’, verb > *-munka-*, verbalizing causative suffix (McDonald and Wurm 1979: 38, 110). English *make* > causative auxiliary. Ex.

English (anonymous reader)

- (a) *John made it. John washed the car.*
(b) *Susie made John wash the car.*

Sango *sâra* 'make', verb > causative marker (Thornell 1997: 122). Moru 'ba' 'make', 'put', verb > causative auxiliary (Tucker 1940: 220). Logo 'ba' 'make', 'put', verb > causative auxiliary (Tucker 1940: 220). Lendu *bu* 'make', verb > causative marker (Tucker 1940: 220). Ex.

Lendu (Tucker 1940: 220)

mgba-i bu ba mgba nju.
child-mother makes milk child suck
'The mother suckles the baby.'

The causative suffixes *-ndí* of Mandinka, *ndí* of Soninke, and *-ni* of Bozo have been reconstructed back to the Proto-West-Mande verb **ti(n)* 'do, make' (Creissels in prep.a).

Lahu *te* 'do', verb > *te*, causativizer, transitivizer; for example, *teqè* 'make wide' (Matisoff 1991: 245). French *faire* 'make', 'do', verb > causativizer. Tamil *vai* 'put', 'make', verb of action > causative auxiliary. Ex.

Tamil (T. Lehmann 1989: 193ff.)

kumaar enn-ai var-a vai tt- aan.
Kumar 1:SG-ACC come-INF vai- PAST- 3:M:SG
'Kumar made me come.'

Chinook Jargon *mámuk*, *mamúk* 'make', verb > *mank*, *mauk*, or *munk*, causative auxiliary; for example, Grand Ronde Chinook Jargon *munk sím* ('make swim') 'make someone swim' (Grant 1996: 236). Saramaccan CE *mbéi* (< English *make*) 'make' > subordinator of consequence/cause clauses. Ex.

Saramaccan CE (Veenstra 1996: 96–8)

- (a) *A bì tá mbéi di témbé.*
3:SG TNS ASP make DET:SG wood
'He was making the wood carving.'
- (b) *de mbéi a siki.* (reduced subordinate clause)
3:PL make 3:SG:SUBJUNCT sick
'They had made him sick.'

The following processes appear to be part of this general evolution. One involves the formation of de-nominal verbs ('make X > (cause) to be X'); for example, Ewe *wɔkpé* ('make stone') 'be stony', *wɔ ɣútsu* ('make man') 'be virile', *wɔ tsi* ('make water') 'be watery'.

The other process, probably related to the first, is the grammaticalization of do-verbs ('do', 'make') to transitivizing grams: Newari *ya-na* 'having done' (participial verb) > *-yana*, transitivity marker on ergative nouns (DeLancey 1983: 56–8). Lahu *te* 'do', verb > transitivizer, causativizer; *te qè ve* 'widen', 'make wide' (Matisoff 1991: 432).

See also GIVE, SEND, TAKE > CAUSATIVE.

DO ('to do', 'to make') > (2) EMPHASIS

DO-verbs in some languages are used to emphasize the action described by the main verb; compare English *He came* versus *He did come*. !Xun, E1 dialect *dù* 'do', verb > auxiliary used to emphasize the verb following it. Ex.

!Xun, E1 dialect (Dickens 2005)

A /óá kxóni ká. yáú, mí dù kxóni-á ká.
 2:SG NEG fix it:c4 hey 1:SG do fix-T it:c4
 'You did not fix it.' 'Hey! I *did* fix it.'

Imonda *fē* 'make', 'do', verb > emphasis marker. Ex.

Imonda (Seiler 1985: 116)

- (a) *Bései adaia fē-f?*
 what work do-PRES
 'What are you doing?'
 (b) *Pon ka-m ha fē-f.*
 hunger 1:SG-GOAL affect do-PRES
 'I am hungry.'

For further details on this development, see van der Auwera (1999).

DO ('to do', 'to make') > (3) D-NECESSITY (Obligation)

Punjabi *kar* 'do', verb > marker of strong obligation (Denning 1987: 48). Korean *-ya ha-* (lit.: 'only:if do') > marker of weak obligation (Denning 1987: 49).

See Denning (1987) for more details. The exact nature of this pathway is still largely unclear, especially since there are no text examples illustrating the process.

DO ('to do', 'to make') > (4) PRO-VERB

Archaic Chinese *wei* 'do' > *wei*, pro-verb. Modern Chinese *zuo/gao* 'do' > *zuo/gao*, pro-verb. Jingpo *zai*³¹ 'do' > *zai*³¹, pro-verb. Japanese *suru* 'do', verb > resumptive pro-verb; *ittari kitari suru* 'be coming and going (all the time)' (Matisoff 1991: 432). Lahu *te* 'do', 'make', verb > resumptive pro-verb. Ex.

Lahu (Matisoff 1991: 432)

gĩ- yà? gĩ- tá? te ve.
 run descend run ascend do PART
 'Keep running up and down.'

Hausa *yi* 'do, make', verb > pro-verb, 'light verb' (Jaggar 2017: 66–7). Ewe *wɔ* 'do', 'make', verb > pro-verb after certain nouns. Ex.

Ewe

- (a) *é wɔ do'.*
 3:SG do work
 'S/he worked.'

- (b) *É wə kpé.*
 3:SG do stone
 'It is stony.'

The process discussed in this entry is seemingly not an instance of grammaticalization since the DO-verb does not really change its status as a verb. As a matter of fact, however, we argue that grammaticalization is involved since the DO-verb assumes the derivational function of turning a frequently used action verb into a semantically empty predicate marker for verbalizing nouns. Thus, it involves desemanticization (loss of verbal semantics) and decategorialization (loss of the combinatorial potential generally associated with verbs). For further details on this development, see van der Auwera (1999). *See also* BEAT.

DO ('to do', 'to make') > (5) PROGRESSIVE

Southern Barasano main verb + *ya* 'do' > progressive. Exx.

Southern Barasano (Smith 1973: 19–20; Blansitt 1975: 28)

bago yamo.
 eat:F doing:she
 'She's eating.'

Bongo (Heine 1993: 34; quoted from Tucker 1940: 75)

má- dɔ- ndêrè.
 I- do- walking
 'I am walking.'

More data on this pathway is urgently needed. It appears to be an instance of a more general process whereby process verbs are grammaticalized to auxiliaries denoting tense or aspect functions; compare BEGIN; COME FROM; COME TO; FINISH; GO TO; KEEP; LEAVE; PUT.

DUAL > NP-AND

Alyawarra *athirra* 'two', numeral > *-athirra*, dual number marker > sociative marker 'with', 'and' (Stolz 1992b: 639–40). Waropen *kisi*, third person dual marker > marker of noun phrase coordination. Ex.

Waropen (Stassen 2000; quoted from Held 1942: 90)

Mangha kisi bingha
 man 3:DU woman
 'the man and the woman'

Khwe *-tcà*, third person dual suffix > marker of noun phrase coordination involving two participants. Ex.

Khwe (Treis 2000a: 105)

- (a) *á- tcà*
 DEM- 3:M:DU
 'they (two male referents)'

- (b) *xáò-tcà* /'é-tcà
 hippopotamus-3:M:DU fire-3:M:DU
 ‘the hippo and the fire’

One of the ways in which markers of noun phrase coordination (‘and’) may arise is via the grammaticalization of numerals for ‘two’ to conjoining markers (see Stassen 2000). It would seem, however, that this evolution may involve an intermediate stage where the numeral assumes the function of a dual marker before developing into a marker of noun phrase coordination, that is, that we are dealing with the more general pathway TWO > DUAL > NP-AND, even if in a given language the intermediate stage may be skipped. *See also* TWO > DUAL; TWO > NP-AND.

Rather than to coordination, dual markers may also give rise to associative plural forms (see Daniel and Moravcsik 2005: 150), that is, constructions of the kind ‘X and others associated with X’. The !Xun language of southwestern Africa provides multiple examples of dual pronouns that have been grammaticalized to productive markers of associative plurals. The following examples are taken from the W2 dialect of !Xun, where the dual pronoun (DU) is *cā* ‘the two of them’. Ex.

!Xun, W2 dialect (Heine and König 2015: 150–1)

<i>cā d'a'hmə</i>	<i>cā hə bā</i>	<i>cā mí lō</i>
DU wife	DU his father	DU my elder:brother
‘he and his wife’	‘he and his father’	‘I and my elder brother’

‘Dwell, to’ *see* LIVE

E

EAR (body part) > LOCATIVE

Tzotzil *chikin(il)* ‘ear’, noun > ‘region around the corner’, locative marker (de León 1992). Finnish *korva* ‘ear’, *korvassa* ‘in the ear’ > ‘at (the edge of)’, ‘towards’, postposition (Stolz 1992a: 11).

More examples on the genetic and areal distribution of this pathway are needed. We are dealing with an instance of a process whereby certain body parts, on account of their relative location, are used as structural templates to express deictic location; *see also* BACK; BELLY; BUTTOCKS; EYE; FACE; FLANK; FRONT; HEART; NECK; SHOULDER.

EARTH (‘earth’, ‘soil’, ‘land’, ‘ground’) > DOWN

Bulu *sī* ‘earth’, ‘land’, ‘landscape’, noun > ‘below’, ‘under’, adverb, preposition (Hagen 1914: 296). Kikuyu *thĩ* ‘earth’, ‘world’ (noun class 9/10), noun > ‘down’, adverb. Ex.

Kikuyu (Mathias Schladt, p.c.)

- (a) *thĩ nĩ nene mũno.*
 earth/world is big very
 ‘The world is very big.’
- (b) *ikara thĩ.*
 stay:IMP earth
 ‘Sit down.’

Kikuyu (*thĩ*, ‘earth’, noun class 9/10), *thĩya* (lit.: ‘earth of’) > *thĩ ya* ‘under’, preposition. Ex.

Kikuyu (Barlow 1960: 203)

roar thĩ ya ihiga rĩu!
 (IMP:look earth of stone that)
 ‘Look under that stone!’

Teso *a-kwap* ‘land’, ‘world’, ‘country’ (*a-* = feminine gender prefix), noun > *kwapka* (lit.: ‘land of’) ‘under’, ‘beneath’, preposition (Hilders and Lawrance 1958: 3, 31, 44). Mano *tá* ‘ground’, ‘earth’, noun > ‘under’, postposition (Becker-Donner 1965: 19–24). Lingala *nsé* ‘earth’, ‘ground’, noun > *onsé ya* (LOC ground GEN) ‘under’, preposition (van Everbroeck 1958: 72, 152). Latvian *zeme* ‘earth’, ‘ground’ > *zem* ‘under’ (Stolz 1992a: 15).

See Heine et al. (1991a: chapter 5) and Svorou (1994) for more details. Bowden (1992: 37) found twenty-four Oceanic languages where terms for ‘earth’ or ‘land’ have given rise to DOWN markers.

This is an instance of a process whereby a noun, on account of some salient semantic feature, gives rise to a grammatical marker highlighting that property; compare HOME; SKY.

EAT > PASSIVE

Chinese *chī* ‘eat’, verb > *chi*, passive marker (Alain Peyraube, p.c.; on the development of a verb meaning ‘eat’ into a passive marker in the Xiang dialects of Hunan see Wu 2005: 192). Korean *mek-* ‘eat’, verb > *-mek-*, passive derivational suffix (Haspelmath 1990: 41; Rhee and Koo 2014; Rhee 2016c).

Kharia *jom* ‘eat’, verb > *-jom*, passive suffix (Haspelmath 1990: 41). Juang *jim* ‘eat’, verb > *-jim* (or *dzim*), passive suffix (Haspelmath 1990: 41). Ex.

Juang (Coupe 2018: 211)

aiŋ ma 'd-dzim-seke
 I beat-EAT-PFV:PRES:T
 ‘I am beaten’

For more details, see Haspelmath (1990: 41, 64), Keenan (1985), Wiemer (2011: 537), Coupe (2018), as well as Chappell (2015c) on Sinitic languages.

One source of passive markers is provided by reflexive and middle markers (*see* REFLEXIVE > PASSIVE). The following example from the Yakkha language of eastern Nepal might therefore provide a bridge between verbal/lexical and passive functions: the Yakkha verb *-ca* ‘eat’ has been grammaticalized to a reflexive, middle, and autobenefactive marker when attached to the lexical verb (Schackow 2015: 303). Coupe (2018) provides a number of additional instances of this pathway from languages of South India, where this general pathway also involves, or may involve, stages of middle, reciprocal, and/or reflexive marking.

Nevertheless, the conceptual base of this grammaticalization is not entirely clear; more data are needed to account for this process, which appears to be an instance of a more general process whereby constructions involving certain process verbs are grammaticalized to markers of diathetic shifts. *See also* COME; FALL; GET; GIVE; GO; SEE; SUFFER.

EDGE (relational noun) > LOCATIVE

Welsh *ymyl* ‘edge’, ‘border’, *yn ymyl* (PREP + ‘edge’) > *yn ymyl* ‘near to’, preposition. Ex.

Welsh (William 1960: 36)

yn ymyl bae Colwyn
PREP edge bay Colwyn
‘near Colwyn Bay’

Kpelle *da*: ‘edge’, ‘end’, noun > ‘at’, ‘in front of’, postposition (Westermann 1924: 12). Italian *canto* ‘edge’, relational noun > *accantoa* ‘beside’, complex preposition (Lehmann 1985: 304).

This is an instance of a more general process whereby relational nouns give rise to relational (typically spatial or temporal) grammatical markers; *see*, for example, BOTTOM; BOUNDARY; HOME; SIDE; TOP.

‘Emphatic reflexive’, *see* INTENSIFIER

‘End, to’, *see* FINISH

ENTER > IN (SPATIAL)

Ute *-nagha* ‘enter’, verb > *-nagh* ‘in’, case suffix (Givón 2006: 24). Tonkawa *koxo* ‘several (persons) enter’ > *kox-* ‘in’, e.g. *kox-ta-* ‘several come in’, *kox-na-* ‘several go in’ (Mithun 2018: 334).

The evidence for this pathway is highly limited. We have nevertheless included it tentatively because it would be suggestive of a more general process from goal-directed motion to spatial direction; *see* COME; COME FROM; CROSS; DESCEND; GO; GO TO; PASS.

ENVIRONS (‘environs’, ‘vicinity’) > AROUND (SPATIAL)

Icelandic (*um*)*hverfi* ‘environs’, ‘neighbourhood’, **umhverfis* (genitive singular neuter) > *umhverfis* ‘around’ (Stolz 1991b: 9–10). Lithuanian *aplinkà* ‘environs’, noun > *apliūk(ui)* ‘around’ (Stolz 1991b).

More data are needed on the genetic and areal distribution of this pathway, which appears to be an instance of a more general process whereby concrete nouns, on account of some salient semantic characteristic, are grammaticalized to markers highlighting that characteristic; compare BOUNDARY; EDGE; HOME; SIDE; TOP. *See also* CIRCLE.

‘Enough, to be’, *see* SUITABLE

‘Equal, to be’, *see* SIMILATIVE; SUITABLE

‘Evil’, *see* BAD

ERGATIVE > CAUSE

Ohori (2011: 640) provides an example from the Tauya language of New Guinea to illustrate what he calls a crosslinguistically widespread pathway of grammaticalization from ergative to cause markers. Tauya *-ni*, ergative suffix > reason marker. Ex.

Tauya (MacDonald 1990: 237; Ohori 2011: 640)

- (a) *ʔasu-ni fai-e-ʔa.*
knife-ERG cut-1/2-IND
‘I cut (it) with a knife.’
- (b) *Fanu ne-pi ʔumua-te-ni wamasi mene-a-ʔa.*
man 3.SG-GEN 3.SG.-DS-ERG widow stay-3.SG-IND
‘Her husband died so she’s a widow.’

We are tentatively including this case as a pathway of grammaticalization on account of Ohori’s (2011) analysis. Note that the grammatical concept CAUSE has a wide range of sources, including a variety of case functions; *see* LOCATIVE; PURPOSE, TEMPORAL.

EVER > EXPERIENTIAL

Experientials are aspect markers dedicated to coding “that an event has taken place at least once at some point in the past” (Chappell 2001c: 57; *see also* Comrie 1976: 58; Dahl 1985: 141).²¹

Dutch *ooit* ‘ever’, adverb > *ooit* experiential marker.²² Ex.

Dutch (Hoeksema 1998; cited in Ziegeler 2015: 139)

Hier stond ooit een molen.
here stood once a mill
‘Here stood once a mill (nobody ever knew it).’

²¹ We are grateful to Debra Ziegeler for having provided the data presented in this entry.

²² Modern Dutch *ooit* ‘ever’ is polysemous between having a meaning of ‘at (possibly) one time’ in negative polarity contexts and ‘at (necessarily) one time’ in non-negatively polarised contexts (Hoeksema 1998; Debra Ziegeler, p.c.).

Singapore English *ever* > *ever*, experiential marker. Ex.

Singapore English (Ho and Wong 2001: 81)

*This share **ever** hit forty dollars!*

*I **ever** had a grant once that was funded by Melbourne.*

(Tuck Choy, p.c.)

More research is needed on the grammaticalization, the typological dimension of the process concerned, and on the nature of experiential categories, which have so far not been well described. *See also* CROSS, KNOW, PASS, TASTE, TOUCH > EXPERIENTIAL.

EVIDENTIAL, INFERRED > MIRATIVE

With the term ‘mirative’ we refer to a notional category involving surprise because of the speaker’s sudden awareness of a fact hitherto unknown, unappreciated or not considered relevant to the present situation. Mirativity is not normally the default meaning of a grammatical category; rather, it is normally a secondary or tertiary meaning of some grammatical marker. Most recent research shows, however, that there are also languages where mirativity is expressed by dedicated grammatical means, hence the distinction between mirativity as a “semantic space” (DeLancey 1997) or “mirativity strategies” (Aikhenvald 2004; 2010; 2012), on the one hand, and the mirative as a grammatical category, on the other. The former refers to extensions of essentially non-mirative categories which acquire mirative meanings within a given context, the latter to special, “mirative-only” grammatical markers (see, e.g., DeLancey 1997; Lazard 1999; Aikhenvald 2004; 2010; 2012; Olbertz 2012). The following data and interpretations are based primarily on Aikhenvald (2012).

In Bulgarian, the non-firsthand information evidential (“reported speech” marker) can be used to express speaker’s surprise. Ex.

Bulgarian

(a) *Imam* *pari.*

have:1:SG:PRES money

‘I have money.’

(b) *Ima-la* *săm* *pari.*

have-AOR.PTCPL.F be:1:SG:PRES money

‘(I) have money! [What a surprise!]' (Speaker suddenly discovers that she has some money which she did not think she had.)

Mapudungun, an isolate spoken in the Andean areas of Chile and west central Argentina, has an evidential marker *-rke-* which has a complex of meanings typical for non-firsthand evidential (Aikhenvald 2012: 465). For example, it describes what one has inferred based on existing evidence, as in (a) below.

This same form can express speaker's surprise at something unexpected, that is, mirativity; see (b) below. Ex.

Mapudungun (Aikhenvald 2012: 465)

- (a) *wəðwəð-pe-rke-la-y.*
crazy-PROX-*rke*-IND-3
'He must be crazy [that one, he travelled through all that rain].'
(b) *miyaw-pa-rke-ymi.*
walk-CISLOC-*rke*-2:SG:IND
'So you are (around) here! [What a surprise!]'

In Khwarshi, a Northeast Caucasian language, the past unwitnessed form can be used with first person subjects (Aikhenvald 2012: 469). This refers "to a situation where the speaker is not conscious or the speaker suddenly realizes something as a surprise".

In Jarawara, an Arawá language from Brazil, there is a two-term system of firsthand and non-firsthand evidentials (Dixon 2003; 2004: 203–6; cited in Aikhenvald 2012: 466). The Jarawara story from which the example below comes is told in far past firsthand. "It is a personal reminiscence by the narrator about how he and his companions had gone up a strange river and come across a patch of forest full of game animals. Their surprise is through using the immediate past non-firsthand marking" (Dixon 2003: 172, cited in Aikhenvald 2012: 466). Ex.

Jarawara (Aikhenvald 2012: 466)

baniS mee wina-tee-hani.
animal(M) 3:NONSG live-HAB-IMPST:NONFIRSTH:F
'There were surprisingly many animals.'

In Tsakhur, a Northeast Caucasian language spoken in Azerbaijan, Russia, the non-firsthand evidential may acquire a mirative connotation if something happens contrary to the speaker's expectation and much to their regret. In the example below, the speaker has told his son not to go to a wedding. Nevertheless, the son is going to go. The speaker did not expect his son to disobey (Aikhenvald 2012: 469). Ex.

Tsakhur (Aikhenvald 2012: 469)

ru šā-qa ulq- a wo=r
you:1 there-ALL 1:go-IMPF be=1:NONFIRSTH
'So you are still going there!'

In Colombian Spanish, an erstwhile marker of reported speech – the particle *dizque* (literally, '(it) says that') – developed a variety of meanings associated with non-firsthand information and can also refer to non-volitional and

uncontrollable actions which go against the speaker's expectations (Travis 2006, cited in Aikhenvald 2012: 469–470). The sentence below is an example of this mirative extension: to his disgust, the speaker has been given a job cleaning bathrooms. He lists a number of ways in which he is unsuitable for the job because he is oversensitive to cleanliness. He expresses his disbelief at finding himself in this position. This is where he uses *dizque*. In this example, *dizque* does not mark reported speech. Rather, it indicates that the speaker has no control over the situation, “it also expresses an element of surprise, as though he has all of a sudden found himself in this terrible situation” (Travis 2006, cited in Aikhenvald 2012: 469–70). Ex.

Colombian Spanish (Aikhenvald 2012: 469–70)

... yo, que incluso algunas veces limpié la taza que otro había chapoteado para que quien usara el baño después de mí no fuera a pensar que el descarado había sido yo; yo, por Dios, *dizque* a limpiar baños.

‘... me, who even sometimes wiped the toilet bowl that someone else had splattered so that whoever used the bathroom after me wouldn’t think that the shameless one had been me; I, for God’s sake, *dizque* to clean bathrooms.’

In Takelma, an isolate from southwestern Oregon, there exists a form for the “inferential”, which “implies that the action expressed by the verb is not directly known or stated on the authority of the speaker, but is only inferred from the circumstances of the case or rests on the authority of one other than the speaker”. The same form is frequently used “in rhetorical questions of anger, surprise, wonder, and discovery of fact after ignorance of it for some time” (Sapir 1922: 158, 200; cited in Aikhenvald 2012: 465–6).

In Archi, a Northeast Caucasian language spoken in Dagestan, Russia, the non-firsthand marker *li* can be used if the speaker participated in a situation the meaning of which is unknown to the hearer, and turns out to be unexpected for the hearer (Aikhenvald 2012: 466).

Tsafiki, a Barbacoan language spoken in Ecuador, has four evidentials; the evidential form marking inference from visible traces can indicate surprise of the speaker who has made an unexpected discovery (Dickinson 2000: 411; cited in Aikhenvald 2012: 467).

The inferred evidential in Mamaindê (a Northern Nambiquara language spoken in Brazil) has mirative extensions, or “the additional function of expressing surprise” (Aikhenvald 2012: 467–8).

According to Aikhenvald (2012: 465),

[W]hich evidentials would tend to have mirative extensions depends on the structure of the evidential system and the number and semantics of the terms within it. In small evidential systems, with firsthand (or eyewitness) evidential versus non-firsthand (or

non-eyewitness) evidential, non-firsthand typically acquires mirative meanings, especially in combination with first person.

A nonfirsthand evidential typically covers the meanings of inference and speech report. This type of evidential is sometimes referred to as “inferential” (see Jacobsen 1986 on the history of the term, and further definitions and overview in Aikhenvald 2004: 29–31). In some languages the mirative is encoded as a distinction in the copular system and enters the verbal system through finite constructions built on copulas; other languages, however, manifest this distinction in marking it in verb inflection but not in the copula (for details, see DeLancey 1997: 46).

See also ADVERSATIVE > MIRATIVE; PERFECT > MIRATIVE.

EXCEED ('to exceed', 'to defeat', 'to surpass') > (1) COMPARATIVE

Duala *buka* 'exceed', verb > marker of standard noun phrases in comparative constructions, comparative auxiliary. Ex.

Duala (Stassen 1985: 164)

Nin ndabo e kolo buka nine.
this house it big exceed that
'This house is bigger than that.'

Yabem *-lelec* 'exceed', verb > marker of standard noun phrases in comparative constructions. Ex.

Yabem (Stassen 1985: 164)

Tamoc kapoeng ke-lelec ae su.
father is:big he-exceed me ready
'My father is taller than me.'

Guangzhou Cantonese *kuo* 'exceed, surpass', verb > *kuo* 'than', marker of standard in comparative constructions (Long et al. 2012; Alain Peyraube, p.c.).²³ Thai *kwaa* 'exceed', verb > marker of standard noun phrases in comparative constructions. Ex.

Thai (Stassen 1985: 165)

Khaw jaj kwaa phom.
he big exceed me
'He is bigger than me.'

Vietnamese *hon* 'exceed', verb > marker of standard noun phrases in comparative constructions. Ex.

²³ Note that according to Hilary Chappell (p.c.), here we are dealing with a grammaticalization of *kuo* into a comparative marker in Cantonese, which, however, is not of the 'than' type. It is morphosyntactically a verb complement in a V1V2 complex verb structure as the V2 'exceed', e.g. as in *gou-gwo* (lit. tall-exceed) 'I tall-exceed him'.

Vietnamese (Stassen 1985: 165)

Vàng qui hơn bạc.
 gold valuable exceed silver
 'Gold is worth more than silver.'

Yoruba *ju* 'exceed', verb > marker of standard noun phrases in comparative constructions. Ex.

Yoruba (Stassen 1985:165)

Ile mi kere ju tiwon.
 house my small exceed theirs
 'My house is smaller than theirs.'

Bari *to-tongun* (INF-exceed) 'exceed', verb > marker of standard noun phrases in comparative constructions. Ex.

Bari (Stassen 1985:168)

Körsuk a lokong to-tongun Jökö.
 Körsuk is wise INF-exceed Jökö
 'Körsuk is wiser than Jökö.'

Wolof *gen* 'exceed', verb > marker of standard noun phrases in comparative constructions. Ex.

Wolof (Stassen 1985: 169)

Sa yai gen na à bakh sa bai.
 your mother exceed IND SERIAL:MARKER is:good:SUBJUNCT your father
 'Your mother is better than your father.'

Igbo *ka* 'exceed', verb > 'more', comparative marker. Ex.

Igbo (Stassen 1985: 167)

Ge ka m ike.
 you exceed me strength
 'You are stronger than me.'

Margi *mdia* 'exceed', verb > 'more', comparative marker. Ex.

Margi (Stassen 1985: 167)

Naja ga mdia-da de dzegam-kur.
 he SUBJ exceed-me with tall-NOMIN
 'He is taller than me.'

Banda *dere* 'exceed', verb > 'more', comparative marker. Ex.

Banda (Stassen 1985: 168)

Anda ne mo dere ne ze de ayan.
 house of me exceeds of you with bigness
 'My house is bigger than your house.'

Fulfulde *buri* 'exceed', verb > 'more', comparative marker. Ex.

Fulfulde (Stassen 1985: 176)

Samba buri Amadu (i) mawn-de.
 Samba exceed Amadu (with) big-INF
 'Samba is taller than Amadu.'

Swahili *ku-shinda* (INF-defeat) 'defeat', 'surpass', verb > *kushinda* 'more than', comparative marker. Ex.

Swahili (own data)

- (a) *a-me-ni-shinda.*
 3:SG-PERF-1:SG-defeat
 'He defeated me.'
- (b) *Mnazi ni mrefu kushinda mwembe.*
 coconut:tree COP tall to:defeat mango:tree
 'A coconut tree is taller than a mango tree.'

Kikuyu *gũ-kĩra* (INF-exceed) 'to defeat, surpass, exceed', verb > comparative marker of standard. Ex.

Kikuyu (Barlow 1960: 63)

Nũkwa wa mũndũ ũ-cio nĩ mũ-rayā gũ-kĩra w-akwa.
 strap of person c3-that COP c3- long INF-defeat c1- my
 'That person's strap is longer than mine.'
 (lit.: '... is long, to surpass (or surpassing) mine')

Ewe *wú* 'surpass', 'defeat', verb > 'than', marker of standard noun phrases in comparative constructions. Ex.

Ewe (Claudi and Heine 1986: 305)

- (a) *é-wú m.*
 3:SG-defeat 1:SG:OBJ
 'He defeated me.'
- (b) *néti kò wú detí.*
 coconut:tree be:high defeat oil:palm
 'A coconut tree is taller than an oil palm.'

Bulu *dañ* 'surpass', 'pass', 'cross', verb > 'than', marker of standard noun phrases in comparative constructions. Ex.

Bulu (Hagen 1914: 35, 224)

Madu a dañ Obo ñgu(l).
 Madu TAM surpass Obo strength
 'Madu is stronger than Obo.'

Gbaya *gán* 'surpass', verb > 'than', marker of standard noun phrases in comparative constructions. Ex.

Gbaya (Stassen 1985: 164)

Ngma mo gan ó ngay gán nzapa na.
 some thing NEG is strong surpass God NEG
 'There is nothing stronger than God.'

Vai *bére* 'surpass', verb > 'than', marker of standard noun phrases in comparative constructions (Koelle [1854] 1968: 112). Susu *dangi* 'surpass', verb > 'than', marker of standard noun phrases in comparative constructions. Ex.

Susu (Friedländer 1974: 62)

khimbeli na Kōnakiri dangi Kankan na.
 (humidity POST Conakry surpass Kankan POST)
 'Conakry is more humid than Kankan.'

Zande *susa* 'surpass', verb > 'than', marker of standard noun phrases in comparative constructions. Teso *aki-tēlēkarīt* (INF-surpass) 'surpass' > auxiliary marking standard noun phrases in comparative constructions. Ex.

Teso (Kitching 1915: 25, 120)

e-ka-kin'ok e:telekarit lōkōni.
 (M-my-dog 3:SG:surpass M:your)
 'My dog is bigger than yours.'

This process has been described by Stassen (1985: 42–4) under the label "Exceed-Comparative" and by Heine (1997b: 112–14) under "Action Schema." This is an instance of a process whereby a verb, on account of some salient semantic property, gives rise to a grammatical marker highlighting that property; see, for example, FALL; FINISH; GIVE; PASS.

EXCEED ('to exceed', 'to defeat', 'to surpass') > (2) ELATIVE²⁴

Archaic Chinese *guo* 'exceed' > Medieval Chinese *guo* 'too much' > Medieval Chinese *guo* 'very'. Baka *wətò* 'pass', 'go on', 'overtake', verb (> comparative marker) > 'too much', elative marker. Ex.

Baka (Brisson and Boursier 1979: 486)

- (a) *ʔe gəlò à wətò.*
 it:is far ASP pass
 'It is very far.'
- (b) *ʔe ko dàdì à wətò.*
 it:is really much ASP pass
 'That is far too much.'

Moré *lōghé* 'pass', 'surpass', 'exceed', verb > 'too much' (following the main verb). Ex.

Moré (Alexandre 1953b: 236)

- (a) *dē lōgha m pāga.*
 'This exceeds my strength.'

²⁴ This term must not be confused with the use of "elative" in the literature on case marking.

- (b) *a nyũ ti lõghé.*
 ‘He has drunk too much.’

So far, evidence for this instance of grammaticalization comes mostly from Niger-Congo languages of Africa. But compare also English *exceeding(ly)*, Fa d’Ambu CP *pasa* ‘surpass’ > elative, superlative marker. Ex.

Fa d’Ambu CP (Post 1992: 159)

<i>tyipa</i>	<i>bi</i>	<i>sxa</i>	<i>dual</i>	<i>eli</i>	<i>kumu</i>	<i>pasa.</i>
stomach	come	PART	hurt	3:SG	eat	surpass

‘His stomach hurt, he had eaten too much (lit.: ‘most’).’

The present pathway appears to be conceptually plausible, but more examples are needed. What seems to be involved is that the use of EXCEED verbs without complement may give rise to a superlative or elative interpretation.

EXIST > (1) COPULA

Verbs or particles expressing existence (‘there is, be present’) may grammaticalize into classifying and identifying copulas. A number of cases of this process have been reported by Rubin (2005: 44–6) from Semitic languages. His examples include the existential particles of Hebrew (*yēš*), Aramaic (*ʾītay*, later *ʾīl*), and Ugaritic *it*, as well as their negative counterparts. Most fully, the process has proceeded in Aramaic, apparently much less so in Biblical Hebrew and Ugaritic. Ex.

Syriac (Rubin 2005: 45)

ʾītay sabbā
 ‘I am old’

The Akkadian verb *bašūm* provides another example. The verb was normally existential in meaning (‘to exist, be present’), but there are a handful of cases where it is used as a simple copula (Rubin 2005: 45).

Evidence for this pathway comes also from pidgins and creoles. In Kenya Pidgin Swahili, the existential particle *iko* (< Swahili *i-ko*, c9-exist:c17, ‘exist’), see (a), is also used generally as a copula, see (b). Ex.

Kenya Pidgin Swahili (Heine 1973: 96)

- (a) *Matunda mingi hapana iko.*
 food many NEG exist
 ‘There is not much fruit.’
- (b) *Bwana Kamau hapana Iko mwalimu.*
 Mr Kamau NEG COP teacher
 ‘Mr Kamau is not a teacher.’

More data from other languages are needed to establish this as a general pathway of grammaticalization.

EXIST > (2) H-POSSESSIVE²⁵

Mandarin Chinese *yǒu* ‘exist’, verb > *yǒu*, verbal possession marker. Ex.

Mandarin Chinese (Li and Thompson 1981: 513)

Tā yǒu sān-ge hái-zi.

3:SG exist three-CLASS child

‘S/He has three children.’

The form *neɿ*²⁵ of Tawang Monpa has both ‘exist’ and H-POSSESSIVE meanings (Long et al. 2012).

!Xun, N1 dialect *gè* ‘exist’ > ‘have’-construction. Ex.

!Xun, N1 dialect (Heine and König 2015)

Mí ≠hole gè.

1:SG dog exist

‘I have a dog.’ (lit.: ‘My dog exists.’)

The Turkish adjectives *var* ‘existent’ and *yok* ‘nonexistent’ are the ordinary means of expressing the H-POSSESSIVE in this language. Ex.

Turkish (anonymous reader; Lewis [1967] 1985: 142f.)

(a) *köşe-de bir kahve var.*

corner-LOC one coffee exist

‘There’s a café on the corner.’

(b) *araba-m var. araba-m yok.*

car-my existent car-my nonexistent

‘I have a car.’ ‘I don’t have a car.’

Possible examples of this pathway can also be found in Kwoma and Manambu of Papua New Guinea: In Kwoma, the verb *ta-* ‘be, exist, stay, live’ has presumably developed into a general possessive verb (‘have’), while in Manambu the verb and auxiliary *tə-* ‘stand, exist’ appears to have given rise to a construction of temporary possession (Aikhenvald 2013: 27). Ex.

Manambu (Aikhenvald 2013: 27)

dəy samasa:ma wapi tə-na-di.

they many bird have-ACTION:FOCUS-3:PL

‘They have/possess many birds.’

This process has been described by Heine (1997a: 58–9) under the heading “Genitive Schema”, having the propositional structure (‘X’s Y exists’). It requires the possessor to be encoded as a genitival modifier of the subject, which presents the possessee.

Seemingly, this process violates the unidirectionality principle, since there is another instance of grammaticalization exhibiting a reverse directionality: H-POSSESSION > EXIST. As a matter of fact, however, the two are part of

²⁵ H-POSSESSIVE stands for a marker of predicative possession, typically expressed in English by *have*; see Heine (1997a).

a more extensive pathway, which is described by Heine (1997a: 96) in the following way:

<i>Existence</i>	>	<i>Possession</i>	>	<i>“Nuclear” existence</i>
(Y exists with reference to X)		(X has Y)		(It has Y > Y exists)

In the present case (i.e. the Genitive Schema) we are dealing with the first part of this pathway, where existence involves two participants, while in the case of “nuclear” existence there is only one participant (see Heine 1997a: 94–6).

EXIST > (3) PROGRESSIVE

Kongo *kala* ‘to be’, ‘exist’, ‘remain’, verb > *ka(la)*, progressive aspect marker. Ex.

Kongo (Laman 1912: 159–80; Heine and Reh 1984: 88)

y-a-ka(la) *kanga*.
 (1:SG-PAST-exist bind)
 ‘I was binding.’

Yagaria *hano* ‘exist’, ‘be’, verb > *no’-/ne’-*, progressive aspect marker, prefix (Renck 1975: 90). In Korean, the verb *iss-* has, on the one hand, given rise to the durative aspect marker *-ese* (‘while, in the state of’). On the other hand, it developed also into the progressive aspect marker *-koiss-* (Rhee 1996; 2016c; Kim 2011).

Since PROGRESSIVE markers may further develop into HABITUAL aspect markers, some EXIST-verbs also express habitual events; for example, Yagaria *hano* ‘exist’, ‘be’, verb > *no’-/ne’-*, habitual aspect prefix (Renck 1975: 90). Ghanaian PE *dèy*, locative/existential copula (< English *there*) > progressive/habitual (“nonpunctual”) marker. Ex.

Ghanaian PE (Huber 1996; see also Turchetta 1998)

so that place wey rain dèy fall they dèy come.
 (so that place where rain PROG fall they PROG come)
 ‘So they were coming to where it was raining.’

More research is needed on the exact nature and the genetic and areal distribution of this process. See PROGRESSIVE > HABITUAL.

‘Exit, to’ see LEAVE

EYE (body part) > (1) BEFORE

Rutul *ul* ‘eye’, noun > *ulixde* ‘before, in front’ (lit.: ‘under the eye’, subessive case of *ul* ‘eye’) (Arkadijev and Maisak 2018: 134).

Maninka-mori *jé* ‘eye’, ‘face’, noun > *jé* ‘in front of’, ‘before’, postposition (Creissels in prep.b). Bambara *nyè* ‘eye’, ‘face’, noun > *nyè*, *nyè fê* (lit.: ‘eye at’), temporal postposition. Ex.

Bambara (Raimund Kastenholz, p.c.)

à nà-na né nyé.
 3:SG come-PAST 1:SG:EMPH before
 'She arrived before me.'

While there are only a couple of clear examples to support the present grammaticalization, we have nevertheless included it since it is suggestive of a widespread pathway whereby certain concrete nouns are grammaticalized to spatial markers, which themselves may further develop into temporal markers. Nouns for 'eye' appear to be a widespread source for 'face'; hence the two belong to one polysemy set in some languages. For various other grammaticalizations of nouns meaning 'eye' or 'face' in the Mixtecan language family, see Hollenbach (1995). Conceivably, the present grammaticalization is part of a more extended evolution: EYE > (FACE >) FRONT > BEFORE.

This grammaticalization appears to be an instance of a more general process whereby certain body parts, on account of their relative location, are first used as structural templates to express deictic location and then may develop further into expressions for temporal deixis; *see also* BACK; BELLY; FACE; HEAD.

EYE (body part) > (2) FRONT

Halia *mata* 'eye', 'face', 'front', noun > locative marker FRONT, spatial gram FRONT REGION (Svorou 1994: 249). Baka *là-*, inalienable noun, *làlà*, alienable noun, 'eye' (also: 'face') > 'in front of', prepositional, 'ahead', 'in front', adverb. Ex.

Baka (Brisson and Boursier 1979: 189)

ʔé gbɔɛ wɔ-è a là-lè.
 3:SG beat:PAST woman-his LOC eye-my
 'He beat his wife in front of me.'

Bambara and other Manding varieties *né* 'eye', 'face', noun > *né* 'in front of', 'before', postposition (Creissels in prep.b). Bambara *né* 'eye', 'face', noun > *né*, *né fê* (lit.: 'eye at'), locative adverb or postposition. Ex.

Bambara (Donald A. Lessau, p.c.)

(a) *n̄ fâ né*
 1:SG father face
 'my father's face'

Bambara (Kastenholz 1989: 100)

(b) *à bɛ tɪga fɛɛrɛ mɪsiri né fɛ̃.*
 (3:SG TAM peanut sell mosque in:front:of)
 'He sells peanuts in front of the mosque.'

Susu *ya* 'eye' + *-ra*, multipurpose particle > *yara* 'in front of', postposition. Ex.

Susu (Friedländer 1974: 40)*bankhi yara*

‘in front of the house’

Kpelle *ɲai* ‘eye’, ‘face’, noun > ‘in front of’, postposition (Westermann 1924: 12).

Japanese *ma-pe* ‘location of eye’ (noun-noun) > *mae* ‘in front (of), before’, relational noun (Narrog and Rhee 2013: 296).

For various other grammaticalizations of nouns meaning ‘eye’ or ‘face’ in the Mixtecan language family, see Hollenbach (1995). While terms for ‘face’ and ‘eye’ appear to be the primary sources for FRONT markers, not uncommonly there are also verbal sources. Bowden (1992: 38) has identified twenty-two Oceanic languages where FRONT markers appear to go back to verbs meaning ‘precede’.

This grammaticalization appears to be an instance of a more general process whereby certain body parts, on account of their relative location, are used as structural templates to express deictic location (Heine 2011c); *see also* BACK; BELLY; BUTTOCKS; FACE; HEAD; NECK.

F**FACE (body part) > (1) FRONT**

The Semitic root *panū-* ‘face’ has reflexes meaning ‘before, in front of’ in the following languages: Ugaritic *pn* (or *l-pn*), Hebrew *li-pnê*, Akkadian *ina pāni* (Rubin 2005: 47). In the Tibeto-Burman language Mongsen Ao of northeast India, the root of the relational noun *tā-ma* ‘face’ is gradually developing the spatial meaning of ‘in front of, to the front of’, often resulting in case stacking, whereby the newest layer of a grammaticalizing postposition occurs closest to the root (Coupe 2007; 2016). Ex.

Mongsen Ao (Coupe 2007: 188)

tā-əi pa thùŋ-a wa akhu-la ma taŋ nə.

thus-SEQ 3:SG reach-SIM go:PAST tiger-F FACE SIDE ALL

‘And then, he reached [the front side of] Tiger.’

This pathway is especially widespread in languages of the Tai-Kadai family of southeastern Asia. Long et al. (2012) provide the following examples from this family: Wuming Zhuang *na*³ ‘face’ > *pa:i*⁶ *na*³ ‘front’. Longzhou Zhuang *na*³ > *paŋ*⁴ *na*³ ‘front’. Xishuangbanna Dai *na*³ ‘face’ > *pa:i*² *na*³ ‘front’. Dehong Dai *la*³ ‘face’ > *pa*³ *la*³ ‘front’. Sui *na*³ ‘face’ > *na*³ ‘front’. Maonan *na*³ ‘face’ > *na*³ ‘front’. Li (Hlai) *day*¹ ‘face’ > *day*¹ ‘front’.

Mixtec *nuù* ‘face’, noun > ‘top surface’ or ‘front surface’ of a box-like object (Brugman and Macaulay 1986: 318). Ex.

Mixtec (Brugman and Macaulay 1986: 319)

rùʔù hindii-ri nùù María.
 I stand-1:SG face Maria
 ‘I am standing in front of Maria.’

Copala Trique *rian* ‘face’, noun > ‘area in front’. Ex.

Copala Trique (Hollenbach 1995: 174–5)

- (a) *rian*^{3 2} *neʔe*^{3 h} *a*^{3 2}
 face baby DEC
 ‘the baby’s face’
 (b) *rian*^{3 2} *we*^{ʔ3} *a*^{3 2}
 face house DEC
 ‘the area in front of the house’

Colonial Quiché *vach* ‘face’, noun > *-vach* ‘in front of’, locative preposition. Ex.

Colonial Quiché (Dürr 1988: 58–9)

x-u-cat *ri* *pom* *ch-u-vach* *ri* *ah*.
 CPL-3:SG:ERG-heat DEF incense LOC-3:SG:ERG-face DEF reed
 ‘She burned incense in front of the reeds.’

Alamblak *ñiŋga-tik* (eye-platform) ‘face’, noun > ‘front’, positional word confined to animate beings (Bruce 1984: 85; cf. HEAD). Amharic *fit* ‘face’, body part noun > *fit-u ga* (face-DEF at) ‘at the front’ (lit. ‘at his face’) (Aberra 2016: 87–8). Ex.

Amharic (Aberra 2016: 87–8)

zaf-u *biro-u* *fit-fit-ga* *tə-təkkəl-ə*.
 tree- DEF office- DEF face-face-at PASS-plant-3:SG:M:SBJ
 ‘The tree was planted in front of the office.’

||Ani *kx'úi-si* ‘face’ (‘face’-F) > ‘in front of’, locative postposition (Heine 1999: 47). Gimira *ap*¹ ‘face’ > *a²pm*⁵ (‘face’-case marker) ‘before’, ‘in front of’, postposition (Breeze 1990: 38). Halia *mata* ‘eye’, ‘face’, noun > FRONT-REGION (Svorou 1994: 77). Bambara and other Manding varieties *né* ‘eye’, ‘-face’, noun > *né* ‘in front of’, ‘before’, postposition (Creissels in prep.b). Vai *dṣā* ‘face’, ‘front’, noun > *dṣāro* (‘face’ + *ro* ‘in’) ‘before’, locative and temporal postposition (Koelle [1854] 1968: 39).

See Svorou (1994: 70–9, 124–43) for various other grammaticalizations of nouns meaning ‘face’ in the Mixtecan language family, see also Hollenbach (1995). Bowden (1992: 36) found forty-nine Oceanic languages where terms for ‘face’ appear to have given rise to FRONT markers. This grammaticalization has received quite some treatment in the relevant literature; see, for example, Heine et al. (1991a); Svorou (1994); Heine (1997b). It appears to

be an instance of a more general process whereby certain body parts, on account of their relative location, are used as structural templates to express deictic location; *see also* BACK; BELLY; BUTTOCKS; EYE; HEAD; NECK; SHOULDER.

Terms for 'face' and 'eye' are the primary sources for FRONT markers (see EYE > FRONT), but not uncommonly there are also verbal sources. Bowden (1992: 38) has identified twenty-two Oceanic languages where FRONT markers appear to go back to verbs meaning 'precede'.

FACE (body part) > (2) UP

In the Tibeto-Burman language Mongsen Ao of northeast India, the root of the relational noun *tə-ma* 'face' is developing into a postposition with a superessive meaning 'above' (Coupe 2016). Nama *ai-s* (*éis* in Krönlein's orthography) 'face', 'blanket', noun > *ai* (*êi* in Krönlein's orthography) 'on', 'at', postposition. Ex.

Nama (Krönlein 1889:64)

- (a) *éis â-tsa //ā ê-ts ...*
 (face POSS-2:M:SG wash so:that-2:M:SG)
 'Wash your face so that you ...'
 (b) *ti /hawi- s éi ʔnã re nē sō/oa- ba.*
 (my wound- 3:F:SG on pour IMP this drug- 3:M:SG)
 'Pour this medicine on my wound.'

Copala Trique *rian* 'face', noun > 'on top of'. Ex.

Copala Trique (Hollenbach 1995: 174, 179)

- (a) *rian*³² *neʔe*^{3 h} *a*³²
 face baby DEC
 'the baby's face'
 (b) *oto*^{32 h} *lu*³ *rian*³² *yana*³² *a*³².
 sleeps cat face platform DEC
 'The cat is sleeping on top of the platform.'

Researchers have found two out of 125 African languages and six out of 104 Oceanic languages to derive a locative marker UP(ON) from a noun meaning 'face' (Heine et al. 1991a: 126; Bowden 1992: 36). For various other grammaticalizations of nouns meaning 'face' in the Mixtecan language family, see Hollenbach (1995).

This grammaticalization appears to be an instance of a more general process whereby certain body parts, on account of their relative location, are used as structural templates to express deictic location; *see also* BACK; BELLY; BUTTOCKS; EYE; HEAD; NECK; SHOULDER.

FAIL ('to fail', 'to lack', 'to miss') > AVERTIVE

French *faillir* 'fail', 'sin', 'err', verb > *failli*, past participle + infinitive > avertive marker 'was on the verge of doing but did not do'. Ex.

French (Kuteva 1998a: 116, 118)

- (a) *Elle a failli.*
 she have:3:SG:PRES sin/err:PAST:PARTCP
 'She has sinned.' (or 'She has born an illegitimate child.')
- (b) *La route est glissante et j'*
 DEF road be:3:SG:PRES slippery and 1:SG
ai failli tomber.
 have:PRES fail/sin:PAST:PARTCP fall:INF
 'The road is slippery and I nearly fell.'

Turkish -*yaz-* 'sin', 'err', 'fail', 'miss', verb > -*yaz-* 'was on the verge of doing but did not do', auxiliary (Kuteva 1998a; Johanson and Csató 2018: 159). Ex.

Turkish (Kuteva 1998a: 116)

öl- e- yazdı.
 die- GER- sin/err/fail/miss:3:SG:PAST
 'He nearly died.'

Modern Chinese *cha* 'lack, miss' + *yidian* 'r' 'a little' > *chadian* 'r', aversive adverb (Long et al. 2012). Uzbek *yâz-* 'fail', 'miss', verb > *yâz-* 'to almost, nearly do', e.g. *öl-â yâz-* 'be on the point of dying', *çik-â yâz-* 'be about to come out' (Johanson and Csató 2018: 159).

Tariana -*mayã* 'make mistake', 'forget', 'do', 'get wrong', verb > -*maya*, -*mayã* 'something (negative) almost happened but the agent managed to prevent it', aspect enclitic. Ex.

Tariana (Aikhenvald 1997: 28)

ha- na-nuku nu- hweta-mayã nhupa- ka.
 this- CL:VERTICAL-TOP 1:SG- fall:CAUS-ALMOST 1:SG:grab- DEC
 'I almost dropped this long one (pen) but managed to grab it.'

French *manquer* 'miss', 'lack', verb > Haitian CF *mâké* 'almost'. Ex.

Haitian CF (Hall 1953: 55)

Li mâké fè-m pèdi pitit mwê.
 (3:SG miss make-1:SG lose child my)
 'He almost made me lose my child.'

Instead of aversive markers, FAIL-verbs may also develop in the direction of negation markers, in that utterances like 'I failed to find the book' are in appropriate contexts regularly reinterpreted as meaning 'I didn't find the book' (cf. Egan 2017).

This grammaticalization appears to be an instance of a more general process whereby verbs are grammaticalized to auxiliaries denoting tense, aspect, or modal functions; compare BEGIN; COME FROM; COME TO; DO; FINISH; GO TO; KEEP; LEAVE; PUT; WANT. FAIL-verbs may also give rise to plain negation markers; Givón (1979a), compare LACK > NEGATION.

FALL ('to fall (down)') > (1) CHANGE-OF-STATE

English *fall*, as in *fall dead*, *fall ill*, *fall in love*. French *tomber* 'fall', as in *tomber malade* 'fall ill'. In Mandinka (Manding, West Mande) of West Africa, the verb *bòyi* 'fall' is also used as an inchoative auxiliary. Ex.

Mandinka (Creissels in prep.b)

- (a) *Yir-óo bòyi-tà sil-òo kàn.*
tree-D fall-CPL road-D on
'The tree fell on the road.'
- (b) *Mūs-óo bòyi-tà kumbóo-là.*
woman-D fall-CPL cry-INF
'The woman burst into tears.'

The evidence for this hypothesis is weak; more data are needed to substantiate it. We have nevertheless included it because it might be part of a more general pattern whereby telic verbs of movement may give rise to change-of-state markers; compare COME TO > CHANGE-OF-STATE; GO > CHANGE-OF-STATE.

FALL ('to fall (down)') > (2) DOWN

Ijo *kóro* 'fall', verb > 'down' (Svorou 1994). Bulu *ɲké* 'flow down (of water)', verb > 'below', 'down', 'eastward', adverb (Hagen 1914: 285).

The evidence for this hypothesis is far from satisfactory, the more so since it is confined to African examples. We have nonetheless included it, first, on account of evidence presented by Svorou (1994), according to whom 'fall'-verbs may be grammaticalized to spatial grams for DOWN. Second, this would appear to be an instance of a more general process whereby process verbs, on account of some salient semantic property, give rise to grammatical markers highlighting that property; see, for example, DESCEND; EXCEED; FINISH; PASS.

FALL ('to fall (down)') > (3) PASSIVE

Korean *ci-* 'fall', verb > *-eci-* passive auxiliary (Rhee 1996; 2016c; Rhee and Koo 2014; see also Haspelmath 1990: 39). Tamil *paṭu* 'fall', 'happen' > *-paṭ*, passive suffix (Haspelmath 1990: 39). Tonga *gua* 'fall', verb > *-igu*, passive suffix (Haspelmath 1990: 39).

This process, proposed by Haspelmath (1990), has not yet been sufficiently described; more research is needed on its exact nature and genetic and areal distribution. It appears to be an instance of a more general process whereby constructions involving certain process verbs are grammaticalized to passive constructions; see EAT; GET; SEE; see also DESCEND.

FATHER > MALE

Nouns for 'father' have been grammaticalized in some languages to closed-class categories denoting male participants, typically as adjectival modifiers or derivational elements. !Xóǎ *ǎa* 'father', noun > *ǎa* 'male', modifier. Ex.

!Xóõ (Güldemann 1999b: 69; quoted from Traill 1994: 154, 174)

<i>Tâa</i>	<i>q̣a</i>	<i>gùmi</i>	<i>q̣a</i>
person	father	cattle	father
‘man’		‘ox’	

Chinese languages and dialects such as Gan, Hakka, Hui, Min, and Xiang have a suffix derived from ‘father’ to indicate the male sex of animals (Long et al. 2012). In the Hmong language of China’s Eastern Guizhou Province, the noun *pa*³ ‘father’ also serves to mark male animals (Long et al. 2012).

In written Tibetan, the form *pha-* ‘father’ designates a sexually intact male animal belonging to a castratable species when used as the first constituent of compounds. Ex.

Written Tibetan (Matisoff 1992: 29)

<i>pha-glang</i>	<i>pha-phag</i>	<i>pha-ra</i>	<i>pha-rta</i>
‘bull’	‘boar’	‘billy goat, buck’	‘stallion’

Furthermore, the Tibetan suffix *-pa*, presumably a grammaticalized form of *pha-* ‘father’, forms agentive nouns and “seems to carry a default nuance of masculine gender”, e.g. *rta-pa* (horse-father) ‘horseman’, *lug-pa* (sheep-father) ‘shepherd’, *chu-pa* (water-father) ‘water carrier’ (Matisoff 1992: 29).

The Thai noun *phôw* ‘father’ has a derivational potential in the meaning ‘male’ in certain collocations. Ex.

Thai (Matisoff 1992: 10, 15)

<i>phôw bâan</i>	<i>phôw kháa</i>	<i>phôw lian</i>
father house	father trade	father nourish
‘male head of a household’	‘male shopkeeper’	‘foster father’

Based on Matisoff (n.d.: 41), this pathway can be argued to be one that is suggestive of a chain of conceptual change of the following kind (where intermediate stages can be skipped): FATHER > MALE > PERSON > OBJECT.

Note, however, that this pathway rarely leads to fully productive grammaticalized morphemes. The source construction is typically one of noun–noun compounds, and the construction combines features of both lexicalization and grammaticalization.

Frequently, the grammaticalized meaning ‘male’ tends to give rise to other, context-induced senses that are conceived to be associated with the concept ‘father’, such as ‘leader of’ or ‘owner of’. For example, the noun *rra* ‘father’ of the Bantu language Tswana of southern Africa has grammaticalized to a derivational prefix *ra-*, whose meanings include ‘owner of’, ‘responsible for’, ‘expert on’, e.g. *motse* ‘town’ vs. *ra-motse* ‘mayor’, *motlakase* ‘electricity’ vs. *ra-motlakase* ‘electrician’ (Creissels in prep.a). More crosslinguistic data are needed to establish this grammaticalization, which appears to be an instance of a more general process whereby human

nouns, on account of some salient semantic characteristic, give rise to grammatical markers highlighting that characteristic; *see also* CHILD; MAN; MOTHER; WOMAN.

FIELD > OUT

Basque *landa* 'field', noun > 'outside', 'since', 'through' (Stolz 1992a: 15).²⁶ Latvian *lauks* 'field', noun > *laukā* 'outside' (Stolz 1992a: 15). See also Svorou (1994). More information on the areal and genetic distribution of this process is needed. This appears to be an instance of a process whereby a noun, on account of some salient semantic property (in this case, location outside the home), gives rise to a grammatical marker highlighting that property; see, for example, BACK; EARTH; SKY.

FINISH ('to finish', 'to complete', 'to end') > (1) AFTER

Archaic Chinese *yi* 'finish', verb > *yi* 'after' (Long et al. 2012). Turkish *son* 'end', verb > *sonra* 'after' (Haspelmath 1997b: 65). Nanay *xoži-* 'finish', 'end', verb > *xožiočiania/xožiopia* 'after' (Haspelmath 1997b: 65). Indonesian *telah/habis* 'finished' > *setelah/sehabis* 'after' (Haspelmath 1997b: 65).

The exact nature of this process is not entirely clear. Conceivably, it is conceptually related to the (>) FINISH > CONSECUTIVE grammaticalization.

FINISH ('to finish', 'to complete', 'to end') > (2) ALREADY

Two Archaic Chinese verbs, *ji* and *yi*, both meaning 'finish', have given rise to the adverbs *ji* and *yi*, respectively, both meaning 'already' (Long et al. 2012). Burmese *-pi-* 'finish', verb > *-pi* 'already' (van Baar 1997: 87). Tongan *'osi* 'be finished', verb form > 'already', when used as a preverb, in particular in combination with the perfect marker *kuo* (van Baar 1997: 87). Arawak *hibi* 'be completed' + subordinating suffix *-n* > *hibi-n* 'already' (van Baar 1997: 87). Vietnamese *rôi* 'finish', 'be idle', verb > 'already' (van Baar 1997: 87). Tariana *-sita* 'finish, complete', verb > = *sita*, *-esta*, *-sta* 'already accomplished', aspectual enclitic (Aikhenvald forthcoming).

Swahili *-(kw-)isha* 'be.finished', 'end' > 'already' in certain contexts. Ex.

Swahili

- (a) *i- me- (kw-)isha.*
c9- PERF- INF-be:finished
'It is finished.'
- (b) *i- me- (kw-)isha fika.*
c9- PERF- INF-be:finished arrive
'It has arrived already.'

²⁶ An anonymous reader of the first edition of this book noted that the target sense of Basque *landa* 'is more commonly 'except for', 'besides', 'in addition to', rather than 'outside', though 'outside' is securely attested, as in *Euskal Herririk landa* 'outside the Basque Country'.

Manda *mal-* 'finish, complete', verb > *mal-* 'already'-auxiliary (Bernander 2017: 213). In the Manding languages of western Africa, which include Bambara, Baninko Bambara, Jula, Kita Maninka, Korogan, Koyaga, Mandinka, Maninka, Maninka-mori, Marka, Maukakan, Niokolo Maninka, and Xasonga, the verb *bán* 'finish' is more commonly grammaticalized to a particle denoting 'already', either in its bare form *bán* or in the infinitive form *kà bán*, occurring in postverbal position (Creissels in prep.b).

Portuguese *acabar* 'finish', verb > Sranan CE *kaba* 'and', 'already', completive marker. Ex.

Sranan CE (Plag 1995: 125)

Mi memree wie abie piekienwan kaba.
I think we have little:one already
'I thought we already had little ones.'

The boundary between ALREADY, COMPLETIVE, and IAMITIVE is still largely unclear. For example, the Burmese *-pi* and Vietnamese *rôi* forms that are presented above are presumably IAMITIVE categories (Östen Dahl, p.c.). The reader is therefore advised to also check under IAMITIVE and COMPLETIVE.

This grammaticalization appears to be an instance of a more general process whereby process verbs are grammaticalized to auxiliaries denoting tense or aspect functions; compare BEGIN; COME FROM; COME TO; DO; GO TO; KEEP; LEAVE; PUT.

FINISH ('to finish', 'to complete', 'to end') > (3) COMPLETIVE²⁷

Medieval Chinese *qí* 'finish', verb > *qí*, completive marker (Long et al. 2012). Medieval Chinese (eighth–tenth centuries AD) *liao* 'finish', 'accomplish', verb used as V₂ in a series of two verb phrases > *le*, completive or perfective marker, aspectual particle following the main verb (V₁) (Peyraube 1988: 640–5; see also Peyraube 1996: 185–7 and Sun 1996: 82–99).²⁸ Ex.

Middle Chinese (Jinshu: Fuxian zhuan; quoted from Sun 1996: 85)

(a) *guan- shì wéi yì liào yē.*
official- matter NEG easy complete PART
'The government matter is not easy to finish.'

Modern Mandarin Chinese (Sun 1996: 89)

(b) *wǒ chī le fàn le.*
I eat ASP food CRS
'I have eaten.'

²⁷ The notion completive is a complex one, and a number of the examples discussed here are perhaps more appropriately treated as iamitive categories (Östen Dahl, p.c.). When consulting entries having COMPLETIVE as their target, the reader is advised to also check under IAMITIVE.

²⁸ According to Sun (1996: 85), *liao* was used mostly in the sense of 'to complete', 'to understand', or 'to be obvious' in Middle Chinese.

In Korean, the verb *mac-* 'encounter, finish' has given rise to the adverb *mace* 'without exception, exhaustively' (Rhee 2016c).

Lingala *-sila* 'finish', 'end', verb > egressive auxiliary (Mufwene and Bokamba 1979: 244–6). Yabem *bacnê* 'end, be finished', verb > terminative auxiliary (coordinate to the main verb, inflected only in the third person singular). Ex.

Yabem (Thomas Müller-Bardey, p.c.)

bôc seng aêâcma janggom gê-bacnê.
 pig 3:PL:eat our corn 3:SG-be:finished
 'The pigs have eaten up our corn.'

Sango *a-we* 'be finished', verb > *awe*, perfective marker (Thornell 1997: 122).²⁹ Ex.

Sango (Thornell 1997: 119)

- (a) *Kua a-we.*
 work AGR-be:finished
 'The work is finished.'
- (b) *Mbi' fatigué awe.*
 I get:tired PFV
 'I am tired.'

Ewe *vɔ* 'end', 'be finished', verb > terminative particle. Ex.

Ewe

- (a) *é-vɔ.*
 3:SG-end
 'It is finished.'
- (b) *é-qu i vɔ.*
 3:SG-eat 3:SG:OBJ CPL
 'He has eaten it up.'

Moré *sa* 'end', 'finish', verb > 'completely', 'entirely', auxiliary following the main verb (Alexandre 1953b: 334–5). Engenni *dhe* 'finish', verb > marker of completed action. Ex.

Engenni (Lord 1989: 365)

Ô kpei dhe me.
 he wash finish me
 'He finished washing me.'

Palaung *hwō-i* 'be finished', 'be ready', verb > marker of anterior aspect (Bybee et al. 1994: 72). Rama *atkul* 'finish', verb > completive marker. Ex.

²⁹ According to Östen Dahl (p.c.), Sango *a-we* is a iimitive rather than a perfective marker.

Rama (Craig 1991: 476)

- (a) *tabulaak tkeeruk nsu- atkul- u.*
 evening grave 1:PL- finish- TNS
 'We finished (digging) the grave in the evening.'
- (b) *dor y- aakang- atkul- u.*
 door 3- shut- ASP- TNS
 'She shut the door *tight*.'

More *bāsé* 'finish', 'end', verb > 'completely', auxiliary following the main verb (Alexandre 1953b: 25). Bulu *man* 'finish', 'be ready', verb > completive marker, auxiliary (Hagen 1914: 257).

Spanish *acabar (de)* 'finish', 'end', 'complete', verb > 'completely', auxiliary. Ex.

Spanish (Halm 1971: 160)

No acab- o de entender-lo.
 (NEG finish-1:SG PREP understand-3:M:SG:OBJ)
 'I don't understand that completely.'

Siroi *sulu-* 'finish', verb > completive aspect marker, auxiliary. Ex.

Siroi (Wells 1979: 57)

nde-ke sulu- wam- ngat.
 go:down-CL finish- INT- 3:SG:FUT
 'It will fall down entirely.'

Many instances of this grammaticalization have been reported from pidgins and creoles. For example, Fa d'Ambu CP *tyama* (cf. Portuguese *terminar*) 'finish', verb > terminative aspect marker (Post 1992: 161). Fa d'Ambu CP *xaba* (cf. Portuguese *acabar*) 'finish', 'end', verb > terminative aspect marker (Post 1992: 161). Portuguese *acabar* 'finish', verb > Sri Lanka CP *ka*, perfect marker. Ex.

Sri Lanka CP (Stolz 1987a: 296)

E:li ja: fəla: e:w ja: ka: fəla: fəla:tu.
 3:SG PAST say 3:SG PAST PERF say say:QUOT
 'He said he (had) told (you).'

Negerhollands CD *kabáá* (< Portuguese *acabar*) 'finish', action verb > completive aspect auxiliary. Ex.

Negerhollands CD (Stolz 1986: 185, 186)

tee am a kabáá kup it de ple.
 till 3:SG PERF finish cut out DET place
 'till he had finished clearing the field.'

Evidence for a process from verbs meaning 'finish' to completive, iative, perfect, and perfective aspect markers can also be found in signed languages, such as American Sign Language (ASL), Israeli Sign Language, and Italian Sign Language (Janzen 1999; Sexton 1999; Pfau and Steinbach 2006). For example, Janzen (1999) observes that the form FINISH in ASL has acquired a wide range of tense-aspect meanings, namely completive, perfect (or anterior), perfective, and past (see Heine and Kuteva 2007: 75).

COMPLETIVE markers such as perfect grams may develop further into past tense markers (see FINISH > PAST; PERFECT > PAST). This grammaticalization appears to be an instance of a more general process whereby process verbs are grammaticalized to auxiliaries denoting tense or aspect functions; compare BEGIN; COME FROM; COME TO; DO; GO TO; KEEP; LEAVE; PUT.

FINISH ('to finish', 'to complete', 'to end') > (4) CONSECUTIVE

Archaic Chinese *ji* 'finish' > *ji(er)* 'later, and, then', consecutive marker. Archaic Chinese *yi* 'finish' > *yi'er* 'later, then', consecutive marker (Long et al. 2012). Modern Chinese *wanle* 'end' > *wanle*, consecutive marker for topics in discourse (Long et al. 2012).

Swahili *i-ki-isha* 'if it is finished', conditional clause > consecutive marker *kisha* 'then', introducing a new episode. Khwe *xú* 'abandon, quite finish', *taá-xú-nò* (lit.: 'thus-finish-if', 'if it is over like that'), conditional clause > *taá-xú-nò* '(and) then', consecutive discourse marker. Ex.

Khwe (Köhler 1989: 565, 566)

- (a) *yà-xú* *nò* // *'áé-m* *ó-ká* *té* *nò* ...
 come-TERM if home-3:M:SG at stay if
 'When you arrive and you are at your residence. ...'
 (b) *taá-xú-nò* *cií* // *ó-* *yí-* *tí-hĩ* ...
 thus-TERM-if go:to lie:down- PASS- FREQ-PAST
 'and then they used to go (there) and to sleep. ...'

||Ani *tíò khúrí nù* 'then when it is finished' > *tíò khúrí nù* 'after that', marker introducing a new discourse paragraph. Ex.

||Ani (Heine 1999: 85f.)

tíò *khúrí* *nù* *xù-è* *á* *xèù-he* *kò* *kún-è*.
 then finish when leave-PASS DEM hippo-F:SG CONV go-PASS
 'Then, when that is over, they leave the hippo and go.'

Portuguese *acabar* 'finish', 'complete', verb > Kabuverdiano CP *cabá*, temporal conjunction ('then'). Ex.

Kabuverdiano CP (Stolz 1987a: 296–7)

<i>El</i>	<i>cendê</i>	<i>candêr;</i>	<i>el</i>	<i>sentá</i>	<i>pêl</i>	<i>d'</i>
3:SG	light	candle	3:SG	caress	skin	of
<i>cara,</i>	<i>cabá</i>	<i>el</i>	<i>bá</i>	<i>abri.</i>		
face	then	3:SG	go	open		

'She lit a candle, caressed her face and then went to open the door.'

See also Bavin (1983: 160). This grammaticalization appears to be an instance of a more general process whereby process verbs are grammaticalized to markers used to structure narrative discourse; compare COME; GO. *See also THEN > DISCOURSE MARKER.*

FINISH ('to finish', 'to complete', 'to end') > (5) IAMITIVE

Forms meaning 'finish(ed)' and 'do(ne)' are frequent sources of iamitives, particularly in creole languages. In the relevant literature, grams derived from these sources are often referred to as 'completives', a term with a rather vague meaning. It appears that the label 'completive' is sometimes applied to such markers routinely, without considering their semantics too closely (Östen Dahl, p.c.).

Swahili *kw-isha* 'be finished', verb > iamitive marker. Ex.

Swahili (own data)

- (a) *Chakula ki-me-kw-isha.*
 food c7-PERF-INF-be:finished
 'The food is finished.'
- (b) *Ni-me-kw-isha-kaa hapa sana.*
 1:SG-PERF-INF-be:finished-stay here very
 'I've stayed here already for quite some time.'

Creole languages offer a good opportunity to observe the genesis of iamitives. Portuguese *acabar* 'finish', verb > Papiamentu CS, CP *kaba*, iamitive marker (Östen Dahl, p.c.). English *finish* > Tok Pisin PE *pinis*, iamitive marker, e.g. *Em i bikipela pinis. Yupela i mas askim em* 'He is of age; ask him' (Östen Dahl, p.c.).

In English-based creoles the lexical source is frequently a 'do'-verb rather than a 'finish'-verb: English *done* > Belizean CE *don* 'be finished' > iamitive marker, e.g. *Unu don kleen aredi* 'You are clean already' (Östen Dahl, p.c.). English *done* > Jamaican CE *don*, iamitive marker. Ex.

Jamaican Creole English (Östen Dahl, p.c., taken from a New Testament translation)

Afta dem don lisen di king, dem lef go we.
 'After they had (finished) listened to the king, they went their way.'

Conceivably, there is also evidence for a pathway FINISH > IAMITIVE in American Sign Language (ASL). The form FINISH has acquired a wide range

of tense–aspect meanings which include that of a completive, perfect (or anterior), perfective, and a past marker, and the following example might be suggestive of a development into a iamitive marker (*see also* TOUCH > EXPERIENTIAL):

American Sign Language (ASL; Sexton 1999: 115–16; Heine and Kuteva 2007: 75)

TOUCH FINISH JAPAN YOU

'Have you ever been to Japan?'

See also ALREADY > IAMITIVE; FINISH > PAST; IAMITIVE > PERFECT.

FINISH ('to finish', 'to complete', 'to end') > (6) PAST

In the Wintu language of Northern California, the verb *kEr* 'finish' ('finish off, terminate, die, be killed, exterminate, and massacre') is the source of a past tense marker (Mithun 2018: 314). "Dahome" dialect of Ewe *ko* 'end', 'have finished', verb > -*kɔ*-, verbal past prefix. Ex.

"Dahome" dialect of Ewe (Westermann 1907: 139–40)

m- *kɔ-* *sa.*

1:SG- PAST- sell

'I sold.'

This pathway appears to be part of a more extended chain of grammaticalization, namely FINISH > COMPLETIVE > PERFECT > PAST. Accordingly, the pathway implies that there may have been an intermediate stage of a completive and/or perfect function.

There is also evidence for this pathway in signed languages. For example, Janzen (1999) observes that in American Sign Language (ASL), the form FINISH has acquired a wide range of tense–aspect meanings which include that of a completive, perfect (or anterior), perfective, and a past marker.

FINISH ('to finish', 'to complete', 'to end') > (7) PERFECTIVE

COMPLETIVE markers occasionally give rise to PERFECTIVE aspect markers (Bybee et al. 1994); hence, we also find PERFECTIVE constructions going back to FINISH main verbs.

Early Modern Chinese *liao* 'finish', verb > *liao/le*, completive marker > *le*, perfective marker (Long et al. 2012). Lhasa *tsháa* 'finish', verb > perfective marker (Lord 1989: 369). Burmese *pi* 'finish', verb > perfective auxiliary (Park 1992: 16). Kongo *mana* 'finish', verb > perfective aspect marker (Laman 1912: 185–6; Heine and Reh 1984: 88). Mandarin Chinese *liǎo* 'finish', verb > *le*, perfective marker (Bybee and Dahl 1989: 58; Hagège 1993: 213).

This grammaticalization appears to be an instance of a more general process whereby process verbs are grammaticalized to auxiliaries denoting tense or aspect functions; compare BEGIN; COME FROM; COME TO; DO; GO TO; KEEP; LEAVE; PUT.

FIRST (TEMPORAL) > BEFORE

Italian *primo* ‘first’ > *prima* ‘at first’, ‘earlier’ > *prima di* ‘before’ (Haspelmath 1997b: 63). Punjabi **prathila-*, ‘first’, a suffix variant of Old Indic *prathama-* > Punjabi *pāilāā* ‘before’ (Haspelmath 1997b: 63). Latvian *pirmis* (an adverbial form based on *pirmais* ‘first’) > *pirms* ‘before’, ‘earlier’ (Haspelmath 1997b: 63). Kannada *modalu* ‘first’ > *modalu* ‘before’ (Haspelmath 1997b: 63). Compare Basque *lehen* ‘first’, which occurs in constructions as illustrated in the following example:

Basque (anonymous reader)

etxe- ra joan baino lehen
house- ALL go than first
‘before going home’

This hypothesis (see Haspelmath 1997b) does not appear to be well established; conceptually it would seem equally plausible that there is also a reverse directionality. More research is needed on this issue.

‘Fitting, be, to’, see SUITABLE**FLANK (body part) > SIDE (SPATIAL)**

Korean as spoken in China *yepkwuli* ‘flank’, body part noun > *yeph* ‘side’, locative (Long et al. 2012).

||Ani *gām-si* (flank-F) ‘flank’, noun > ‘beside’, locative postposition (Heine 1999: 47). Abkhaz *àvara* ‘flank, side’, noun > *a-vara* ‘beside’ (Svorou 1994: 72). Tzotzil *xokon* ‘flank’, noun > ‘side’, locative marker (de León 1992: 577).

It would seem that this grammaticalization starts out with a body part noun (‘flank’) that acquires the additional meaning ‘side (of)’. Subsequently, the noun may grammaticalize into an adverbial (e.g. ‘aside’) or an adpositional item (‘beside’; cf. Svorou 1994: 72). This grammaticalization appears to be an instance of a more general process whereby certain body parts, on account of their relative location, are used as structural templates to express deictic location (Heine 2011c); see also BACK; BELLY; BUTTOCKS; EYE; FACE; HEAD; NECK; SHOULDER.

FOLLOW > (1) ACCORD (‘according to’)

Korean *ttalu-* ‘follow’, verb > *-(ul)ttala* ‘following’, prolative postposition (Rhee 2016c).

Korean *ttalu-* ‘follow’, verb > *-(ul/-ey)ttala* ‘according to’, prolative postposition (Rhee 2016c). Latin *sēqui* ‘follow’, *sēcundus* ‘following’ (gerund, verbal adjective) > *sēcundum* ‘along’, ‘(immediately) after’, ‘according to’, ‘for (the benefit of)’, preposition (Kühner and Holzweissig [1912] 1966: 935). Swahili *ku-fuatana na* ‘to follow each other’, verb > *kufuatana na* ‘following’, ‘according to’, preposition.

More research is needed on the exact nature and the genetic and areal distribution of this process. Nevertheless, it appears to be an instance of a process whereby process verbs, on account of some salient semantic property, give rise to grammatical markers expressing case relations; compare COME FROM; GIVE; GO TO; LEAVE; SEE; TAKE.

FOLLOW > (2) BEHIND

Albanian *pasón* ‘follow’, verb of action > *pas* ‘behind’, locative adverb and preposition. Ex.

Albanian (Buchholz et al. 1993: 391–2)

nga pas
‘from behind’

Bowden (1992: 38) found seven Oceanic languages where verbs for ‘follow’ have given rise to BEHIND markers.

So far poorly documented, this seems to be an instance of a pathway whereby process verbs, on account of some salient semantic property, give rise to locative markers; compare ARRIVE; CROSS; DESCEND.

FOLLOW > (3) CAUSE

The Proto-Oceanic verb **suRi* ‘follow, be in motion behind somebody or something’, ‘accompany’, is hypothesized to have given rise to a reason or cause marker in a number of Oceanic languages, such as Toqabaqita *suli-a*. Ex.

Toqabaqita (Lichtenberk 2013: 89; Moyse-Faurie 2018: 295–6)

Ku too qi luma suli-a ku mataqi.
1:SG:NFUT stay LOC house REAS-3:OBJ 1:SG:NFUT be.sick
‘I stayed at home because I was sick.’

While this pathway is possibly restricted to Oceanic languages, we have nevertheless included it here tentatively on account of its conceptual plausibility, possibly being an instance of a process from verb to grammatical marker expressing case relations; compare COME FROM; GIVE; GO TO; LEAVE; SEE; TAKE.

FOLLOW > (4) COMITATIVE

Early Modern Chinese *gen* ‘follow’, verb > *gen* ‘with, in parallel with’, preposition (Long et al. 2012). Mandarin Chinese *gen* (or *gēn*) ‘follow’, verb > ‘with’, preposition (Hagège 1993: 204; Peyraube 1996: 191; Chappell and Peyraube 2011: 788). The first instances of *gen* as a comitative preposition are attested in the eighteenth century, and its further development into a conjunction started in the nineteenth century (Peyraube 1996: 191). Hagège (1993: 204) notes that at present this item has in 8 per cent of its occurrences the lexical meaning ‘follow’, while the grammatical uses account for 92 per cent of its appearances.

Conceivably, the development of the Chinese verb *tong* can be related to this general process. In Archaic Chinese *tong* meant ‘to be the same as’ and later ‘to share with’ and ‘to accompany’. Probably during the Tang period, *tong* was grammaticalized to a comitative preposition. Ex.

Tang period Chinese (Han Shan shi; quoted from Peyraube 1996: 191)

bai yun tong he fei.
white cloud with crane fly
‘White clouds are flying away (together) with the crane.’

In Contemporary Chinese (i.e. from the nineteenth century onward), *tong* began to function as a coordinating conjunction (Peyraube 1996: 190–1).

Korean *coch-* ‘follow’, verb > *-cocha* ‘with’, associative postposition (Rhee 2016c). Ainu *tura* ‘follow’, verb > *-tura*, comitative case marker with animate nouns (Kilian-Hatz and Stolz 1992: 7).

This is an instance of a process whereby process verbs, on account of some salient semantic property, give rise to grammatical markers expressing case relations (Heine 2011c); compare COME FROM; GIVE; GO TO; LEAVE; SEE; TAKE. See also FOLLOW > NP-AND; COMITATIVE > NP-AND.

FOLLOW > (5) NP-AND

In some languages, verbs whose meaning includes ‘follow’ have given rise to comitative markers (see FOLLOW > COMITATIVE) and the latter again may further grammaticalize into the noun phrase-conjoining conjunction ‘and’ (see COMITATIVE > NP-AND). In Modern Chinese, all three stages are attested (Qian Qu, p.c.), namely the verb *gen* ‘to follow’ and the same element as a comitative marker (see (a)) and as a noun phrase-conjoining conjunction (see (b)):

Modern Chinese (Qian Qu, p.c.)

- (a) *Zhansan gen Lisi dajia.*
Zhangsan follow/with Lisi fight
‘Zhangsan fought with Lisi.’
(b) *wo gen Xiaohong dou xihuan kanshu*
I.SG follow/and Xiaohong both like reading
‘Both Xiaohong and I like reading.’

FOOT (‘foot’, ‘leg’)³⁰ > DOWN

Anren dialect of Gan *teyo*²⁴ ‘foot’, body part noun > *teyo*²⁴ *xa*³⁴, ‘under’. Hengshan dialect of Xiang *to* ‘foot’, nominal > *to xæ* ‘down, the lower place’ (Long et al. 2012).

Silacayoapan *sà?à* ‘foot’, noun > ‘bottom of’. Ex.

³⁰ In a number of languages, no lexical distinction is made between ‘foot’ and ‘leg’; hence, this entry contains forms for both meanings.

Silacayoapan (Hollenbach 1995: 178; Shields 1988: 317)

kándúǵù nà sàǵà yítò.
 are:lying they foot tree
 ‘They are lying [at] the base of the tree.’

Ma’di pá ‘leg’, noun > pá (gá) ‘underneath’, postposition (Blackings and Fabb 2003: 395–6). Kisi bēngú ‘foot’, ‘leg’, noun > ‘under’, postposition. Ex.

Kisi (Childs 1995: 130)

ò wá kùṅndáṅ ó bǵó bēngú.
 he AUX groan to bush foot
 ‘He was groaning under the bushes.’

See Hagège (1993: 214) and Heine et al. (1991a: chapter 5) for more examples. For various other grammaticalizations of nouns meaning ‘foot’ in the Mixtecan language family, see Hollenbach (1995). Bowden (1992: 36) found ten Oceanic languages where terms for ‘foot’ or ‘leg’ have given rise to DOWN markers.

This grammaticalization appears to be an instance of a more general process whereby certain body parts, on account of their relative position, are used as structural templates to express deictic location; *see also* BACK; BELLY; BREAST; BUTTOCKS; EYE; FACE; FLANK; HEAD; NECK.

FOOTPRINT > BEHIND

In the West Caucasian language Adyghe, the noun wəžə ‘footprint’ developed into a postposition meaning ‘behind, after’. But there is also a second instance of the present pathway, in that the noun *lə* ‘foot, footprint’ appears to have given rise to the locative preverb *lə-* ‘moving following the landmark’ functioning as a verbal applicative derivation (Arkadiev and Maisak 2018: 123).

Gimira *ya²par³* ‘footprint’, noun > *ya²pa³rn³* (‘footprint’-case marker) ‘after’, ‘behind’, postposition (Breeze 1990: 38). Zande *fu*o ‘footprint’, ‘trace’, noun > *fu*o ‘after’, preposition. Ex.

Zande (Canon and Gore [1931] 1952: 38)

- (a) *Fuo bahũ du erẽ.*
 ‘A lion’s footprints are here.’
 (b) *Mi nandu fuo ko.*
 ‘I am going after him.’

Most examples of this pathway have been found in African languages. Nevertheless, this appears to be an instance of a general cognitive process whereby a noun, on account of some salient semantic property, gives rise to a grammatical marker highlighting that property; *see also* BACK; EARTH; FOOT; SKY; TRACE.

FOREHEAD > FRONT

Dullay *miinté* (*miinaté*, locative genitive) ‘forehead’, noun > *miinacé* ‘in front of’, postposition. Ex.

Dullay (Amborn et al. 1980: 102)

payisa yéela mīnacé ákkád'í.
 Payisa 1:SG:LOC in:front:of sits
 'Payisa sits in front of me.'

Bulu *asu* 'forehead', 'front', noun > *ôsu* 'ahead', locative adverb (Hagen 1914: 215, 291). There are only two African language families where this process has been documented. Nevertheless, it appears to be an instance of a more general process whereby certain body parts, on account of their relative location, are used as structural templates to express deictic location; *see also* BACK; BELLY; BREAST; BUTTOCKS; EYE; FACE; FLANK; HEAD; NECK.

'From', *see* ABLATIVE**FRONT > (1) BEFORE**

Archaic Chinese *qian* 'front', locative noun > *xianqian*/-*zhiqian*, 'before', temporal (Long et al. 2012). Korean *cen* 'front', noun > *-ceney* 'before', temporal anterior postposition (Narrog and Rhee 2013; Rhee 2016c).

Bulgarian *pred* 'in front' > *predi* 'before' (Haspelmath 1997b: 61). Turkish *ön* 'front' + *ce*, adverbial suffix > *önce*, "sequential adposition" (Haspelmath 1997b: 61). Lingala (*li*)*bosó* 'in front', 'ahead', noun, adverb > 'earlier', 'formerly', adverb (van Everbroeck 1958: 71, 75). Kwaio *na'o-na* 'in front of' > *na'o-na* 'before'. Ex.

Kwaio (Keesing 1991: 335)

- (a) *na'o-na 'ifi*
 'in front of the house'
 (b) *na'o-na omea*
 'before the mortuary feast'

Compare Chinese *qian* 'front' > 'earlier'. Ex.

Chinese (Alain Peyraube, p.c.)

qian san nian
 front three year
 'the last three years'

See Haspelmath (1997b) for further information on this development. This grammaticalization appears to be an instance of a more general process whereby spatial concepts are used to also express temporal concepts; *see, for example*, ABLATIVE; ALLATIVE; BEHIND; IN; LOCATIVE.

FRONT > (2) LATER

Shona *mberi* 'front', noun of noun class 8 > 'ahead', time adverb. Ex.

Shona (Hannan 1987: 339)

zvi-uya zvi-ri mberi- yo.
 (c8-excellent c8-be front- DEM)
 ‘Good things are ahead.’

Moré *béōghé* ‘go ahead’, ‘be in front’ > *béōgho* ‘tomorrow’, ‘the following day’ (Alexandre 1953b: 36f.). More research is needed on the exact nature and the genetic and areal distribution of this process. Nevertheless, it appears to be an instance of a more general process whereby spatial concepts are used to also express temporal concepts; compare ABLATIVE; ALLATIVE; BEHIND; IN; INTERIOR; LOCATIVE.

FUTURE > E-NECESSITY (Probability)

Archaic Chinese *jiang* ‘will’, auxiliary of future tense > *jiang* ‘maybe’, epistemic auxiliary (Long et al. 2012). English *will*, future tense marker > marker of epistemic modality in certain contexts that rule out a future meaning. Ex.

English (anonymous reader)

- (a) *Susie will be at the party (tomorrow).*
- (b) *That will be Susie* (on hearing the doorbell).

German *werden* (+ infinitive), future tense marker > marker of probability. Ex.

German

- (a) *Sie wird bald kommen.*
 she will soon come
 ‘She will come soon.’
- (b) *Sie wird jetzt zu Hause sein.*
 she will now at home be
 ‘She will be at home by now.’

Bulgarian *šte*, future marker > *šte*, marker of epistemic modality. Ex.

Bulgarian

- (a) *Konferencijata šte se sastoī v Berlin.*
 conference:DEF FUT REFL take:place in Berlin
 ‘The conference will take place in Berlin.’
- (b) *Tja šte e pri prijatelja si po tova vreme.*
 she FUT be:3:SG:PRES at boyfriend REFL at this time
 ‘She will be at her boyfriend’s place at this time.’

Swahili *-ta-*, future tense prefix > marker of probability. Ex.

Swahili

- (a) *A-ta-ku-ja.*
 C1-FUT-INF-come
 ‘He will come.’

- (b) *A-ta-ku-wa nyumba-ni sasa.*
 CI-FUT-INF-be house-LOC now
 'He will be at home by now.'

For other languages expressing future and epistemic modality (possibility, probability) by means of the same marker, see Bybee et al. (1994: 205ff., 347–8); a more detailed treatment of Greek can also be found in Tsangalidis (1999). Concerning a discussion of modality as a semantic map, see van der Auwera and Plungian (1998).

G

GET ('to get', 'to receive', 'to obtain') > (1) CHANGE-OF-STATE

English *get drunk*, *get rich*.

Rodrigues CF *gañ* 'get', verb > marker of change-of-state in examples such as the following:

Rodrigues CF (Corne 1977: 165; Papen 1978: 440)

- (a) *mo fin gañ sa avek li.*
 (1:SG CPL get it with 3:SG)
 'I got it from him.'
- (b) *kâ kan gañ gro, nu kup li.*
 (when cane get big 1:PL cut 3:SG)
 'When the cane gets (to be) big, we cut it.'

See also Anderson (1975). This process appears to be associated primarily with contexts where GET has adjectives and related words expressing qualities as complements.

GET ('to get', 'to receive', 'to obtain') > (2) D-NECESSITY (Obligation)

Archaic Chinese *de* 'get', verb > *de (dei)*, marker of obligation (Long et al. 2012).
 Tai *Ya lai*³ 'get', verb > *lai*³ 'need to', marker of obligation (Long et al. 2012).

English *have got to*, e.g. *I've got to study tonight* (Bybee et al. 1994: 184).
 Lahu *gä* 'get', 'obtain', 'catch', verb > obligation construction (Bybee et al. 1994: 183). Archaic Chinese (tenth–second century BC) *de* 'obtain', verb > Modern Mandarin Chinese *dei* 'should'. Ex.

Old Chinese (300 BC; Shijing; Guanju; quoted from Sun 1996: 112)

- (a) *qiu zhi bu de.*
 want her NEG obtain
 '(The lord) wished (for) her, (but) did not get (her).'

Modern Mandarin Chinese (Sun 1996: 160)

- (b) *hai dei chi rou.*
 still should eat meat
 '(One) still has to eat meat.'

This is an instance of a pathway whereby process verbs give rise to markers for tense, aspect, and modality; compare BEGIN; COME FROM; COME TO; DO; FINISH; GO TO; KEEP; LEAVE; PUT.

GET ('to get', 'to receive', 'to obtain') > (3) PASSIVE

Warring States period Chinese *bei* 'receive', 'suffer', 'be affected', verb³¹ > Early Medieval Chinese (second–sixth centuries AD) *bei*, passive marker (see Xing 2015).³² Ex.

Old Chinese (Shiji; quoted from Sun 1996: 63)

- (a) *bei shui han zhi hai.*
 receive water cold REL damage
 'Receive damage from flood and cold.'

Early Medieval Chinese (Shi shuo xin yu: Fang zheng; quoted from Peyraube 1996: 176)

- (b) *Liangzi bei Su Jun hai.*
 Liangzi BEI Su Jun kill
 'Liangzi was killed by Su Jun.'

Old Chinese *de* 'to obtain', verb > Middle Chinese *de*, passive marker. Ex.

Old Chinese (300 BC; Shijing: Guanju; quoted from Sun 1996: 112)

- (a) *qiu zhi bu de.*
 want her NEG obtain
 '(The lord) wished (for) her, (but) did not get (her).'

Middle Chinese (Shiji: Zhang Shezi Fengtan zhuan; quoted from Sun 1996: 118)³³

- (b) *qihou you ren dao gaomiao qian yuhuan bu-de.*
 later have man steal high:temple front jade:ring catch-obtain
 'Later there was (a) man stealing the jade ring in front of the high temple and was caught.'

For a detailed reconstruction of this process from Early Archaic Chinese to the present, see Peyraube (1989a), see also Xing (2015: 612–15). For a survey of Sinitic languages, see Chappell (2015c). Early Modern Chinese *de* 'get' had both causative meaning ('make, let') and passive meaning ('suffer') (Long et al. 2012). Korean *pat-* 'receive', verb > *-pat-*, passive derivational suffix

³¹ Originally, *bei* was a noun meaning 'blanket'. It later turned into a verb meaning 'to cover', 'to wear' before acquiring the meanings 'to receive', 'to suffer', 'to be affected' (Peyraube 1996: 176).

³² The first Chinese passive constructions using *bei* did not involve agents (Alain Peyraube 1989a and p.c.).

³³ Alain Peyraube (p.c.) doubts whether this is really an example of a process from *de* 'to obtain' to passive marker.

(Rhee and Koo 2014; Rhee 2016c; Haspelmath 1990: 41). Vietnamese *đu'p'c* 'receive', verb > passive marker (Haspelmath 1990: 41).³⁴

German *kriegen*, *bekommen*, *erhalten* 'get', 'receive', verbs > marker of the recipient passive ("Dativpassiv", "Adressatenpassiv", "Rezipientenpassiv", "indirektes Passiv"; Helbig and Buscha 1986: 184). Ex.

Colloquial German (Lehmann 1991: 517)

Sie kriegte den Wagen repariert.
she got the car repaired
'She got the car repaired.'

Welsh *cael* 'get', 'earn', 'win', 'find', verb > passive auxiliary. Ex.

Welsh (Haspelmath 1990: 42)

Cafodd y bachgen ei rybuddio gan y dyn.
got the boy his warning by the man
'The boy was warned by the man.'

Evidence for this pathway also comes from creole languages. Rodrigues CF *gaỹ* 'get', verb (< French *gagner* 'gain') > passive marker. Ex.

Rodrigues CF (Corne 1977: 164–5)

- (a) *mo fin gaỹ sa avek li.*
(1:SG CPL get it with 3:SG)
'I got it from him.'
- (b) *lisiẽ i gaỹ morde ek pis.*
(dog 3:SG get bite with flea)
'Dogs get bitten by fleas.'

Seychelles CF (Seselwa) *gaỹ* 'get', verb > passive marker. Ex.

Seychelles CF (Haspelmath 1990: 42)

zot pa ti gaỹ evite dā sa festẽ.
they not PAST PASS invite in that party
'They did not get invited to that party.'

Wiemer (2011: 540) observes that "German and all West Slavic languages except Polish show a passive construction whose auxiliary has evolved from a ditransitive 'receive'-verb ...; the subject of this passive corresponds to the dative object of the lexical verb which can name a recipient, an addressee or a beneficent/maleficent." See Wiemer (2011: 537–8, 540) for more details on this pathway; see also Corne (1977: 159–68) for a discussion of *gaỹ*-passives in Indian Ocean creoles.

³⁴ Note that the orthography used for Vietnamese in Haspelmath (1990) differs from that of Kuhn (1990).

Conceivably, this grammaticalization is related to another pathway, namely (>) SUFFER > PASSIVE. This process appears to be an instance of a more general process whereby constructions involving certain process verbs are grammaticalized to markers structuring clausal valency; *see* COME; EAT; FALL; GIVE; GO; SEE; SUFFER.

GET ('to get', 'to receive', 'to obtain') > (4) PAST

Khmer *baan* 'get', verb > past tense/'already' marker. Ex.

Khmer (Haiman 1999: 156)

haəj baan haw Thombaal məək cuəp
and PAST call Thombaal come meet
'and summoned Thombaal to a meeting'

Hmong *tau* 'get', 'receive', verb > past tense marker (Bisang 1996: 569). Thai *dāj* 'get', 'receive', verb > past tense marker (Bisang 1996: 570). In the Twi language of Ghana, the verb *nyã* 'get', 'receive', 'obtain', when used as an auxiliary, may indicate "that the action has already taken place" (Lord 1993: 218–19). Note also that in the Soninke language of West Africa, the completive form of the verb *ñi* 'find/be found' is used as a past tense auxiliary (Creissels in prep.b).

The evidence supporting this process is far from satisfactory. Still, the process appears to be an instance of a more general pathway whereby process verbs are grammaticalized to auxiliaries denoting tense or aspect functions; compare BEGIN; COME FROM; COME TO; DO; FINISH; GO TO; KEEP; LEAVE; PUT.

GET ('to get', 'to receive', 'to obtain') > (5) H-possessive

Old Chinese *de* 'to obtain', verb > Middle Chinese *de* 'have'.³⁵ Ex.

Old Chinese (300 BC; Shijing; Guanju; quoted from Sun 1996: 112)

- (a) *qiu zhi bu de.*
want her NEG obtain
'(The lord) wished (for) her, (but) did not get (her).'

Tenth-century Chinese (Zutangji 1/74; quoted from Sun 1996: 122)

- (b) *yi ren de wo rou.*
one person obtain I flesh
'One (of them) has my flesh.'

In many French-based creoles, the French verb *gagner* 'gain', 'win' has acquired uses like 'obtain', 'get', and this verb was grammaticalized to a marker of predicative possession, for example, Haitian CF *gê(gnê)* 'have'. Ex.

³⁵ Among the various grammaticalization processes that the verb *de* underwent in the history of Chinese (see Sun 1996: 108–62), the present one constitutes only a minor, less common pattern.

Haitian CF (Hall 1953: 31)

mwê pa-gê plis.
 (1:SG NEG-have more)
 'I have no more.'

See also Anderson (1975). More research is needed on the exact nature and the genetic and areal distribution of this process. This is an instance of a pathway whereby process verbs, on account of some salient semantic property (in this case, implied possession), give rise to grammatical markers.

GET ('to get', 'to receive', 'to obtain') > (6) C-POSSIBILITY (root possibility)

Archaic Chinese (tenth–second century BC) *de* 'to obtain', verb > Early Medieval Chinese (second–sixth century AD) *de*, marker of ability or possibility (Peyraube 1996: 194, 1999; Sun 1996: 112ff.). Ex.

Old Chinese (300 BC; Shijing: Guanju; quoted from Sun 1996: 112)

- (a) *qiu zhi bu de.*
 want her NEG obtain
 '(The lord) wished (for) her, (but) did not get (her).'

Middle Chinese (tenth century AD; Zutangji 5/98/7; quoted from Sun 1996: 121)

- (b) *hai jie pan de xu-kong bu?*
 still explain judge possible empty NEG
 'Can (you) still tell what emptiness is?'

Burmese *rá* 'get', verb > 'be able to', 'manage to', auxiliary (Park 1992: 16). English *get to* > 'manage to', 'be permitted to'; *I get to sit on Santa's lap* (Bybee et al. 1994: 191). Khmer *baan* 'get', verb > marker of ability. Ex.

Khmer (Matisoff 1991: 425–6)

- (a) *look cɔŋ baan chəə-kuh tee?*
 2:SG want get matches Q
 'Do you want to get some matches?'
- (b) *kñom sdap baan.*
 (1:SG understand? get)
 'I can understand.'

Lahu *gä* 'get', 'obtain', verb > 'to manage to complete an act' (Bybee et al. 1994: 191). Vietnamese *đu'q'c* 'receive', verb > 'can', 'be able', modal particle. Ex.

Vietnamese (Kuhn 1990: 9)³⁶

- (a) *sáng nay chị to:i đu'q'c tho'.*
 morning this sister 1:SG receive letter
 'This morning, my (elder) sister received a letter.'
- (b) *to:i bá't hai Con cá đu'q'c.*
 1:SG catch two CLASS fish receive
 'I am able to/can catch two fish.'

³⁶ Note that the orthography used for Vietnamese in Kuhn (1990) differs from that of Haspelmath (1990).

Réunion CF *gaŷ* 'get', verb (< French *gagner* 'gain') > *gaŷ* 'be able'. Ex.

Réunion CF (Corne 1977: 166)

<i>m</i>	<i>i</i>	<i>gaŷ</i>	<i>lir</i> .
(1:SG	CPL	get	read)

'I can (am physically able to) read.'

See also GET > D-POSSIBILITY.

GET ('to get', 'to receive', 'to obtain') > (7) D-POSSIBILITY (permission)

Archaic Chinese *de* 'get, be able to', verb > *deyi*, verb > *de* 'can', auxiliary of dynamics > *de* 'may', auxiliary of permission (Long et al. 2012). Early Archaic Chinese (tenth–second century BC) *de* 'to obtain (something after making an effort)', verb > Late Archaic Chinese *de*, marker of permission. Early Archaic Chinese *huo* 'to obtain (something after making an effort)', verb > Late Archaic Chinese *huo*, marker of permission (Peyraube 1999).

English *get to*, verb > 'manage to', 'be permitted to'. The development presumably involves an intermediate stage of root possibility (C-POSSIBILITY), suggesting the following chain of grammaticalization (see Narrog 2012a: chapter 6.2.5): GET > C-POSSIBILITY > D-POSSIBILITY.

This is an instance of a more general pathway whereby process verbs give rise to markers of tense, aspect, and modality; compare BEGIN; COME FROM; COME TO; DO; FINISH; GET > E-POSSIBILITY; GO TO; KEEP; LEAVE; PUT. See also PI-POSSIBILITY.

GET ('to get', 'to receive', 'to obtain') > (8) E-POSSIBILITY (Possibility)

Root possibility (C-POSSIBILITY) markers may give rise to permission and possibility (E-POSSIBILITY) uses (cf. C-POSSIBILITY), and GET-verbs can also acquire these meanings (see Bybee et al. 1994 for details). Archaic Chinese (tenth–second century BC) *de* 'obtain', verb > Early Medieval Chinese (second–sixth century AD) *de*, marker of ability or possibility (Peyraube 1996: 194, 1999; Sun 1996: 112–14). Early Archaic Chinese *huo* 'obtain (something after making an effort)', verb > Late Archaic Chinese *huo*, auxiliary verb expressing possibility (Peyraube 1999). Across Southeast Asian languages, lexical verbs meaning 'acquire, get' have been grammaticalized to markers of 'achievement' in immediately postverbal position, and as modals of possibility in clause-final position (see Enfield 2003).

This is an instance of a more general pathway whereby process verbs give rise to markers of tense, aspect, and modality; compare BEGIN; COME FROM; COME TO; DO; FINISH; GET > D-NECESSITY; GO TO; KEEP; LEAVE; PUT. See also PI-POSSIBILITY.

GET ('to get', 'to receive', 'to obtain') > (9) SUCCEED

Archaic Chinese *de* 'get', verb > *de* 'succeed', verb. Medieval Chinese *qu* 'get', verb > Early Modern Chinese *-qu*, complement indicating that the action has

been completed successfully (Long et al. 2012). German *kriegen* ‘to get’ > ‘manage to do’. Ex.

German

- (a) *Er kriegt einen neuen Computer.*
 he gets a new computer
 ‘He gets a new computer.’
 (b) *Er kriegt das nicht geregelt.*
 he gets that not settled
 ‘He doesn’t get that settled.’

Mauritius CF *gañ* ‘get’, verb > *gañ* ‘succeed doing’. Ex.

Mauritius CF (Papen 1978: 480)

A-fors reflesi, muê la gañ fer.
 (by:dint try 1:SG PAST get do)
 ‘By dint of trying I succeeded in doing it.’

More research on the nature and genetic and areal distribution of this process is needed.

GIVE > (1) BENEFACTIVE

Archaic Chinese *yu* ‘give’, verb > benefactive marker (see Peyraube 1988; 1996; Sun 1996: 22ff., 44). Ex.

Tenth-century Chinese (Zutangji; quoted from Sun 1996: 22)

yu lao seng guo jing shui ping.
 for old monk pass clean water-bottle
 ‘(Someone) rinsed the bottle clean for the old monk.’

Mandarin Chinese *gěi* ‘give’, verb > ‘to’, ‘for’, benefactive/dative preposition (Hagège 1975: 160; Long et al. 2012). Southern Min *kɔʔ²* ‘give’, verb > *kɔʔ²*, preposition introducing benefactive participants (Long et al. 2012).

Cahuilla *-máx-* ‘give’, verb root > *-max-*, benefactive affix (Seiler 1977: 151). In the Tonkawa language of Central Texas, the verb *?eke-* ‘give’ has grammaticalized in place and also serves as a general benefactive applicative when occurring as the second constituent of compounds, e.g. *?e?eyawa-* ‘to do, make, prepare; to work’ vs *?e?eyaw-ke-* ‘to work **for** (someone)’ (Mithun 2018: 332).

Thai *hâj* (or *hây*) ‘give’, verb > *haj* ‘to’, ‘for’, co-verb (Bisang 1998b: 771; Lord et al. 2002: 220–1). Ex.

Thai (Bisang 1998b: 771)

Dœŋ sɔɔn léeg hâj Sùdaa hâj phýan.
 Dang teach arithmetic give Suda give friend
 ‘Dang taught arithmetic to Suda for his friend.’

Proto-Oceanic **pa(nñ)i* ‘give’, verb > Toqabaqita *fana* ‘to’, ‘for’, benefactive preposition (Lichtenberk 1991b: 59–60). Awtuw *kow* ‘give’, verb > *kow*, benefactive marker (Feldman 1986: 76–7).

Southern Senufo languages, for example, Jimini *kan* ‘give’, verb > benefactive marker (Carlson 1991: 214). Akan *ma* ‘give’, verb > dative, benefactive marker (Lord et al. 2002: 218–21). Awutu *na* ‘give’, verb > benefactive marker (Lord 1993: 39). Efik *nò* ‘give’, verb > benefactive preposition. Ex.

Efik (Welmers 1968: 68–9)

yét ùsan nò éyé!
(wash dish give him)
‘Wash the dishes for him!’

Proto-Khoe **māã* ‘distribute, offer, give out’, transitive verb > Ts’ixa *-mà*, benefactive suffix (Fehn 2014: 161), Tjwao *-mà*, applicative and benefactive suffix (Admire Phiri, p.c.), Khwe *-ma* ‘for’, benefactive derivative suffix (Köhler 1981a: 503). Ex.

Khwe (Köhler 1981a: 503)

djàò rǒ ma- à- tè ti ’à
work- II- BEN- I- ASP 1:SG OBJ
‘(He) works for me.’

Ijo (Kolokuma dialect) *-piri* ‘give’, verb > benefactive postposition (Williamson 1965: 35). Zande *fu* ‘give’, verb > *fu*, benefactive preposition (Canon and Gore 1926: 37). In the Kabba language of the Central African Republic, the verb *kàrə* ‘give’ has been grammaticalized to a benefactive marker after transitive verbs like ‘crush’, ‘find’, or ‘sift’, but to a recipient (dative) marker when the preceding verb denotes ‘give’, ‘say’, ‘ask’, ‘want’, ‘tell’, ‘send’, and ‘want’ (Moser 2005: 284).

Tagbana *kan* ‘give’, verb > benefactive marker. Ex.

Tagbana (Carlson 1991: 214)

Ki yo kūdi kǎ!
it say chief give
‘Say it for the chief!’

Lahu *pî* ‘give’, verb > benefactive marker (indicating that the verbal action impinges on a third person), e.g. *chə pî*. ‘Chop for him/her/them’ (Matisoff 1991: 396). Burmese *pè* ‘give’, verb > benefactive marker, auxiliary (Park 1992: 16). Yao Samsao *pun* ‘give’, verb > benefactive preposition, (>) causative complementizer. Ex.

Yao Samsao (Matisoff 1991: 428)

- (a) *nîn pun pəw yǎ*
3:SG give axe 1:SG
‘He gave me an axe.’

- (b) *maa cáp bùdò? -gwaäy pun fũ? -cúay.*
 mother cut fingernails give child
 'The mother cut the child's nails for him.'

Korean *cwu-* 'give', verb > *-ecwu-*, benefactive, transfer auxiliary (Koo 2003; Rhee 2016c). Korean *tal-* 'give', verb > *-etal-*, benefactive auxiliary (Koo 2003; Rhee 2016c). Korean *tuli-* 'give' (honorific), verb > *-etuli-*, benefactive, transfer auxiliary (Koo 2003; Rhee 2016c).

Vietnamese *cho* 'give', verb > benefactive preposition/postposition (Matisoff 1991: 429). Ex.

Vietnamese (Kuhn 1990: 5–6)

- (a) *Bà Ba cho Lan mọ:t cái ví.*
 Mrs Ba give Lan one CLASS bag
 'Mrs Ba has given Lan a bag.'
- (b) *to:i mua cho bà Hai cái dồ:ng hò: dồ.*
 1:SG buy BEN Mrs Hai CLASS watch this
 'I bought this watch for Mrs Hai.'

Tamil *koṭu* 'give', verb of action > auxiliary marking the benefactive case. Ex.

Tamil (T. Lehmann 1989: 227)

raajaa kumaar-ukku.k katav-ai.t tira- ntu koṭu- tt- aan.
 Raja Kumar-DAT door-ACC open- PARTCP give- PAST- 3:M:SG
 'Raja opened the door for Kumar.'

This is a common grammaticalization process in Atlantic pidgins and creoles; for examples see Holm (1988: 184–5) and Muysken and Veenstra (1995: 290ff.). Sranan CE *gi* 'give', verb > benefactive case marker (Lord 1989: 105). Saramaccan CE *dá* 'give', verb > benefactive, dative marker (Lord 1989: 106). Netherhollands CD *gi* (< Dutch *geven*) 'give', action verb > benefactive preposition. Ex.

Netherhollands CD (Stolz 1986: 185, 216)

- (a) *astər mi ga: gi si kabái watər*
 (after 1:SG CPL give POSS:3:SG horse water)
 'after I had given his horse water'
- (b) *as ju kan fang som fligi gi mi*
 (CONJ 2:SG can catch some flies BEN 1:SG)
 'when you can catch some flies for me'

Fa d'Ambu CP *da* 'give', verb > benefactive marker. Ex.

Fa d'Ambu CP (Post 1992: 158)

Amu ske fě taba da-bó.
 1:SG PART make work give-you
 'I'll do the work for you.'

See also Newman (1996; 1997) for further details. More research is needed on the latter line of grammaticalization.

This is an instance of a process whereby process verbs, on account of some salient semantic property, give rise to grammatical markers expressing case relations; compare COME FROM; FOLLOW; GO TO; LEAVE; SEE; TAKE.

GIVE > (2) CAUSATIVE

Archaic Chinese *yu*, ‘give’, verb > Medieval Chinese *yu*, causative marker (Long et al. 2012). Mandarin *gěi* ‘give’, verb > causative marker (Peyraube 2015: 62). Southern Min *kɔʔ²* ‘give’, verb > *kɔʔ²*, causative marker (Long et al. 2012).

Thai *hāj* ‘give’, verb > causative complementizer. Ex.

Thai (Matisoff 1991: 437)

mêe-khrua hāj dèk tət ny’a pen chin lék-lék.
 cook give child cut meat be slice small-small
 ‘The cook had the child cut the meat into tiny slices.’

Vietnamese *cho* ‘give’, verb > (benefactive adposition >) permission/causative complementizer. Ex.

Vietnamese (Matisoff 1991: 429)

Ông ấy không cho tôi thôi.
 HON 3:SG NEG give 1:SG resign
 ‘He wouldn’t let me resign.’

Khmer *qaoy* ‘give’, verb > causative complementizer (with sentential object). Ex.

Khmer (Matisoff 1991: 429–30)

- (a) *mənuh prəh baan qaoy siəwphəw təw mənuh srɔy.*
 person male PAST give book to person female
 ‘The man gave the book to the woman.’
- (b) *kñom qaoy koət ruət.*
 1:SG give 3:SG run
 ‘I had him run (intentionally).’
- kñom twəə qaoy koət ruət.*
 1:SG do give 3:SG run
 ‘I made him run (maybe by scaring him inadvertently).’

Luo *miyo* ‘give’, verb > causative auxiliary. Ex.

Luo (Stafford 1967: 72)

Koth no-miyo wa-bedo e tiend yath.
 (rain 3-give 1:PL-stay at foot tree)
 ‘The rain made us stay at the foot of the tree.’

Somali *siin* ‘give’, verb > *-siin*, causative suffix (Marcello Lamberti, p.c.). Siroi *t-* ‘give’, verb > causative auxiliary (Wells 1979: 56–7). In the Kabba language of the Central African Republic, the verb *kārə* ‘give’ has been grammaticalized to a causative marker mostly when preceded by intransitive stative verbs like ‘die’, ‘fall’, ‘go’, ‘come’, ‘see’, ‘sleep’, or ‘return’, as well as by ambitransitive verbs such as ‘do’, ‘eat’, ‘keep’, or ‘learn’ (Moser 2005: 284).

For more examples of this pathway from languages of South Asia, see Coupe (2018). The development GIVE > CAUSATIVE tends to involve a stage where in addition to CAUSATIVE there is also a PERMISSION function, referred to by Matisoff (1991: 427–31) as a “permission-causative function;” see also Chappell (2001d) on Southern Min dialects (see GIVE > PERMISSION). Based on data from Akan and Thai, Lord et al. (2002: 223–6) hypothesize that in prototypical transfer situations there is a process of the following kind: ‘give’ + NP + VP > PERMISSION > CAUSATIVE. According to this hypothesis, PERMISSION precedes CAUSATIVE in time.

The pathway GIVE > CAUSATIVE has been shown to be sensitive to language contact in the languages of Mainland Southeast Asia. For example, the verbs for ‘give’ in Vietnamese (*cho*), Thai (*hâj*), and Cambodian (*ṣaoy*) have grammaticalized into causative auxiliaries presumably as a result of areal diffusion (Bisang 1996: 577).

See also Chappell (2001d: 262), Newman (1996; 1997); compare GIVE > PERMISSION.

See also DO, SEND, TAKE > CAUSATIVE.

GIVE > (3) CAUSE

Yoruba *fún* ‘give’, verb > *fún* reason marker (Lord et al. 2002). Ex.

Yoruba (Lord et al. 2002)

- (a) *ó fún mi l-ówó.*
he give me PART-money
‘He gave me some money.’
(b) *ó ń kú lq fún ebi.*
HE PROG die go give hunger
‘He is dying of hunger.’

For an explanatory account for this so far poorly documented pathway, see Lord et al. (2002: 231–3). These authors hypothesize that the pathway from GIVE to CAUSE (REASON in their terminology) has an intermediate stage of a GOAL/BENEFACTIVE function. *See also* GIVE > BENEFACTIVE; GIVE > PURPOSE.

GIVE > (4) CONCERN

Concern markers present a clausal participant expressing the concern, topic, or reason of what the predication is about. Zande *fu* ‘give’, verb > *fu, fo*, marker of concern. Ex.

Zande (Canon and Gore 1926: 37)

Mi nazinga fo ko.
(I be:angry give him)
‘I am angry with him.’

Nanning Yue *pi*³⁵ ‘give’, verb > *pi*³⁵, marker of concern or reason (Huang forthcoming). Zhuang *hɔ:i*³ ‘give’, verb > *hɔ:i*³, marker of concern or reason (Huang forthcoming).

Fa d’Ambu CP *da* ‘give’, verb > concern marker. Ex.

Fa d’Ambu CP (Post 1992: 158)

Dantu television xa fa xa montyi da kuz.
in television PART speak PART much give thing
‘On television they speak often about the affair.’

Conceivably related to this function is the use of ‘give’-verbs to denote affected participants. In the Yakkha language of Nepal, for example, the verb *-pi?* ‘give’, when used as the second in a series of verbs (V2), can indicate that some participant is affected by the event in undesirable ways (Schackow 2015: 299).

This is an instance of a pathway whereby process verbs, on account of some salient semantic property, give rise to grammatical markers expressing case relations; compare COME FROM; FOLLOW; GO TO; LEAVE; SEE; TAKE.

GIVE > (5) IMPERATIVE

Italian *dai!* ‘give!’, imperative marker (Silvia Luraghi, p.c.). Russian *davaj* ‘give!’ > imperative marker. Bulgarian *daj* ‘give!’ > imperative marker. Ex.

Bulgarian

Daj da ti sgotvja nešto!
give:IMP:SG:you CONJ you cook:PFV:1:SG:PRES something
‘Let me cook something for you!’

Russian

Davaj pojdjom v kino!
give:IMP:SG go:1:PL in movies
‘Let’s go to the movies!’

Mandarin *gei wo* ‘give me’, Xuzhou dialect of Zhongyuan Mandarin *ke*⁵⁵ *uo*²¹³ ‘give me’ (Qian Qu, p.c.). Ex.

Mandarin (Qian Qu, p.c.)

gei wo zhanqilai!
 give 1:SG stand.up
 ‘Stand up!’

Xuzhou dialect of Zhongyuan Mandarin (Qian Qu, p.c.)

Ke⁵⁵ uo²¹³ i²¹³ tɛi³⁵ tɛ^{hy}51.
 give 1:SG stand.up
 ‘Stand up!’

This pathway is in need of further research. As far as the data available suggest, the ‘imperative’ in the examples above might be an extra-clausal constituent in the terminology of Dik (1997) or a thetical in the sense of Kaltenböck et al. (2011) and Heine et al. (2013). If this hypothesis is correct, then the development of this ‘imperative’ category would not have been restricted to grammaticalization but rather would have involved cooptation, i.e. a prior shift from a sentence grammar unit to a marker serving specific discourse purposes of speaker–hearer interaction (see Heine 2013; Heine et al. 2017).

GIVE > (6) PASSIVE

Peyraube (2015: 61) observes that in many Sinitic languages, verbs from the lexical domain of giving are often used as passive markers, mentioning languages/dialects such as Wu, Yue, Hakka, Min, and Jianghuai Mandarin. Chappell (2015c: 29) points out that the agent must not be deleted in such passive constructions. The following example using the Mandarin verb *gěi* ‘give’ illustrates this pathway:

Mandarin (Peyraube 2015: 61)

Yú gěi māo chī le.
 fish PASS cat eat ASP
 ‘The fish has been eaten by the cat.’

Outside Sinitic, the pathway has been rarely attested. Colloquial Malay as spoken in northern and western parts of peninsular Malaysia provides an example, where the lexical source item was *bagi* ‘give’ (Yap and Iwasaki 2003; Hilary Chappell, p.c.). Ex.

Kedah Malay (Northern Peninsular Malaysia; Hilary Chappell, p.c.)

Rumah kita habis bagi api jilat.
 house we finish give fire lick
 ‘Our house was completely licked by fire!’

Language contact presumably played an important role in the diffusion of the pathway, in particular in Baba Malay and Singapore Colloquial English (Singlish), where Singapore Hokkien, belonging to the Southern Min branch of Sinitic, may have provided the model of grammaticalization (Bao and Wee 1999; Matthews and Yip 2009; Hilary Chappell, p.c.). Ex.

Baba Malay (Penang, Malacca in Malaysia and Singapore; Bao and Wee 1999: 5; Hilary Chappell, p.c.)

Daging kena anjing makan.

meat give dog eat

‘The meat was eaten by the dog (not intended for dog).’

Singapore Colloquial English (Bao and Wee 1999: 5; Hilary Chappell, p.c.)

John give his boss scold.

‘John was scolded by his boss.’

In many Manchu-Tungusic languages, the same morpheme *-bul-(v)u*, derived from a verb meaning ‘give’, is used to express both causative and passive functions. Ex.

Manchu (Nedjalkov 1993: 194)

(a) *I bata-be va-bu-ha.*
he:NOM enemy-ACC kill-CAUS-PAST
‘He made (somebody) kill the enemy.’

(b) *I bata-de va-bu-ha.*
he:NOM enemy-DAT kill-PASS-PAST
‘He is/was killed (by the enemy).’

According to Wiemer (2011a), GIVE may form a reflexive-permissive passive in West Slavic languages, including Polish and Czech, but these have not yet proceeded to his two final stages of modal and “real” passives.

Finally, Hilary Chappell (p.c.) notes that GIVE-constructions developed into impersonal or agentless passives in certain non-standard German dialects, including Luxembourgish and Moselle Franconian (*Moselfränkisch*) dialects (Glaser 2006; Lenz 2008). These developments differ from the ones to be observed in Sinitic languages in that they can be explained in terms of an initial development of the GIVE-verb into a copular auxiliary use (Lenz 2008). Sinitic GIVE-passives, by contrast, are agentful due to their origin in causative constructions and generally do not allow the agent noun to be omitted.

The pathway is included here on account of its occurrence in a range of different languages. More research is needed on the extent to which the pathway is induced by areal factors (see also Chappell 2015b: 27ff.).

Note that in addition there is a wide range of other verbal sources for passive markers; see COME; EAT; FALL; GET; GO; SEE; SUFFER.

GIVE > (7) PATIENT

Qimen dialect of Hui *fā¹¹* ‘give’ > differential object marker (Chappell 2015c: 22). Chappell and Peyraube (2011: 787) found this pathway to be fairly common in Sinitic languages; for example, in Southwestern Mandarin *gěi* can be found to occur both as a verb meaning ‘give’ and as an object marker. This applies also to the Xiang dialects, where the verb *pa³* ‘give’ also occurs as an object marker (Hilary Chappell, p.c.).

While we have not observed corresponding changes outside Sino-Tibetan, this pathway is included here since there are widely attested grammaticalizations from ‘give’-verbs to recipient case markers (*see* GIVE > RECIPIENT) and from recipient to patient markers (*see* DATIVE > PATIENT). Thus, Chappell documented a pathway from ‘give’ via a dative-beneficiary stage to object marker (Chappell and Peyraube 2011: 787; Chappell 2015c).

GIVE > (8) PERMISSION

Akan *ma* ‘give’, verb > permission marker (Lord et al. 2002: 223–4). Thai *hây* ‘give’, verb > permission marker (Lord et al. 2002: 223). Ex.

Thai (Lord et al. 2002: 223)

thâa chán yàak duu khâw kô ca hây chán duu.
 if I want look he PART ASP give I look
 ‘If I want to look, he will let me look.’

Xuzhou dialect of Zhongyuan Mandarin *ke*⁵⁵ ‘give’, verb > *ke*⁵⁵, permission marker (Qian Qu, p.c.). Ex.

Xuzhou dialect of Zhongyuan Mandarin (Qian Qu, p.c.)

*Ke*⁵⁵ *pu*²¹³ *ke*⁵⁵ *kʰũ*⁵¹.
 give not give look
 ‘Allow me to take a look?’

Akan (Lord et al. 2002: 224)

ma no tena hɔ.
 give it (OBJ) stay there
 ‘Let it stay there.’

This grammaticalization process appears to require another verb following ‘give’ which acts as the main verb, and a context ruling out alternative semantic interpretations. As the Akan example above shows, the object of the ‘give’ verb need not be an animate participant in this language. For more details on this process, see Lord et al. (2002: 223–6). *See also* GIVE > CAUSATIVE.

GIVE > (9) PURPOSE

Akan *ma* ‘give’, verb > marker signalling the goal or purpose for which the previous action was carried out. Ex.

Akan (Lord et al. 2002: 227)

ɔ-bɔɔ no ma ɔ-hwe ase.
 he-struck him give he-fall down
 ‘He struck him so that he fell down.’

Acholi *o-miyo* ‘give’ (third person past form), verb > ‘to cause’, ‘because of’, ‘so that’, result conjunction. Ex.

Acholi (Malandra 1955: 115)

En o-yel-a madaa, omiyo a-goy-e.
 (he 3:SG-annoy-1:SG much give 1:SG-beat-3:SG)
 'He vexed me so much so that I beat him.'

In the Central Sudanic language Kabba, the verb *kàrà* 'give' combines with the purpose marker *tà* to form purpose, resultative, and causative clauses (*tà kàrà*; Moser 2005: 291–3).

Vietnamese *cho* 'give', verb > 'so that', purposive marker (Song 1997a: 333). Khmer *ʔaoy* 'give', verb > 'so that', purposive marker (Song 1997a: 333). Saramaccan CE *dá* (< Portuguese *dar* 'give') 'give', verb > purpose marker (restricted clauses). Ex.

Saramaccan CE (Veenstra 1996: 104)

dí mujée mbéi te dá dí mii bebé.
 DET:SG woman make tea give DET:SG child drink
 'The woman made tea for the child to drink.'

For a detailed discussion of purpose extensions of 'give', see Newman (1996: 171–81, 1997) and Lord et al. (2002: 227–8). A description of the pathway in the Kabba language of the Central African Republic is found in Moser (2005: 291–5). The Acholi example appears to suggest that it is RESULT-clauses, rather than PURPOSE-clauses, that are the primary target of GIVE-verbs. One common source of PURPOSE markers consists of BENEFACTIVE grams. Conceivably, we are dealing here with a more extended chain: GIVE > BENEFACTIVE > PURPOSE; see BENEFACTIVE. A PURPOSE meaning may arise in a context where instead of a nominal complement the verb 'give' takes a verbal complement.

This is another instance of a pathway whereby process verbs give rise to grammatical markers expressing case relations; compare COME FROM; FOLLOW; GO TO; LEAVE; SEE; TAKE.

GIVE > (10) RECIPIENT

Archaic Chinese *yu* 'to give', verb > Medieval Chinese (around the eighth century AD) *yu* 'to', dative (RECIPIENT) preposition, arising in a serial verb construction (Peyraube 1988: 633–40; see also Peyraube 1996: 178–82, 1999: 204; Sun 1996). Early Modern Chinese *yu* 'give', verb > *yu*, dative preposition. Early Modern Chinese *gei/kui/gui/ji* 'give', verbs > *gei/kui/gui/ji*, dative prepositions (Long et al. 2012). In Early Mandarin Chinese, *yu* was replaced by the verb *gei* 'give', which also developed into a benefactive and dative (RECIPIENT) preposition. These stages of development are illustrated here with examples from Modern Mandarin Chinese.

Modern Mandarin Chinese (Sun 1996: 44)

- (a) *ta gei le wo wu-kuai qian.*
 3:SG give ASP 1:SG five CLASS
 'He gave me five dollars.'
- (b) *wo xie le yi-feng xin gei ta.*
 1:SG write ASP one-CLASS letter to him
 'I wrote him a letter.'

Ewe *ná* 'give', verb > 'for', 'to', benefactive, dative preposition. Ex.

Ewe (Heine et al. 1991a: chapter 1)

- (a) *me ná ga kofi.*
 1:SG give money Kofi
 'I gave Kofi money.'
- (b) *É gblɔ e ná m.*
 3:SG say it give me
 'He told it to me.'

Akan *ma* 'give', verb > marker of recipient object, benefactive, dative (Lord et al. 2002: 218). Yoruba *fún* 'give to', verb > 'for', 'to', benefactive, dative preposition (Lord 1989: 92ff.). Engenni *kye* 'give', verb > 'for', 'to', benefactive, dative preposition (Lord 1989: 99ff.). Saramaccan CE *dá* 'give', verb > benefactive, dative marker (Lord 1989: 106). Zande *fu* 'give', verb > (benefactive preposition >) 'for', 'to', dative preposition (Canon and Gore 1926: 37). In the Kabba language of the Central African Republic, the verb *kàrə* 'give' has been grammaticalized to a recipient marker when the preceding verb denotes 'give', 'say', 'ask', 'want', 'tell', 'send', or 'want', but as a benefactive marker after transitive verbs like 'crush', 'find', or 'sift' (Moser 2005: 284).

São Tomense CP *da* 'give', verb > dative marker. Ex.

São Tomense CP (Romaine 1988: 56)

- e fa da ine.*
 he talk give them
 'He talked to them.'

Saramaccan CE *dá* (< Portuguese *dar* 'give') 'give', verb > dative marker. Ex.

Saramaccan CE (Veenstra 1996: 101, 102)

- (a) *mí dá dí miíi móni.*
 1:SG give DET:SG child money
 'It is me that gave money to the child.'
- (b) *de bì táki dá hen táa ...*
 3:PL TNS talk give 3:SG say
 'They told him that ...'

As these examples from Saramaccan CE show, BENEFACTIVE markers may give rise to RECIPIENT markers, for example, when the main verb is an utterance verb, such as ‘say’ or ‘tell’, or a transaction verb, such as ‘sell’. In a number of these examples, we are dealing with intermediate stages of evolution where the relevant marker is still used for BENEFACTIVE senses but has acquired RECIPIENT senses in specific contexts where a BENEFACTIVE interpretation no longer makes sense. Not infrequently, this process is part of a more general chain of grammaticalization: GIVE > BENEFACTIVE > DATIVE; see also Newman (1996; 1997); Lord et al. (2002: 218–19) for more details. This hypothesis is in accordance with that by Lord et al. (2002: 223), who propose the following pathway: ‘give’ + NP > GOAL/BENEFACTIVE > PERSPECTIVE/STANCE. It would seem in fact that what they call “PERSPECTIVE/STANCE” is an experiencer and that there is a further process of grammaticalization which surfaces when the main verb expresses a state rather than an activity, as in the following example from Akan, where (a) illustrates the lexical use of *ma* ‘give’ and (b) that of a PERSPECTIVE/STANCE marker:

Akan (Lord et al. 2002: 218, 222)

- (a) *o-ma-a me akutu.*
 he-give-PAST me orange
 ‘He gave me an orange.’
- (b) *ε-ye den ma me.*
 it-is difficult give me
 ‘It is difficult for me.’

The reason for not including the latter process in this work is that the cross-linguistic data on it are so far not entirely satisfactory.

This is another instance of a pathway whereby process verbs give rise to grammatical markers expressing case relations; compare COME FROM; FOLLOW; GO TO; LEAVE; SEE; TAKE.

GO > (1) ANDATIVE

Mandarin Chinese *qù* ‘go’, verb of motion > *-qù* ‘away from the speaker’, directional marker. Ex.

Mandarin Chinese (Li and Thompson 1981: 59)

- Tā nǎ- qù- le liǎng- běn shū.*
 3:SG bring- go- PFV two- CLASS book
 ‘S/He took (away from the speaker) two books.’

Dulong *dī*⁵³ ‘go, go to’ > *dī*³¹, andative marker (Long et al. 2012). Nohay *bar-* ‘go away’, verb > *bar-*, andative (translocative) marker, e.g. *uš-ïp bar-* ‘to fly away’ (Johanson and Csató 2018: 160).

Proto-Chadic **də* ‘go’, verb > Hona -’*d*, andative (“centrifugal”) extension (Frajzyngier 1987c: 35). Logone *lə* ‘go’, -*li* andative extension (Frajzyngier 1987c: 35). Supyire *syɛ* ‘go’, verb > (1) *sa* ‘go’, defective verb, (2) *sá* andative, auxiliary-like marker (Carlsson 2014: 250). Gurenne *ta* ‘go’, verb > andative auxiliary. Ex.

Gurenne (Rapp 1966: 69f.)

Gulese leta ta bo fo so.
(write letter go give your father)
‘Write a letter to your father.’

Xaracuu *fè* ‘go’, verb > andative (“centrifugal”) directional ‘away’ when used as the second of two verbs in combination (Moyse-Faurie 2018: 289).

A number of instances of this grammaticalization have been reported from pidgin and creole languages. Haitian CF *ale* ‘go’ (< French *aller* ‘go’), verb > andative marker. Ex.

Haitian CF (Boretzky 1983: 174)

Voye msye- a ale.
(send man- DEF go)
‘Send the man away.’

Grand Ronde Chinook Jargon *látwa* ‘go’, verb > *látu* ‘action away from the speaker’ (preceding main verbs); for example, *látuískam* (lit.: ‘go take’) ‘take away from’ (Grant 1996: 236). Negerhollands CD *loop*, *lo(o)* (< Dutch *lopen*) ‘go’, ‘run’, verb > ‘away’, directional (andative) adverb. Ex.

Negerhollands CD (Stolz 1986: 216, 234)

- (a) *Ju lo: afo fa mi.*
(2:SG go in front of 1:SG)
‘You go in front of me.’
- (b) *Am a flig lo mi di flut.*
(3:SG PERF fly away PREP DEF flute)
‘He flew away with the flute.’

For more examples from pidgins and creoles, see Arends, Muysken, and Smith (1995).

This is an instance of a process whereby a verb, on account of some salient semantic property, gives rise to a grammatical marker highlighting that property; compare CROSS; DESCEND; PASS. *See also* ANDATIVE > EVIDENTIAL, DIRECT.

GO > (2) CHANGE-OF-STATE

Early Modern Chinese *qu* ‘go, go to’, verb > *qu*, particle expressing change-of-state (Long et al. 2012). Tatar *kit-* ‘go, leave’ > *kit-*, marker for change-of-state (Long et al. 2012). English *go*, verb > change-of-state marker of limited productivity. Ex.

English

- (a) *He went home.*
 (b) *He went mad.*

Tamil *poo* ‘go’, verb of motion > auxiliary marking a change-of-state. Ex.

Tamil (T. Lehmann 1989: 224)

Paanai uṭai ntū pooy-ir-ru.
 pot break- PARTCP go-PAST-3:NEUT:SG
 ‘The pot got broken.’

Korean *ka-* ‘go’, verb > *-eka-*, change-of-state aspect auxiliary (Rhee 1996, 2016c). In the Syer language of southwestern Burkina Faso, the verb *ke* ‘go’ has acquired uses of a resultative marker (*ke* > *ka(a)*) when combined with stative verbs in the perfective aspect but of an inceptive marker when combined in the imperfective aspect.

GO > (3) DISTAL DEMONSTRATIVE³⁷

Mopun ‘*dì*’ ‘go’, verb > distal demonstrative (Frajzyngier 1987b). !Xun, E2 dialect *tǝ’à* (*tòàh*) ‘go away’, motion verb > *tòàh*, distal demonstrative. Ex.

!Xun, E2 dialect (Köhler 1973b: 48; Heine and König 2015: 156, 241)

dzháú-s-à tòàh
 woman-PL-T DISTAL
 ‘the women there’ / ‘those women’

!Xun, E2 dialect ‘*úú*’ ‘go’ + *tǝ’à* ‘go’ > ‘*úú-tòàh*, remote demonstrative. Ex.

!Xun, E2 dialect (Köhler 1973b: 48; Heine and König 2015: 156, 241)

dzháú- à ’úú-tòàh
 woman-T go- DISTAL
 ‘the woman over there (far away)’

!Xun, W3 dialect *ú* ‘un, W3 dialect here *ú*, go > (3) distal demonstrative marker of distal demonstratives. Ex.

!Xun, W3 (own data)

ts’ū k̄ā ú k̄ā è
 house:c4 c4 go c4 PROX
 ‘that house’

Note that Archaic Chinese *zhi* ‘to go’ has given rise to a proximal demonstrative (‘this’; Yue 1998; Alain Peyraube, p.c.). See further Frajzyngier (1987b; 1995).

³⁷ There is a possible counterexample to this grammaticalization: the Chinese verb *zhi* ‘to go’ has been claimed to be derived from the demonstrative pronoun *zhi* ‘this’ (see Peyraube 1996: 191).

This pathway is suggestive of a process whereby physical motion is used as a structural template to express static location. To use verbs as a source for demonstrative deictics appears in fact to constitute a well-established pathway. Archaic Chinese provides a number of examples. Thus, in the course of the Archaic Chinese history, the following family of processes has been reconstructed: *ci* ‘stop, stop here’ > *ci* ‘here, this’, *zhi* ‘stop’ > *zhi* ‘here, it’, *yi* ‘stop’ > *yi* ‘this’, *ji* ‘approach, come near’ > *ji* ‘this’ (Bo Hong, own data).

It would seem that verbs of motion are not the only verbal source for demonstratives. In the Xaracuu language of New Caledonia, the source appears to have been a verb of static location, namely the locative verb *nöö* ‘be at (a place) momentarily’, which grammaticalized into a distal demonstrative (‘there, away from the speaker and the hearer, but still visible’ (Moyse-Faurie 2018: 288). But perhaps even more commonly, it is postural verbs that may give rise to demonstrative categories. Rosés Labrada (2015; 2016) reports that in the Mako language of Venezuela the body posture verbs *b-* ‘sit’ and *h-* ‘stand’ have grammaticalized, respectively, into markers for proximal and distal demonstratives. Furthermore, in the Siouan language Mandan, the postural verb *hək* ‘stand’ was grammaticalized to the proximal demonstrative *-hək*, e.g. *máta-hək* ‘this river’ (Helmbrecht in prep.). According to Helmbrecht (2017), in Omaha-Ponca, another Siouan language, positional auxiliary verbs grammaticalized into classificatory definite articles; note that definite articles are most commonly derived from demonstrative modifiers (see DEMONSTRATIVE > DEFINITE).

There is an alternative view to the one proposed here, according to which demonstratives are diachronically, so to speak, “primitives of grammaticalization”. On this view, demonstratives may give rise to various kinds of grammatical markers while they themselves cannot be historically derived from other entities like lexical items (see Plank 1979; Diessel 1999b: 150ff.; 2006: 474–5): “If we disregard cases of reinforcement, there is no evidence from any language that demonstratives are historically related to content words; their roots are generally so old that they cannot be traced back to other types of expressions” (Diessel 2006: 475).

Crosslinguistic evidence suggests, however, that this view is in need of reconsideration. Demonstratives such as the ones discussed above cannot only be said to be related to but can also be hypothesized to derive from verbal sources. For example, in the Southeastern !Xun dialects of Namibia and Botswana, the distal demonstrative *tò'à* can be reconstructed back to the Proto-!Xun verb **tu'a* ‘go’ (E1 dialect *tò'ā* ‘go to, arrive at’) added to the head noun by means of the relative clause marker **-a*. Thus, the phrase below from the E1 dialect of Southwestern !Xun can be interpreted

diachronically as ‘oranges which go’ (Heine and König 2015: 156–7, 241).

!Xun, E1 dialect (Heine and König 2015: 156)

n!òh-s-à *tò'à*
orange-PL-REL DISTAL
‘those oranges’

That demonstratives cannot only be derived from verbs but also from locative adverbs is shown in the entries [HERE](#) and [THERE](#).

GO > (4) DURATIVE

Ese'eja *poki-* ‘go’, verb > *-poki-* continuous aspect marker (Vuillermet 2012: 403–4, 480). Yolngu *marritji-* ‘go’, ‘come’, verb > marker of durative aspect when used in conjunction with a main verb (Austin 1998: 32). Wichita *i:ya:* ‘go randomly’ > continuous marker. Ex.

Wichita (Rood 1976: 65)

wit- *i:ya:*
boil- go:randomly
‘be boiling’

Koasati *aíl:yan* ‘go’, verb > continuous marker. Ex.

Koasati (Kimball 1991: 90–1)

ísko- *t* *aíl:ya-* *k* *im-* *cokfolóhli-* *t* ...
drink- CONN go- SS 3:STATS- be:dizzy- CONN
‘He kept on drinking, became dizzy, and ...’

The Turkish continuous marker *-yor* appears to derive from the Old Turkish verb *yorimak* ‘go’, ‘walk’. Ex.

Turkish (anonymous reader; Lewis [1967] 1985: 108–9)

buz *eri-* *yor.*
ice melt- CON
‘The ice is melting.’

Lahu *qay* ‘go’, verb > ‘versatile’ verb having a continuative, inchoative function. Ex.

Lahu (Matisoff 1991: 407)

vəʔ *vəʔ qay*
put:on/wear (wear go)
‘put on’, ‘wear’ ‘goes on wearing’

According to Xiao and McEnery (2004: 227), the directional lexical verb *xiaqu* of Mandarin Chinese, indicating downward movement, is developing into the

marker *-xiaqu* for a continuative aspect. Aranda **ape* ‘go’, verb of motion > *-pe*, durative marker, bound morpheme (Wilkins 1989: 244). Ex.

Aranda (Wilkins 1989: 244)

angke-rre- *angke-rre-pe-rre-*
 ‘speak to each other’ ‘to be continually speaking to each other’

Gwari *lō* ‘to go’, verb > present continuous marker (Heine and Reh 1984: 198). Negerhollands CD *loop*, *lo(o)* (< Dutch *lopen*) ‘go’, ‘run’, motion verb > durative, progressive, habitual auxiliary. Ex.

Negerhollands CD (Stolz 1986: 153, 179)

- (a) *Dat e:nte:n man nā kan lo: apé: am be:*
 (that nobody man NEG can go where 3:SG be)
 ‘so that nobody could go to where she was’
- (b) *Am a ki e:n puši bo*
 (3:SG PERF see a cat on
di hus lo was ši gesé:.
 DEF house DUR wash POSS face)
 ‘He saw a cat that was cleaning its face on the house.’

Tok Pisin PE *igo* (cf. English *go*) ‘go’, verb > continuous aspect marker, emphasizing duration (postverbal). Ex.

Tok Pisin PE (Sankoff 1979: 44–5)

- (a) *ol igo wok finis ...*
 ‘They had gone to work ...’
- (b) *Em isave pilei long das tasol igo igo ...*
 ‘He would keep playing in the dust ...’

This grammaticalization appears to overlap with that of COME > PROGRESSIVE in a number of languages, also being an instance of a more general development whereby process verbs are grammaticalized to auxiliaries denoting tense or aspect functions; compare BEGIN; COME FROM; COME TO; DO; FINISH; KEEP; LEAVE; PUT.

GO > (5) HABITUAL

PROGRESSIVE aspect markers may further develop into habitual aspect markers; hence, GO-verbs may acquire habitual uses. In Djinang, the verb *giri*- ‘go’ appears to have given rise to an habitual auxiliary (Waters 1989: 131–3), and so has the Diyari verb *wapayi* ‘go’ (Austin 1998: 30). Negerhollands CD *loop*, *lo(o)* (< Dutch *lopen*) ‘go’, ‘run’, motion verb > durative, progressive, habitual auxiliary. Compare PROGRESSIVE; SIT.

This grammaticalization appears to be an instance of a more general process whereby process verbs are grammaticalized to auxiliaries denoting tense or

aspect functions; compare BEGIN; COME FROM; COME TO; DO; FINISH; KEEP; LEAVE; PUT.

GO > (6) IMPERATIVE

The following example from the Jingulu language of the Northern Territory of Australia is suggestive of an incipient stage of grammaticalization, where the imperative form *-yirri* (-go:IMP) still expresses physical motion (Mauri and Sansò 2014a: 180). Ex.

Jingulu (Mauri and Sansò 2014a: 180)

ngunu buba miji-yirri.
DEM(N) fire get-go.IMP
'Go get some firewood!'

A fully grammaticalized form is found in the Tetun language of Timor, where the verb *bá* 'go' is used after other verbs in commands or invitations including contexts in which no motion is implied (Mauri and Sansò 2014a: 171). Ex.

Tetun (Mauri and Sansò 2014a: 171)

Imi hán bá.
2:PL eat go
'You (plural) eat up!'

In Vietnamese, the verb *đi* 'go, go ahead' combines with other verbs, including *đi* itself, to form a directive construction where there may be no motion component (Mauri and Sansò 2014a: 171). In Sipakapense Maya, the deictic imperative prefix *j-* is presumably derived from the irregular imperative form of the verb *jat* 'go' (Mauri and Sansò 2014a: 170).

Rama *bang* 'go', verb > first person plural imperative suffix (Craig 1991: 477). Baka *gɔ* 'go' (followed by a verb) > imperative marker. Ex.

Baka (Christian Kilian-Hatz, p.c.)

- (a) *gɔ-ɛ na ja ndɔ!*
go-IMP INF take banana
'Go and fetch bananas!'
- (b) *gɔ ja ndɔ!*
go take banana
'Fetch bananas!'

French *allons* 'we go', 'let us go' has become a first person plural imperative marker (> *anô*, *anu*, *ân*, or *ânu*) in various French-based creoles (see Goodman 1964: 89).

For a worldwide survey, see Mauri and Sansò (2014a), who also provide a reconstruction of this pathway. We side with these authors in that this pathway is somewhat unusual (see also Nicolle 2007). As far as the data available suggest, the 'go' -verb form in at least a number of languages concerned is an extra-clausal constituent in the terminology of Dik (1997)

or an imperative thetical in the sense of Kaltenböck et al. (2011) and Heine et al. (2013). On this hypothesis, the development of this “imperative” category would have involved cooptation, i.e. a shift of a linguistic expression from sentence grammar to a marker serving specific discourse purposes of speaker–hearer interaction, subsequently undergoing grammaticalization (see Heine 2013).

This appears to be a process whereby certain verbs assume an interpersonal function in specific contexts involving directives and related interpersonal functions; compare COME > IMPERATIVE; LEAVE > IMPERATIVE; LEAVE > PERMISSION.

GO > (7) NEW-EVENT

According to this pathway, the deictic movement verbs ‘go’ and/or ‘come’ have in some languages assumed the function of a new-event marker, that is, a grammatical marker expressing a function that can be paraphrased roughly as ‘watch out, now something new is going to happen that is relevant to what follows’, where the new event is expressed by the following verb (Heine 2000a; Luraghi 2017).

In the extinct Hittite language of Anatolia, the verb *pai-* ‘go’ has been grammaticalized into what Luraghi (2017) calls the “the *pai-* plus agreeing verb construction”. The grammaticalized function indicates that the new event is most often distant in time and can, but need not, be controlled by an agent.

Akie *wa*, PL *pa* ‘go’, verb of motion (perfective stem) > *wa*, PL *pa*, auxiliary signalling a new event in narrative discourse (König et al. 2015: 111). Moré *ti* ‘go (to)’, defective verb > ‘and’, conjunction (Alexandre 1953b: 393–4). !Xun, W2 dialect *ú* ‘go’, intransitive motion verb > *ú*, new-event marker when used as the first verb in a series of two verbs (König 2010). Khwe *cii* ‘go’, ‘proceed’, motion verb > new-event marker, see Heine (2000a). Ex.

Khwe (Heine 1997e: 33, 36)

- (a) //é *cií* *nù* //’àè *okà* ...
 I:M:PL reach when home LOC
cií- *á-xu-* *a-tà* //’àè *okà*.
 ‘And when we reached our home, ...’
- (b) *taátenu* *córò-hé* *táá-kho(e)-mà* *ci* *wó-ò-tè* ...
 then monitor-3:F:SG old-man-3:M:SG proceed find-I-PRES
 ‘Then an old man found a monitor lizard ...’

In the Kera language of Chad and Cameroon, the deictic movement verb *dé* ‘go’ also occurs in contexts where it does not express motion and does not take direct complements but rather heralds a new event as relevant for the subsequent discourse (Ebert 1987). In the Syer language of southwestern Burkina Faso, the verb *ke* ‘go’ appears to have been grammaticalized to a marker for

foregrounding or introducing a new event ($k\epsilon > ka(a)$) (Dombrowsky-Hahn 2012: 107).

Devos and van der Wal (2010; 2014) describe a pathway in the Bantu language Shangaci where the verb *-entta* ‘go’ has given rise to a verb focus marker. Ex.

Shangaci (Devos and van der Wal 2010: 46, 53)

- (a) *mwaw-éntt-é* *vaai* *taána?*
 2:PL:PAST-go-PFV where yesterday
 ‘Where did you (PL) go yesterday?’
- (b) *miíyó* *koów-áampel-e* *okhuruúpa* *weéyo* *w-entt’*
 I 1:SG:PAST:OBJ:2:SG-tell-PFV to:pull:weed you 2:SG-go
orézuúla *miyani* *z-áawe*.
 to:sweep weed c4-POSS
 ‘I told you to pull out the weed but you just swept it.’

Korean *ka-* ‘go’, verb > *-eka-*, continuative aspect (Rhee 2016c).

New-event markers introduce new information and as such they have been described as involving verbal focus. It would therefore seem, for example, that the Spanish auxiliary *ir* ‘go’, which has been described as a scalar focus marker in some of its uses (Bravo 2014: 203), also qualifies as a new-event marker.

This grammaticalization appears to be an instance of a more general process whereby deictic process verbs for ‘come’ and ‘go’ give rise to markers of text continuity, being grammaticalized into markers used to establish cohesion in narrative discourse. For a more detailed account of some aspects of this process, see Heine (2000a); Bourdin (2008); Luraghi (2017); compare COME > NEW EVENT.

GO > (8) PASSIVE

In Old Italian, a passive evolved in the Tuscan area based on the verb *andare* ‘go’. First attested in the fourteenth century, its occurrences were few in the fifteenth century (Mocciaro 2014: 60). In Contemporary Italian, this passive, which does not imply an agent, differs from the *essere-* and *venire-* passives in a number of ways (see Mocciaro 2014: 60). Ex.

Italian (Mocciaro 2014: 60)

- I* *documenti* *andarono* *smarriti*.
 ART documents go:PAST:3:PL mislay:PP:PL
 ‘The documents were mislaid.’

For a more detailed reconstruction of passive and passive-like constructions based on the verb ‘go’ in the history of Italian, see Sansò and Giacalone Ramat (2016). These authors also provide evidence for the pathway GO > PASSIVE in Indo-Aryan languages. The ‘go’-verb of late Apabhramsa (twelfth century) of the Middle Indo-Aryan period acquired the function of an abilitative passive marker. Ex.

Twelfth-century Apabhramsa (Sansò and Giacalone Ramat 2016: 17)

kaha maṁ dīṭṭhau jāisai ehu.
 How I:INSTR see:PFV:PTCPL go:FUT:3:SG this
 ‘How will I be able to see this city?’ (lit.: how will this [city] be seen by me?)

The Maithili language of Nepal uses the verb *ja* ‘go’ as a passive auxiliary (Giacalone Ramat and Sansò 2014: 35). In Marathi of western India, the verbs for both ‘come’ and ‘go’ can combine with the past participle to form passive constructions with slight differences in meaning (Giacalone Ramat and Sansò 2014: 39). In a similar fashion: Hindi *jana* ‘go’, verb > abilitative and customary/deontic passive marker; Gujarati, Punjabi, and Rajasthani *ja*-‘go’, verb > abilitative passive marker (Sansò and Giacalone Ramat 2016: 14–15).

For an in-depth analysis of this pathway see Sansò and Giacalone Ramat (2016); concerning the role of deontic modality in this development, see Bourdin (2014).

There is a range of verbs which provide the source for passive constructions, typically via auxiliation of the GO-verb (see Haspelmath 1990: 29; Wiemer 2011a: 537). Compare COME > PASSIVE; EAT; FALL; GET; GIVE; SEE; SUFFER > PASSIVE.

GO > (9) PROGRESSIVE

In the Wintu language of northern California, the verb of directed motion *har* ‘go’ is the source of a progressive aspect marker (Mithun 2018: 313–14). Djinang *kiri*- ‘go’, verb > progressive aspect auxiliary (Waters 1989: 130–2). Maricopa *yaa-k* ‘go’, verb > progressive auxiliary. Ex.

Maricopa (Gordon 1986: 219)

Nyaa vesh- k vny- yaa- m- i.
 I run- ss DEM- go- DIR- VINC
 ‘I am running.’

Spanish *andar*, *ir* ‘go’ + present participle > progressive markers (Bybee and Dahl 1989: 58, 79). The Turkish continuous marker *-yor* appears to derive from the Old Turkish verb *yorimak* ‘go’, ‘walk’. Ex.

Turkish (anonymous reader; Lewis [1967] 1985: 108–9)

Buz eri- yor.
 ice melt- CON
 ‘The ice is melting.’

Tibetan *tʂo*¹² ‘go’, verb > *tʂo*¹², continuous marker (Long et al. 2012). Korean *ka*- ‘go’, verb > *-eka-*, continuative aspect (Rhee 1996; 2016c). Tarahumara verb + *eyéna* ‘go’ > progressive (Bybee and Dahl 1989: 58). Gwari *lō* ‘to go’, verb > present continuous marker (Heine and Reh 1984: 198). Negerhollands

CD *loop*, *lo(o)* (< Dutch *lopen*) ‘go’, ‘run’, motion verb > durative, progressive, habitual auxiliary. Ex.

Negerhollands CD (Stolz 1986: 153, 179)

- (a) *Dat e:nte:n man nā kan lo: apé: am be:*
 (that nobody man NEG can go where 3:SG be)
 ‘so that nobody could go to where she was’
- (b) *am a ki e:n puūi bo*
 (3:SG PERF see a cat on
dī hus lo was šī gesé:.
 DEF house DUR wash POSS face)
 ‘He saw a cat that was cleaning its face on the house.’

This grammaticalization appears to overlap with that of COME > DURATIVE in a number of languages. It is presumably an instance of a more general process whereby process verbs are grammaticalized to auxiliaries denoting tense or aspect functions; compare BEGIN; COME FROM; COME TO; DO; FINISH; KEEP; LEAVE; PUT.

‘Go down, to’, see DESCEND

GO TO > (1) ALLATIVE

The conceptual label ‘GO TO’ stands for ‘go’-verbs expressing goal-directed movement. Archaic Chinese *yu* ‘go to’, verb > *yu* ‘to’, ‘at’ (Alain Peyraube, p.c.).

Early Modern Chinese *qu* ‘go, go to’, verb > *qu* ‘to, towards’, directional preposition (Long et al. 2012). Mandarin Chinese *cháo* ‘go toward’, verb > *cháo* ‘to’, ‘towards’, allative preposition. Ex.

Mandarin Chinese (Hagège 1975: 97)

women fēi yībān de cháozhe shíyànsuǒ pao qù.
 we fly like ADV going:towards lab run DIR
 ‘We rushed (lit.: ‘ran as if flying’) toward the lab.’

Ute *-kwa* ‘go to’, defective verb > *-kwa* ‘to’, case suffix (Givón 2006: 24). Rama *ba(ng)* ‘go’, verb > ‘goal’, ‘target’ (Craig 1991: 461). Ewe *yi* ‘go’, verb > ‘to’, allative coverb. Ex.

Ewe (own data)

- (a) *é-yi afé.*
 3:SG-go home
 ‘She went home.’
- (b) *me-kplɔ e yi afé.*
 1:SG-accompany 3:SG:OBJ go home
 ‘I escorted him home.’

|Xam *lla* ‘go’, ‘run’, verb > *la*, allative preposition. Ex.

|Xam (Bleek 1956: 512–13)

- (a) *ŋ //a ha to:i.*
 (1:SG go DEM ostrich)
 ‘I go to that ostrich.’
- (b) *Ha !nerri:ja //a: olifantsklu:f.*
 (3:SG drive go Oliphantskloof)
 ‘He drives away to Oliphantskloof.’

||Ani *kûn-à-nà* ‘going (to)’, verb form > ‘towards’, ‘until’, preposition (Heine 1999: 45). Fa d’Ambu *ba* ‘go to’ > *ba* ‘to’. Ex.

Fa d’Ambu CP (Post 1992: 157)

wan namin zugá wan budu ba zinál.
 ART child throw ART stone go window
 ‘The child threw a stone at the window.’

Compare Aristar (1991; 1999). This is an instance of a process whereby process verbs, on account of some salient semantic property, give rise to grammatical markers expressing case relations (Heine 2011c); compare COME FROM; FOLLOW; GIVE; LEAVE; SEE; TAKE.

GO TO > (2) FUTURE

The conceptual label ‘GO TO’ stands for ‘go’-verbs expressing goal-directed movement. Early Modern Chinese *qu* ‘go, go to’, verb > *qu*, particle for future tense (Long et al. 2012). English *be going to*, verb form > future tense marker. French *aller à* ‘go to’, verb > *aller* (+ verb in the infinitive), future tense marker. Bari *tu* ‘go’, verb > future marker. Ex.

Bari (Spagnolo 1933: 105)

Nan tu kɔn.
 (I go do)
 ‘I am going to do.’ (Determinative future)

Sotho *-ěa* ‘go (to)’, verb > *-ea-*, immediate future tense prefix. Ex.

Sotho (Doke and Mofokeng [1957] 1985: 205)

ke-ěa-rèka
 (1:SG-go-buy)
 ‘I am about to buy. / ‘I am going to buy.’ / ‘I shall buy.’

Zulu *-ya* ‘go’, verb > *-ya-*, remote future marker. Ex.

Zulu (Mkhatshwa 1991: 97)

- (a) *Ba- ya e- Goli.*
 (3:PL- go LOC- Johannesburg)
 ‘They are going to Johannesburg (eGoli).’

- (b) *Ba- ya- ku- fika.*
 (3:PL- FUT- INF- arrive)
 ‘They will arrive.’

Margi *rà (rá)* ‘to go’, verb > future tense marker. Ex.

Margi (Hoffmann 1963: 212)

Nì àrá wì.
 (1:SG go run)
 ‘I shall run.’

Bassa *mu* ‘go’, verb > future tense marker. Dewoin *mu* ‘go’, verb > *mu ... mu*, future tense marker. Tepo *mu* ‘go’, verb > future tense marker. Krahn *mú* ‘go’, verb > future tense marker. Klao *mu* ‘go’, verb > future tense marker (these examples are all from Marchese 1986: 74). Ex.

Klao (Marchese 1986: 74)

- (a) *ɔ̃ mū nī tó.*
 he:IMPERF go LOC store
 ‘He is going to the store.’
 (b) *ɔ̃ m̃ nī kpa.*
 he:IMPERF AUX water hit
 ‘He will swim.’

Igbo *gà* ‘go’, verb > future tense marker. Ex.

Igbo (Marchese 1986: 110)

ó gà àbyá.
 he go come:NOMIN
 ‘He’s going to come.’

Teso *a-losit* (INF-go) ‘go’, verb > future marker (Hilders and Lawrance 1956: 11f.). Ecuadorian Quechua *ri-* ‘go’, verb > future tense marker. Ex.

Ecuadorian Quechua (Marchese 1986: 111)

puñu-k ri- ni.
 sleep-NOMIN go- 1:SG
 ‘I am going to sleep.’

Tzotzil *ba(t)* ‘go’, verb (when used in the incomplete aspect) > future tense marker. Ex.

Tzotzil (Haviland 1991: 13)

j-tak ta k’anele, yu’un ch-ba tal-uk.
 1:ERG-send PREP wanting because INCPL-go come-SUBJUNCT(:3:ABS)
 ‘However much [liquor] I send for, it’s going to come.’

Tamil *poo* ‘go’, verb of motion > auxiliary marking future tense. Ex.

Tamil (T. Lehmann 1989: 217)

kumaar oru viiṭu kaṭṭ- a.p poo- kiṭ-aan.
 Kumar a house build- INF go- PRES-3:M:SG
 'Kumar is going to build a house.'

In Basque, *joan* 'go' combines with the allative case marker (in *-ra*) of the gerund (in *-tze* or *-te*) of a verb to express future tense. Ex.

Basque (anonymous reader)

Kantatzera noa.
kanta- tze- ra n-a-oa.
 sing- GER- ALL 1:SG:ABS-PRES-GO
 'I'm going to sing.'

Instances of this grammaticalization can be found some way or other in perhaps more than half of all pidgins and creoles (see Goodman 1964: 86; Boretzky 1983: 121; Mufwene 1996 for some examples). Ex.

Krio CE (Marchese 1986: 111)

wi go tray fo pus di trak.
 (we FUT try to push the truck)
 'We will try to push the truck.'

Negerhollands CD *loop*, *lo(o)* (< Dutch *lopen*) 'go', 'run', motion verb > *lo(o)*, near future auxiliary. Ex.

Negerhollands CD (Stolz 1986: 164, 166)

- (a) *Astu aná:nši a lo a hus...*
 (after spider PERF go to house)
 'After the spider had gone home. ...'
 (b) *Wel, am lo: ma: e:n gunggu ba:l.*
 (INTJ 3:SG FUT make a big ball)
 'Well, he's (soon) going to give a big ball.'

French (*il*) *va* '(he) goes' > Haitian CF *a-*, *ava-*, *va-*, future tense marker. Ex.

Haitian CF (Marchese 1986: 111)

Li va vini.
 he go come
 'He will come.'

For the grammaticalization of 'go to'-futures in Semitic languages, see Rubin (2005: 35–6).

See Ultan (1978a); Fleischman (1982a; 1982b; 1983); Heine and Reh (1984); Bybee et al. (1991) for more details on this process. For a cognitive interpretation of the process, see Emanatian (1992). For a collostructural reconstruction of the Dutch *gaan*-future and the English *be going to*-future, see Hilpert (2008).

There is also evidence for a pathway from motion to future tense in first language acquisition (Diessel 2011: 138–9). Additional support comes from American Sign Language (ASL), where Janzen and Shaffer (2002) reconstruct the following development: gesture ‘to leave, go’ > lexical verb ‘to go’ > future tense marker.

This grammaticalization appears to be an instance of a more general development whereby process verbs are grammaticalized to markers for tense or aspect functions; compare COME TO; DO; FINISH; KEEP; LEAVE.

GO TO > (3) PURPOSE

The conceptual label ‘GO TO’ stands for ‘go’-verbs expressing goal-directed movement. In Modern Chinese, the verb *qu* ‘go, go to’ is used in a “VP-*qu*” construction to indicate purpose (Long et al. 2012). Tepo **mu* ‘go’, verb > *mú*, purpose clause marker. Ex.

Tepo (Marchese 1986: 143)

ɔ dé le ɔ mú ó yé.
he come LOC he AUX him see
‘He came in order to see him.’

Cedepo **mu* ‘go (IMPERF)’, verb > *mu*, purpose clause marker. Ex.

Cedepo (Marchese 1986: 143)

ɔ mí tulubɔ mú ma ɔ mí kokwa nú.
he go:IMPERF Monrovia go NOMIN he AUX work do
‘He’s going to Monrovia in order to work.’

Bakwé **mɔ* ‘go’, verb > *mɔ*, purpose clause marker. Ex.

Bakwé (Marchese 1986: 143)

A nye Dali monii ɔ mɔ na lõv sù.
I ce Dali money he AUX my cloth buy
‘I gave Dali money so he would buy my cloth.’

Shona *ku-enda* (INF-go) ‘to go’, verb > (consecutive, finality >) -*ndo-*, purpose marker. Ex.

Shona (Hannan 1987: 158; O’Neil 1935: 170)

- (a) *va-enda ku-tsime*.
(3:SG:PERF- go LOC- well)
‘She has gone to the well.’
- (b) *aka-enda ku-ndo- tsvaga chokudya*.
3:SG:PAST- go INF- go- search food
‘He went to look for some food.’

In the nearly extinct Nlɪŋ (N/uu) language of South Africa, the verb *l'aa* 'go' is used to point to purposive or intentional motion when used as the first in a series of two verbs (Ernszt 2012: 123).

Rama *bang* 'go', verb > *-bang*, subordinating conjunction of goal, purpose. Ex.

Rama (Craig 1991: 457)

tiiskama ni-sung-bang taak-i.
 baby 1:SG-see-SUB go-TNS
 'I am going in order to see/look at the baby.'

Ngbaka Ma'Bo *non* 'go to', verb > *non-*, purpose marker. Ex.

Ngbaka Ma'Bo (Thomas 1970: 179)

ʔó nō-lí, nō-se ngó gbó. ...
 they go-ACTU go-draw water all
 'They go in order to draw water. ...'

Fa d'Ambu CP *ba* 'go to', verb (> allative preposition) > '(in order) to', purpose marker. Ex.

Fa d'Ambu CP (Post 1992: 153)

e sé ku navi ba piska.
 3:SG go:out with boat go fish
 'He has left by boat to fish.'

Krio CE *gó* 'go', verb > purpose complementizer. Ex.

Krio CE (Rettler 1991: 144)

le wi gó gó si am.
 (let us go PURP see her/him)
 'Let's go see her/him.'

The verb *la* (variant *le*) 'go' of the Loni language of Papua New Guinea has not only developed into a purpose marker but is also used for result, instrument, and manner complements (Hamel 1993: 118; Moyse-Faurie 2018: 292).

In creole languages, GO-verbs constitute a common source for PURPOSE markers. Such markers are said to express "realized intention" or "speaker determination"; see Bickerton (1981) and Rettler (1991) for contrasting views on the function of these markers.

This is an instance of a development whereby process verbs, on account of some salient semantic property, give rise to grammatical markers expressing case relations; compare COME FROM; FOLLOW; GIVE; LEAVE; SEE; TAKE.

GOD > INTERJECTION

Ik *nakūji*- 'god, God', noun > *nakūj* 'God!', interjection expressing strong emotion (Schrock 2014: 459, 662). Hausa *Allàh* 'God', noun > *Allàh?* 'Is that so?', *Allàh wadai* 'God damn!', exclamations (Newman 2000: 176).

Italian *Oddio!* (Silvia Luraghi, p.c.), English *God*, noun > *God Almighty!*, *Oh God!*, interjections. German *Gott* 'God', noun > *Mein Gott!* ('My God!'), interjection. French *dieu* 'God', noun > *Grand Dieu!* ('Great God!'), interjection.

An interesting development has been observed in the Chadic language Lele (Frajzyngier 1996b: 81–3). The noun *àlà* 'God' (borrowed from Arabic *Allah* 'God'), came to be coopted as an interjection (exclamation marker of surprise). But it has been further grammaticalized as a marker of an unexpected proposition and in certain contexts as an adversative conjunction ('but'). Such contexts involve situations where in a sequence of two clauses the second clause is interpreted as the unexpected consequence or outcome of the first clause. Ex.

Lele (Frajzyngier 1996b: 82; see also Heine and Kuteva 2007: 247)

Ī-jè tòb kámyà àlà né-Ī hómyà.
 1:SG-HAB like milk but make-1:SG sick
 'I like milk but it makes me sick.'

The present pathway cannot be described exhaustively in terms of grammaticalization. As argued in Heine et al. (2013; 2017), it also involves cooptation, a discourse strategy whereby a unit of sentence grammar is deployed for specific discourse purposes such as expressing functions of text organization, attitudes of the speaker, and/or speaker-hearer interaction. In the present case, this unit is a noun phrase deployed for expressing attitudes of the speaker. Whereas grammaticalization typically leads to semantic and morphosyntactic integration, cooptation has the opposite effect, that is, the unit is semantically and morphosyntactically unattached, frequently also being prosodically marked off. Thus, unlike most of the other data discussed in this book, an evolution of this kind is more complex, being the result of cooptation followed by grammaticalization (Heine et al. 2017).

See also MAN > INTERJECTION; NOW > DISCOURSE MARKER; RIGHT > DISCOURSE MARKER; SO > DISCOURSE MARKER; THEN > DISCOURSE MARKER; WELL > DISCOURSE MARKER.

GOOD ('be good') > D-POSSIBILITY (Permission)

Rather than a lexical item 'good', it is typically a clausal or adverbial expression having '(be) good' as its semantic core in constructions with a complement clause or a conditional clause that may develop into an expression for

permission. Thus, in the Tepehuán language of northern Mexico, the expression *jixbai' na* 'it is good that' has acquired a permission use, as well as other modal uses (Willett 1991: 176–7). Paiwan (of Taiwan), *nanguaq* 'good' > 'may', permission (Egli 1990: 305).

In the Biniñ Gun-Wok language of northern Australia, the adverb *kamak* 'good, OK' appears to have given rise to a marker for permission ('may') (Evans 2003: 367; 557). Ex.

Biniñ Gun-Wok (Evans 2003: 367, 557)

- (a) *Kodjok* *na-mak*.
 Kodjok M-good
 'Kodjok's a good/handsome person.'
- (b) *Wamud, kamak ngani-re gu-mekke?*
 Wamud OK 1:UA-go:NP LOC-DEM
 'Wamud, may we two to go there?'

Japanese *-te=mo* i.i, conditional concessive + 'good' > marker of permission.
See also PI-POSSIBILITY > D-POSSIBILITY. *See also* WELL.

'Ground', *see* EARTH

'Guts', *see* BOWELS

H

HAND (body part) > (1) AGENT

Coptic *hiṯn-* 'on the hand' > 'through', marker of agents in passive constructions. Ex.

Coptic (Stolz 1992a: 31)

- | | | | |
|-------------------------------------|-----------------|-------------|-------------------------|
| <i>au-sōbe</i> | <i>ṗm-mo-f</i> | <i>ebol</i> | <i>hiṯn-ṗm-magos</i> . |
| 3:PL-deceive | in-place-3:M:SG | through | through-DEF:PL-magician |
| 'He was deceived by the magicians.' | | | |

Bambara and other Manding varieties *bóló* 'hand, arm', noun > *bóló*, postposition marking the agent in passive constructions (Creissels in prep.b).

Zande *bé* 'arm', 'hand', *be* 'in possession of' > *be* 'through', 'by', agent marker. Ex.

Zande (Canon and Gore [1931] 1952: 16–17)

- (a) *Si be ko*.
 'He has it.'
- (b) *Si ye be da?*
 'Through whom has it come?'

More research is needed on the exact nature and the genetic and areal distribution of this process, which might be the result of a metonymic transfer, whereby the human hand is used to refer to the person as a whole.

HAND (body part) > (2) FIVE

Teso *a-kan* ‘hand’, noun > *akañ* ‘five’, numeral (Kitching 1915: 101, 104). Turkana *a-kànⁱ* ‘hand’, ‘arm’, noun > *ḡa-kànⁱ* ‘five’ (Dimmendaal 1983: 237, 303). Aztec *mā-ītl* ‘hand’ + *cui* ‘take’ > *mācuilli* (lit.: ‘hand-taking’) ‘five’ (Stolz 1990: 10). Warao *moho basi* ‘the extended hand’ (lit.: ‘hand flat’) > ‘five’, numeral (see Romero-Figeroa 1997: 55). Hixkaryana *kamori* ‘our (INCL) hand(s)’ > *kamori i rakayo me* (lit.: our (INCL) hand(s) – divided/part/half – DENOMINALIZER) ‘five’, numeral (Derbyshire 1985a: 11).

Nouns for ‘hand’ probably provide the most widespread source for numerals for ‘five’ in the languages of the world (see Heine 1997b). This appears to be an instance of a process whereby a noun, on account of some salient semantic property (in this case, the presence of five fingers), gives rise to a more grammatical word (in this case a numeral) highlighting that property.

HAND (body part) > (3) LOCATIVE

Estonian *käsi* ‘hand’, *käes* ‘in the hand’ > ‘in’, ‘at’; *käest* ‘out of the hand’ > ‘from’; *kätte* ‘into the hand’, ‘into’, ‘at’. Ex.

Estonian (Stolz 1992a: 23)

päike- se kä- tte pane- ma
sun- GEN hand- ILL put- INF
‘to place into the sun’

Coptic *toot-* ‘hand’, *n-toot-* ‘in the hand of’ > ‘away from’; *ha-toot-* ‘under the hand of’ > ‘at’; *hi-toot-* ‘on the hand of’ > ‘through’ (Stolz 1992a: 23). Mano *k’lè* ‘hand’, noun > ‘in’, postposition (Becker-Donner 1965: 23).

According to Coupe (2018: 203), Proto-Tibeto-Burman **lak* ‘arm, hand’ was grammaticalized to a relational marker (*-lāk*) expressing ‘terminal part in space’ and ‘terminal part in time’ in the Mongsen Ao language of northeast India.

This grammaticalization may be an instance of a more general process whereby certain body parts, on account of their relative location or their function, are used as structural templates to express location; *see also* BACK; BELLY; BUTTOCKS; EYE; FACE; FLANK; HEAD; NECK.

HAND (body part) > (4) H-POSSESSIVE³⁸

Ancient Egyptian *m-^c. i* (‘in my hand’) ‘in the hand’ > ‘in the possession (of)’, ‘in charge of’, preposition (Gardiner 1957: 132). Akkadian *qātum* ‘hand’ > *ina qāti* ‘in the possession of’ (Rubin 2005: 47).

³⁸ H-POSSESSIVE stands for a marker of predicative possession expressed, for example, in English by *have*.

Kono *bóó* ‘hand’, ‘arm’, noun > postposition, possessive marker. Ex.

Kono (Donald A. Lessau, p.c.)

mótó nì wán kómbá bóó
car:DET COP:PAST EMPH Komba (hand)
‘Komba had in fact a car.’

Bambara *bólo* ‘hand’, noun > marker of ‘have’-possession. Ex.

Bambara (Kastenholz 1989: 58)

dúmunifən té à dénw bólo.
(food COP:NEG 3:SG children hand)
‘His children have nothing to eat/have no food.’

Ewe *le ame así me* ‘be in one’s hand’ > *le ame así* (be person hand) ‘have’, ‘own’, ‘possess’. Ex.

Ewe

- (a) *ga le así- nye me.*
money be hand- my in
‘Money is in my hand.’
(b) *ga le así- nye.*
money be hand- my
‘I have money.’

Zande *bé* ‘arm’, ‘hand’, noun > *be*, possessive marker. Ex.

Zande (Canon and Gore [1931] 1952: 17)

- (a) *be kumba*
(hand man)
‘the man’s hand’
(b) *Wene bambu(du) be re.*
‘I have a good house.’

It would seem that we are dealing with a metaphorical process whereby the phrase ‘in X’s hand’ serves as a vehicle to express the notion ‘in X’s possession’ (see Heine 1997a); compare HOME.

‘Have’, see H-POSSESSIVE

HEAD (body part) > (1) FRONT

Maasai *en-dukúya* (F:SG-head) ‘head’, noun > *dokóya* ‘in front’, ‘ahead’, adverb (Tucker and Mpaayei 1955: 248). Alamblak *měfha* ‘head’, noun > ‘front’, positional word used uniquely for canoes (Bruce 1984: 85). Compare English *ahead*, French *à la tête* (at the head) ‘in front’.

Nouns for ‘head’ provide worldwide the most common source for UP terms (see HEAD > UP). But there are also a number of languages where ‘head’ has given rise to FRONT markers: according to Heine (1997b: 126), out of forty-six African languages that have grammaticalized a noun for ‘head’ to a spatial

gram, six have developed a FRONT term. This appears to be an instance of a more general process whereby certain body parts, on account of their relative location, are used as structural templates to express deictic location (Heine 2011c); *see also* BACK; BELLY; BUTTOCKS; EYE; FACE; FLANK; HEART; NECK.

HEAD (body part) > (2) INTENSIFIER

Fulfulde *hōre*, PL *ko'e* 'head', (*bē*) *hōre* '(with) one's head' > intensifier ('reflexive pronoun'), used to strengthen or emphasize the identity of the concept concerned. Ex.

Fulfulde (Klingenheben 1963: 141–2)

<i>mīn</i>	<i>bē</i>	<i>hōre</i>	<i>'am</i>	<i>kambe</i>	<i>bē</i>	<i>ko'e</i>	<i>maḥbe</i>
(I	with	head)		(they	with	heads)	
'I myself'				'they themselves'			

Hausa *kāi* 'head' + possessive suffix, preceded by an independent personal pronoun > 'self', intensifier pronoun. Ex.

Hausa (Newman 2000: 527)

<i>ita</i>	<i>kāntà</i>	<i>tàurārwā</i>	<i>cē.</i>
(she	head:of:3	star	is:F)
'She herself is a star.'			

Margi *kār* 'head', noun > intensifier ('emphatic reflexive pronoun').

Margi (Hoffmann 1963: 105)

<i>nì</i>	<i>dá</i>	<i>kār-</i>	<i>dā</i>
I	with	head-	my
'I myself'			

In addition, Moravcsik (1972: 272) mentions Amharic, Tigrinya, Kanuri, and Haitian CF as languages showing this grammaticalization. See also Heine (2000b) and Schladt (2000), König and Siemund (2000) for more details. Compare BODY; OWNER.

HEAD (body part) > (3) MIDDLE³⁹

Margi *kār* 'head', noun > middle marker (Hoffmann 1963: 105). Lele *cà* 'head', noun > middle marker (Frajzyngier 1997b: 17).

Nouns for 'head' constitute one of the main sources for reflexive markers, and the latter tend to give rise to middle markers; hence, the present case appears to be part of a more general grammaticalization chain: HEAD > REFLEXIVE > MIDDLE; see Kemmer (1993), Heine (2000b), and Schladt (2000) for more details; *see also* BODY; HEAD > REFLEXIVE.

³⁹ The notion "middle" is semantically complex, and it remains unclear whether we are really dealing with a distinct grammatical function.

HEAD (body part) > (4) REFLEXIVE

Fulfulde *hōre* ‘head’, noun > reflexive marker. Ex.

Fulfulde (Klingenheben 1963: 141)

‘o ɣari hōre māko.

he killed head his

‘He killed himself.’

Hausa *kāi* ‘head’, noun > reflexive marker. Ex.

Hausa (Kraft and Kirk-Greene 1973: 225, 231; Jaggat 1997)

Sun kashè kânsù.

(they kill head:of:3:PL)

‘They have committed suicide.’ (‘They have killed themselves’; lit.: ‘They killed their head.’)

Mina *tàlán* ‘head’, noun > reflexive marker (Frajzyngier 1997b: 19). Pero *kó* ‘head’, noun > reflexive marker (Frajzyngier 1989: 183). Georgian *tavi* ‘head’, noun > reflexive marker. Abkhaz *-xà* ‘head’, noun > reflexive marker. Abaza *c-* ‘head’ > reflexive marker (Schladt 2000: 108). Mordvinian *prä* ‘head’, noun > reflexive marker; for example, *läcems prä* ‘shoot oneself’ (Haspelmath 1990: 44).

In Basque, reflexives are formed by combining a suitable intensifier genitive, such as *neure* ‘my own’, with *buru* ‘head’ plus the article *-a*. Ex.

Basque (anonymous reader; Saltarelli 1988: 104ff.)

Jon- ek bere buru- a hil z-ue-n.

John- ERG his:own head- DET kill PAST-AUX-PAST

‘John killed himself.’

Rubin (2005: 20) lists the following Semitic languages that appear to exhibit the ‘head’-pathway: Gə’əz (*rəš-*), Amharic (*ras-*), Tigre (*ra’as-*), Tigrinya (*rəš-*), Gafat (*dəma-*), and Akkadian (mainly Mari) (*qaqqad-*).

In a survey of roughly 150 languages, Schladt (2000: 112) found that nouns for ‘head’ form one of the major sources for reflexive markers. This grammaticalization is discussed in Heine (2000b) and Schladt (2000). *See also* INTENSIFIER; compare BODY; OWNER.

HEAD (body part) > (5) UP

Lianzhou (West Bank) dialect of Chinese *nɔ⁵⁵ tɕ³³* (‘head’ + ‘top’), noun > *nɔ⁵⁵ tɕ³³* ‘up’, locative (Long et al. 2012). Yudu dialect of Gan *nɔ* ‘head’, noun > *nɔ* ‘up’, locative (Long et al. 2012).

Adyghe *she* ‘head, top’, nominal > *she-de-*, *she-rə-*, *she-šə-* ‘over the (top of the) landmark’, locative preverb (Arkadiev and Maisak 2018:). Shona *musoro* ‘head’, noun > *pamusoro pa* (lit.: ‘at head of’) ‘on top of’, ‘above’, ‘on account of’, ‘about’. Ex.

Shona (O'Neil 1935)

- (a) *ha-a-na* *musoro*.
 NEG-3:SG-COM head
 'He is not clever.' (lit.: 'He has no head.')
- (b) *pa-ne gondo pa- msoro pe- gomo irero*.
 (ADE-COM eagle ADE- head ADE- c5:hill c5:DEM)
 'There is an eagle above that hill.'

Zande *ri* 'head', 'roof', noun > *ri* 'on top of', 'above', 'over', preposition (Canon and Gore [1931] 1952: 123). Bambara and other Manding varieties *kũn* 'head', noun > *kũn* 'on', postposition (Creissels in prep.b). Kono *kùn* 'head', *kùmà* (< *kùn* + *má* 'head on') > *kùmà* 'over', 'on top'. Ex.

Kono (Donald A. Lessau, p.c.)

- (a) *í kùné kàmà?*
 2:SG head:DET How
 'How is your head?'
- (b) *éé sù-5 sòó kùmà*.
 3:SG:TAM sit-TAM horse on:top
 'He is sitting on a horse.'

Baka *njònjò* 'head', 'roof', alienable noun > 'upward'. Ex.

Baka (Brisson and Boursier 1979: 363)

- (a) *njò lè bà kè*
 head my ASP ache
 'I have headache.'
- (b) *ma à dòto à de-ngo, ngamò mo ò ʔo*
 1:SG ASP remain LOC side-river 2:SG:EMPH 2:SG NAR ascend
a njònjò ná.
 LOC head ART
 'I remain near the river; you go up.'

Moré *zugu* 'head', relational noun > 'on', 'over', postposition. Ex.

Moré (Alexandre 1953b: 501)

- a bẽ tẽg zugu*.
 (he be tree on)
 'He is on the tree.'

Gimira *deb^l* 'head', noun > *de^lbm⁵* postposition ('head'-case marker) 'on' (Breeze 1990: 38). Supyire *junjo* 'head', noun > 'on top of', postposition (Carlson 1991: 205). Welsh *pen* 'head', 'end', 'tip', 'mouth of a river', noun > *ymhen* (*yn* + *pen*) 'at the end of', *ar ben* (*ar* + *pen*) 'on top of', *uwch ben* (*uwch* + *pen*) 'above' (Wiliam 1960: 36). Kupto *kúu* 'head', noun > *kúu* 'up', 'above', locative adverb (Leger 1991: 20). Kwami *kúu* 'head', noun > 'on', locative marker (Leger 1991: 27). Egyptian *tp* 'head', noun > 'upon', preposition. Ex.

Egyptian (Gardiner 1957: 130)

<i>tp</i>	<i>t3</i>
head	earth
'on earth' (= 'living')	

This grammaticalization appears to be an instance of a more general process whereby certain body parts, on account of their relative location, are used as structural templates to express deictic location (Heine 2011c); *see also* BACK; BELLY; BUTTOCKS; EYE; FACE; FLANK; HEART; NECK.

HEAD (body part) > (6) CLASSIFIER

Korean *mali* (a historical variant of *meli* 'head' in Early Middle Korean) developed into a numeral classifier for non-human animals, including birds, fish and insects, in the eighteenth century (Koo 2009). In Modern Korean the historical variants have different specialization, i.e. *meli* as a body part noun 'head' (human and non-human) and *mali* as a numeral classifier for animals.

In Mandarin Chinese *tóu* 'head' developed into the numeral classifier *tóu* (Li and Thompson 1981; Kim 2015), e.g. *yì-tóu-yáng* (one-head-goat) (Erbaugh 1986: 400).

In Mundurukú, an indigenous language of Brazil, *a²* 'head' is a classifier for circular/spherical objects (Mithun 1986: 390).

'Head' is among the classifiers for humans and animals in Austroasiatic languages (Adams 1986: 248). Erbaugh (1986: 434) states that English *head of cattle* is "virtually the only currently-used English classifier which is not a measure".

Tai **tue*, a classifier for animals, is suspected to be a borrowing from Chinese **d'u* 'head' (Manomaivibool 1976, as cited in DeLancey 1986: 451).

In Papantla Totonac, a Totonacan language of Mexico, 'head' is a classifier for unit of length (Kilarski 2013: 52).

In Burmese *'u* 'head' is a numeral classifier for people of status, teachers, and scholars (Becker 1975: 115–16, as cited in Kilarski 2013: 280).

HEAR ('to hear', 'to listen') > EVIDENTIAL

The label 'EVIDENTIAL' stands for markers where the data available do not allow us to reconstruct which particular type of evidentiality is involved (cf. EVIDENTIAL, DIRECT, INFERRED, REPORTED). The present pathway most commonly concerns what Aikhenvald (2004; 2011; 2018a) calls NON-VISUAL evidence.

The non-visual sensory evidential *nh'er* of the Wintu language of northern California goes back to a passive form based on the verb 'hear' (followed by the

inferred evidential) (Aikhenvald 2011: 604). In Tariana, the non-visual marker *-mha* seems to be derived from the verb *hima* ‘hear, feel’ (Aikhenvald 2011: 604). This form can be traced back to the Proto-Arawak verb **kima* ‘hear, feel’, which was also grammaticalized in Piro, another Arawak language of Peru, where it is attested in the reported evidential *-gima-*. In Nanti, another Arawak language of Peru, the reported evidential *ke* is derived from the verb *kem* ‘hear’ (Aikhenvald in prep.). In the Hup language of Brazil and Colombia, it was a verb for ‘to sound’ that gave rise to a non-visual evidential marker (Epps 2005). Ex.

Hup (Epps 2005)

nasia *pæ-sĩwĩy*=*hĩ*

boat go:upriver-COMPL=NONVIS

‘The boat already went upriver.’ (= ‘The boat already went upriver, since I heard it.’)

In Kham of eastern Tibet, the non-visual suffix *-grag* comes from the verb *grag* ‘to sound’ (Tournadre and LaPolla 2014). The non-visual and reported evidentials of the Sino-Tibetan language Shibacha Lisu come from the verb ‘hear’ and an inferred evidential from the verb ‘listen’. In the Tibeto-Burman language Biansi, the past non-finite form of *run* ‘cause to hear’ marks quoted speech (Aikhenvald 2011: 605). In the Southern Nilotic Akie language of north-central Tanzania, the verb *kas-ũ* (hear-VEN) ‘see’ has been grammaticalized to an invariable clause-initial evidential particle *kásũ* (‘I have hearing evidence to the effect that’). Ex.

Akie (König et al. 2015: 48)

kásũ *kó* *péntin*.

HEAR:EVI NAR go:3:PL:IMPFV

‘They are leaving (I can hear them).’

More research is needed on these pathways (see Willett 1988; Aikhenvald 2004; 2011; 2018a). This is an instance of a process whereby speech act and mental process verbs, on account of some salient semantic property, give rise to grammatical markers for evidentiality. Compare SEE > EVIDENTIAL, DIRECT; see also KNOW; PERFECT; SAY.

HEART (body part) > IN (SPATIAL)

Chinese *xin* ‘heart’ > *zhongxin* (‘middle-heart’) ‘centre’, ‘in’ (Alain Peyraube, p.c.). Aztec *yōllōtli* ‘heart’, noun > ‘centre’, ‘in’. Ex.

Aztec (Stolz 1991a: 44)

huēi *āltepē-īl* *ī-yōllō-co*

(big town-ABS 3: SG:POSS-heart-LOC)

‘in the big city’

Ancient Egyptian *hr ib* ‘in the middle of’ is presumably derived from *ib* ‘heart’ (Rubin 2005: 47). Akkadian *libbu(m)* ‘heart’, noun > ‘interior’. Ex.

Akkadian (Stolz 1991a: 44)

ana libbu māt- im
 PREP heart country- GEN:SG
 ‘into the country’

Imonda *òd-l* (heart-NOMIN) > ‘middle of’, locative marker (noun and adverb). Ex.

Imonda (Seiler 1985: 39)

kebl òd-l-ia uai-hapu.
 village heart-NOMIN-LOC ACC-come:up
 ‘He comes up to the middle of the village.’

Korean *anh* ‘inside, heart, mind’, noun > *an* ‘inside’, ‘inside of’, relational noun (Narrog and Rhee 2013: 299; Rhee 2016c).

In Oceanic languages, ‘heart’ is a common source for the locative notion IN; Bowden (1992: 36) found six Oceanic languages where ‘heart’ appears to have given rise to IN markers.

This grammaticalization is an instance of a more general process whereby certain body parts, on account of their relative location, are used as structural templates to express deictic location; *see also* BACK; BELLY; BUTTOCKS; EYE; FACE; FLANK; HEAD; NECK.

HELP > BENEFACTIVE

In a number of Sinitic languages, verbs for ‘help’ have given rise to prepositions whose use includes that of a benefactive marker. In a survey and analysis of data for over 600 varieties of Sinitic carried out by Hilary Chappell and Li Lan, over forty different varieties of Mandarin were found where *bang* ‘help’ is used as a benefactive marker and another set of twenty-five varieties from the Gan, Hakka, Xiang, and Wu branches where the cognate verb has also grammaticalized into this function as well as undergoing the further extension to a direct object marker (Chen and Li 1996; Chappell 2006; 2013; Hilary Chappell, p.c.).

In the Changsha dialect of Xiang, *paŋ*³³, derived from the verb for ‘help’, is used as a preposition for benefactive and purpose. Ex.

Changsha dialect of Xiang (Wu 2005: chapter 9; Hilary Chappell, p.c.)

*paŋ*³³ *ŋo*⁴¹ *pa*⁴¹ *peɪ*³³ *tsɿ* *la*³³ *lai* *lo*³³.
 for 1:SG OM cup bring DV PRT
 ‘(Please) bring me the cup.’

This grammaticalization process looks like a very Northern Mandarin feature that is gradually diffusing into Central and other Sinitic languages. This needs more research.

Note that Hong Kong Cantonese offers a relevant example of use of the verb *bōng* ‘help’ which can be treated either as a verb in a serial verb construction (Matthews and Yip 2011: 161) or as a preposition (Hilary Chappell, p.c.). Ex.

Hong Kong Cantonese (Matthews and Yip 2011: 161)

Ngóh bōng léih dá-dihnwá.

I help you call-phone

‘I’ll phone for you.’

The present pathway has so far been observed only in Sinitic languages; data from other languages are urgently needed (Chen and Li 1996; Hilary Chappell, p.c.).

HERE > (1) CAUSE

Lingala *áwa* ‘here’, locative adverb > temporal conjunction (‘while’, ‘when’) > *áwa* ‘since’, ‘because’, causal conjunction. Ex.

Lingala (van Everbroeck 1958: 83)

áwa oyó olingí té, tokotinda mwána mosúsu.

‘Since you don’t come, we’ll look for another boy.’

Albanian *ke* ‘here’, adverb > conjunction marking a causal clause. Ex.

Albanian (Buchholz et al. 1993: 221)

(a) *ja ke erdhi!*

(INTJ here arrive:AOR)

‘Here he is!’

(b) *ke s’fole ti*

(here not PARTICP:say:2:SG)

‘Because you did not say anything...’

This grammaticalization appears to be an instance of a more general process whereby spatial concepts are used to also express causal relations; see Radden (1985) and Heine et al. (1991a) concerning an account of this process in terms of metaphorical transfer. Compare BACK; LOCATIVE; PLACE.

HERE > (2) DEMONSTRATIVE

Elements like English *here* and *there* are classified in some conventions as locative adverbial demonstratives (Dixon 2010b: 228–9), or simply as demonstratives (Diessel 2006: 473–4). In a number of languages, a clear formal relationship can be observed between expressions for ‘here’ and ‘there’ and ‘this’ and ‘that’, respectively. For example, Rubin (2005: 73) describes such a relationship in some Semitic languages, such as Old Babylonian, where distal demonstratives ‘that, those’ had the base *ulli-*, and this base is also found in the adverbs *ullikām* ‘there’, *ullānum* ‘thence’, *ullīš(am)* ‘thither’. And the forms *zhi*, *shi*, and *ci* of Archaic Chinese had both a demonstrative function indicating a place, meaning ‘here, there’, and a demonstrative function indicating a person or a thing, meaning ‘this, that’ (Long et al. 2012).

We have no problems with such alternative terminologies as long as they make it clear that there is a principal difference between (a) elements, pointing to an object, determining nouns, frequently agreeing with the noun in number, gender, and/or case (e.g. *this*, *that*), and (b) elements pointing to a place, modifying verbs or clauses, which do not normally show agreement in number, gender, or case (e.g. *here*, *there*). In this book we refer to type (a) elements as demonstratives and to type (b) as locative adverbs, and our concern is with the diachronic relation between the two.

French *ici* ‘here’, *là* ‘there’, locative adverbs > *-ci* ‘this’, *-là* ‘that’, parts of the proximal and distal demonstratives, respectively. Ex.

French

- (a) *Il est ici.*
he is here
‘He is here.’
(b) *cet homme-ci*
this man-PROXIM
‘this man’

Hausa *nân* ‘here’, adverb > ‘this’, proximal demonstrative. Ex.

Hausa (Cowan and Schuh 1976: 70, 165; Philip Jaggat, p.c.)

- (a) *yanā nân.*
he:is here
‘He’s here.’
(b) *dāwār nân*⁴⁰
guineacorn.of here
‘this guineacorn’

Lingala *wáná* or *wáná* ‘there (nearby)’ and *kúná* or *kúná* ‘(over) there’ > demonstratives *wáná* and *kúná* ‘that’, respectively. Ex.

Lingala (Heine et al. 1993: 10)

- (a) *yangó wáná. azalí kúná.*
‘It is there (near you).’ ‘He is there.’
(b) *moto wáná moto kúná*
person there person there
‘that man (we’re talking about)’ ‘that man (we’re talking about)’

Buang *ken* ‘here’, place adverbial > postposed demonstrative. Ex.

Buang (Sankoff 1979: 35)

- (a) *Ke mdo ken.*
I lives here
‘I live here.’

⁴⁰ Note that in the form *dāwār*, the final *ř* is an apical tap/roll, feminine linker (Philip Jaggat, p.c.).

- (b) *Ke mdo bya ken.*
 I live house this
 'I live in this house.'

In some pidgins and creoles, adverbs for 'here' have given rise to demonstratives, usually in conjunction with other referential markers; for example, Papiamentu CS *e ... aki* 'the ... here' > 'this' proximal demonstrative (see Boretzky 1983: 99). Ex.

Papiamentu CS (Kouwenberg and Muysken 1995: 210–1)

E pòtrèt ki a wordu saká ...
 The picture here PAST be taken
 'This picture was taken ...'

English *here*, locative adverb > Belizean CE *ya*, demonstrative particle (Hellinger 1979: 324).

The directionality of this grammaticalization appears to be well established but there are also examples that can be interpreted as being suggestive of an opposite directionality; more research is needed on this issue. Note that with Archaic Chinese *shì* 'now' > *shì* 'this, that', it was not a locative but a temporal deictic that emerged as a demonstrative (Long et al. 2012).

There is an alternative view to the one proposed here, according to which demonstratives are diachronically, so to speak, "primitives of grammaticalization". On this view, demonstratives may give rise to various kinds of grammatical markers while they themselves cannot be historically derived from other entities like lexical items (see Plank 1979; Diessel 1999b: 150ff.; 2006: 474–5): "If we disregard cases of reinforcement, there is no evidence from any language that demonstratives are historically related to content words; their roots are generally so old that they cannot be traced back to other types of expressions" (Diessel 2006: 475).

Crosslinguistic evidence suggests, however, that this view is in need of reconsideration; see GO > DISTAL DEMONSTRATIVE for more details.

'Reinforcement', whereby an existing form is strengthened by some other element, need not but may qualify as the initial step in a new grammaticalization process. Of interest for students of grammaticalization are, in particular, cases where reinforcement leads to functional differentiation. The French example mentioned above is a case in point, where the grammaticalization of the locative adverbs *ici* 'here' and *là* 'there' introduced a differentiation between a proximal and a distal category – a distinction which did not exist in this form before.

Note that there are seeming counterexamples to the present process: in some languages demonstrative modifiers may assume the function of adverbs when their head noun is omitted, and this may mean that a proximal demonstrative ('this') functions as a kind of adverb ('here'). It would seem,

however, that this is not necessarily a violation of the unidirectionality principle since in all cases where we met such a situation, complex demonstratives consisting of a locative plus a demonstrative element were involved. Thus, rather than with a development from demonstrative to locative adverb, we appear to be dealing with desemanticization of the kind [locative + demonstrative] > [locative].

Compare THERE > DEMONSTRATIVE.

HERE > (3) PERS-PRON

Huoja dialect of Chinese *zher* ‘here’ > ‘we’, ‘us’ (Alain Peyraube, p.c.). Hagège characterizes this evolution thus: there are “languages which use spatial adverbs with the meaning of personal pronouns: Japanese *kotira* ‘here’ often refers to the speaker, Vietnamese *đây* ‘here’ and *đây* (or *đó* ‘there’) are used with the meanings ‘I’ and ‘you’ respectively when one wants to avoid the hierarchical or affective connotations linked to the use of personal pronouns . . .” (Hagège 1993: 216–17).

An example of the rise of a new system of personal pronouns is provided by the Afro-Brazilian Calunga language, which arose in the course of the last centuries among African slaves in the state of Minas Gerais. In this language, the first person pronoun (‘I, me’) is *camano-cá* (‘person-here’) and the second person pronoun (‘you’) is *camano-ai* (‘person-there’) (Byrd 2006; Heine and Song 2010: 140–2).

The contribution of spatial deixis to the rise of personal pronouns, most of all involving demonstrative pronouns, has been pointed out in a number of studies (Diessel 1997; 1999a; 1999b; Heine and Song 2010; 2011).

In sign languages, the deictic space is commonly exploited as a conceptual template for structuring personal deixis: Pointing gestures (and eye gaze) provide a convenient source for concepts of both spatial and personal deixis (see Pfau and Steinbach 2006; 2011: 688).

See also THERE; DEMONSTRATIVE > PERS-PRON, THIRD; LOCATIVE > PERS-PRON.

HERE > (4) RELATIVE

Tok Pisin PE *ia* (< English *here*) ‘here’ > relativizer (Sankoff and Brown 1976; Traugott 1986b: 541). In Tondano, the particle *wia*, *wia* ‘i’ ‘here’ has a number of uses that appear to include that of a relative clause marker, referred to as the ‘relator’ (RM) by Sneddon (1975). Ex.

Tondano (Sneddon 1975: 88, 124)

- (a) *si tuama maana? wia?i.*
 CM:SG man live here
 ‘The man lives here.’
- (b) *se tow rai? wia mbale*
 CM:PL person NEG RM CM:HOUSE
 ‘the people who aren’t in the house’

This grammaticalization appears to proceed via the following more general process: HERE > DEMONSTRATIVE > RELATIVE (see Sankoff and Brown 1976: 663). The following example, involving Buang *ken*, illustrates this process, where (a) exhibits the locative adverb, (b) the demonstrative, and (c) the relative clause marker.

Buang (Sankoff 1979: 35–6)

- (a) *Ke mdo ken.*
I live here
'I live here.'
- (b) *Ke mdo byan ken.*
I live house this
'I live in this house.'
- (c) *Ke mdo byan ken gu le vkev.*
I live house that you saw yesterday
'I live in the house that you saw yesterday.'

The examples available are far from satisfactory to substantiate this process, but see HERE DEMONSTRATIVE; demonstrative > relative for the two constituent parts of this process.

'Hold, to' see KEEP

HOME ('home', 'homestead') > (1) LOCATIVE

Acholi *paàco* 'homestead' > *pà* 'at' (Claudi and Heine 1989: 5ff.). Susu *khönyi* (*khön* + *yi* nominal marker) 'home', 'residence', noun > *khön(ma)* (= *khön* + *-ma* multipurpose particle) 'to', 'towards', postposition. Ex.

Susu (Friedländer 1974: 40)

- A buki khanima Abu khön(ma).*
3:SG book bring Abu to
'He takes the book to Abu.'

Mandinka *yăa* 'home', noun > *yăa* 'at (X's place)' (= French *chez*), postposition; Maninka-mori *bárá* 'home', noun > *bárá* 'at (X's place)', postposition (Creissels in prep.b). Ngiti *ibha* 'at home', adverb > *bhà* 'at', 'with', locative postposition (Kutsch Lojenga 1994: 154).

The evidence for this pathway includes languages that can be assumed to be genetically and areally unrelated, only African examples have been found so far. Nevertheless, we seem to be dealing with another instance of a more general process whereby relational nouns give rise to relational (typically spatial or temporal) grammatical markers; see, for example, BOTTOM; BOUNDARY; EDGE; SIDE; TOP.

HOME ('home', 'homestead') > (2) A-POSSESSIVE

Huanggang dialect of Jianghuai Mandarin ηo^{53} 'I' + u^{213} 'house (home)' > (ηo^{213} + u^{11}) ηo^{213} 'my', first person possessive (Long et al. 2012).

Kabiye *té* ‘homestead’, ‘home village’, noun > genitive marker of alienable possession. Ex.

Kabiye (Claudi and Heine 1989: 4–5)

- (a) *pɛ-tè* *wɛ* *gǝu*.
 their-home be beauty
 ‘Their home is beautiful.’
- (b) *Kólú* *tè* *piya*
 blacksmith of children
 ‘the blacksmith’s children’ (e.g. those living in his compound but not his own)

Acholi *paàco* ‘homestead’ > *pà*, possessive marker (Claudi and Heine 1989).
 Ngiti *ibha*, ‘at home’, adverb > *bhà*, alienable attributive possessive marker on singular possessor noun phrases. Ex.

Ngiti (Kutsch Lojenga 1994: 154)

kamà *bhà* *dza*
 chief POSS house
 ‘the chief’s house(s)’

Note also that the attributive possessive marker *ka-* of Zulu and Xhosa can possibly be traced back to the Proto-Bantu noun **kááya* or **kaya* ‘home (village)’, whereby the construction ‘at the home of X’ was grammaticalized to ‘(property) of X’ (Güldemann 1999a). So far there is evidence almost only from African languages.

It would seem that the present process is the result of a metaphorical process whereby the phrase in ‘X’s home’ serves as a vehicle to express the notion ‘in X’s possession’ (see Heine 1997a); compare HAND.

HOUR > TEMPORAL

Lingala *ntángó* ‘hour’, ‘moment’, noun > *o ntángo ya* (LOC hour GEN) ‘during’, preposition. Ex.

Lingala (van Everbroeck 1958: 73, 152)

o *ntángo* *ya* *etumba*, *basodá* *bakolálaka* *o* *biéma*.
 (at hour of war soldiers they:sleep at tents)
 ‘During the war, the soldiers sleep in tents.’

Italian *ora* ‘hour’, noun > *ora* ‘now’, temporal adverb. Basque *ordu* ‘hour’ is the base of *orduan* ‘then’, which contains the locative case ending *-an* (anonymous reader).

In a number of languages, nouns for ‘hour’ serve in some way or other in constructions expressing temporal notions. Still, more data are needed to assess the general distribution of this grammaticalization. This would seem to be another instance of a process whereby a noun, on account of some salient

semantic property, gives rise to a grammatical marker highlighting that property; compare BACK; EARTH; SKY.

HOUSE > LOCATIVE

Old Swedish *hus* ‘house’, noun > Swedish *hos* ‘at’, ‘next to’. Ex.

Swedish (Stolz 1991b: 18)

om sommar-en bo-dde vi hos vår tant.
 PREP summer-DEF live- PARTCP PRON PREP our aunt
 ‘Over the summer we stayed/lived with our aunt.’

Latin *casa* ‘house’, noun > French *chez* ‘at’, preposition (cf. Latin *in casa* ‘in the house’ > Old French *en schies* ‘at’, ‘to’; Gamillscheg 1928: 218). Akkadian *bītu* ‘house’ > *bīt* ‘at’. Ex.

Akkadian (Stolz 1991b: 18)

bīt imitti šarri
 at right:hand:side king
 ‘at the right side of the king’

Cagaba *hu* ‘hut’, *hú-vala* ‘in front of the hut’ > *húvala* ‘in front of’. Ex.

Cagaba (Stolz 1991b: 18)

nuñhuá-ñ hú-vala
 temple-LOC in:front:of
 ‘in front of/outside the temple’

Central Pomo *čá* ‘house’, noun + -w, postposition (Frances Jack, speaker p.c.). Note that the noun in this case grammaticalizes together with a locative postposition, that is, the noun seems to simply ‘strengthen’ an already existing locative expression. Ex.

Central Pomo (Frances Jack, speaker, p.c.)

- (a) *Ča-w ʔmi: čáw-yo-m!*
 house-inside there in-SG:go-IMP
 ‘Go into the house!’
- (b) *Háy=ʔka čáw-ʔ-di-w.*
 wood=INFERRED in-PL-carry-PFV
 ‘Somebody must have brought in some wood.’

Haitian CF *kay* ‘house’, noun > *ka* ‘at (the house of)’. Ex.

Haitian CF (Hall 1953: 30–1)

- (a) *lò m-té-fèk-abité kay Maglwa*
 (when 1:SG-PAST-CPL-live house Magloire)
 ‘when I had just gone to live at Magloire’s house’
- (b) *ou rét ka moun?*
 (2:SG remain at:house person)
 ‘Are you staying at someone’s house [i.e. not with relatives]?’

It would seem that we are dealing with a metaphorical process whereby a phrase like in 'X's house' serves as a vehicle to express the notion 'in X's place'; compare HOME.

HOW? (W-QUESTION) > (1) COMPARATIVE

Hungarian *mint* 'how?', interrogative adverb > conjunction marking the standard of comparative constructions. Ex.

Hungarian (Halász 1988: 542)

nagy-obb, mint a fia.
(tall-COMP than his son)
'He is taller than his son.'

Colloquial German *wie?* 'how', question word > marker of standard in comparative constructions. Ex.

German

- (a) *Wie groß ist er?*
how big is he
'How big is he?'

Colloquial German

- (b) *Er ist größer wie sein Sohn.*
he is tall:er than his son
'He is taller than his son.'

More data are needed to substantiate this process, which conceivably has an intermediate SIMILATIVE stage in German; hence HOW? > SIMILATIVE > COMPARATIVE (see the next entry). This process appears to be part of a more general evolution whereby interrogative words are grammaticalized to affirmative markers, or parts thereof; see, for example, W-QUESTION.

HOW? (W-QUESTION) > (2) SIMILATIVE

German *wie* 'how?', question word > *wie* 'like', preposition. Ex.

German

- (a) *Wie hast du das gemacht?*
how have you that done
'How did you do that?'
- (b) *Sie sieht aus wie eine Schauspielerin.*
she looks out like an actress
'She looks like an actress.'

(French *comment* 'how?' >) Seychelles CF *koma* 'how?' > 'like', preposition. Ex.

Seychelles CF (Corne 1977: 34)

- (a) *koma u dir*
(how you say)
'as you say'

- (b) *ban koma u*
 (people like you)
 ‘people like you’

More research is needed on the exact nature and the genetic and areal distribution of this process. *See also* MANNER; RESEMBLE; SAY.

I

IAMITIVE > PERFECT

The Indonesian form *sudah* serves both as a marker for ‘already’ and as a iamitive marker (*see* ALREADY > IAMITIVE), *see* (a), but it is also said to be a perfect marker (Dahl and Wälchli 2016, *as in* (b). Ex.

Indonesian (Dahl and Wälchli 2016: 327)

- (a) *Saya sudah tua, dan istri saya juga sudah tua.*
 I IAM old and wife my also IAM old
 ‘(Zacharias said to the angel, “How can I be sure of this?) For I am an old man, and my wife is well advanced in years.”’
- (b) *Dia sudah membaca buk ini.*
 he IAM read book this
 ‘He has read this book.’

According to Olsson (2013) there are grams in a number of other languages that function in a way similar to Indonesian *sudah*, e.g. Thai *léew*, Vietnamese *đã* and *rôi*, Central Khmer *ban*, Lao *laev*, Paraguayan Guaraní *-ma*, and Yoruba *ti*. The difference between IAMITIVE, ALREADY and COMPLETIVE is frequently unclear and the reader is therefore advised to also check under ALREADY and COMPLETIVE.

Given the observations on the grammaticalization development ALREADY > IAMITIVE, we hypothesize a grammaticalization path ALREADY > IAMITIVE > PERFECT. Such a path is compatible with the suggestion made in Dahl (1985) that markers meaning ‘already’ and ‘finish’ could be diachronic sources for perfects. *See also* ALREADY > IAMITIVE.

IN (SPATIAL) > (1) DURATIVE

Vai *-ro* ‘in’, nominal suffix > *-ro*, durative, iterative marker, verbal suffix (*see also* IN > PROGRESSIVE) (Koelle [1854] 1968: 88–9).

Lezgian *-al-e* ‘in’, ‘into’, inessive case marker, nominal suffix > marker of duration (Haspelmath 1993: 103).

This grammaticalization must be taken with care, being based on data from only two languages, but *see also* IN > PROGRESSIVE. Compare LOCATIVE.

IN (SPATIAL) > (2) PROGRESSIVE

Archaic Chinese *zhong* ‘in, inside’, locative noun > Early Modern Chinese *zhong*, postposition > Modern Chinese *zhong*, progressive marker (Long et al. 2012).

Early Modern Chinese *li* ‘inside’, locative > *li*, progressive marker (Long et al. 2012).

Lamang *ŋ’* ‘in’, ‘into’, preposition > *ŋ’-*, verbal progressive prefix. Ex.

Lamang (Wolff 1983: 165–6)

ŋ- kəl- i
(PROG- take- 1:SG)
‘I am taking’

Vai *-ro* ‘in’, nominal suffix > progressive aspect marker (*see also* IN > DURATIVE) (Koelle [1854] 1968: 90).

This grammaticalization hypothesis is in need of more detailed empirical evidence. The pathway proposed appears to be an instance of a more general process whereby grammatical aspect functions are conceptualized and expressed in terms of locative concepts; compare IN > DURATIVE; LOCATIVE.

IN (SPATIAL) > (3) TEMPORAL

Early Modern Chinese *jian* ‘in, inside, middle’, locative noun > *jian* ‘when, at the time’, temporal adverbial marker (Long et al. 2012). Vai *-ro* ‘in’, nominal suffix > ‘during’, ‘in’, temporal marker. Ex.

Vai (Koelle [1854] 1968: 88–9)

- (a) *Anu bē sānsā-ro.*
(3:PL COP town-in)
‘They were in the town.’
(b) *an’ sã`ma súyē-ro.*
(3:SG lie:3:SG:on night-in)
‘He may lie on it in the night.’

Lezgian *-e/-a* inessive case marker ‘in’, ‘into’, nominal suffix > temporal marker ‘in’, ‘at’, nominal suffix. Ex.

Lezgian (Haspelmath 1993: 102ff.)

- (a) *Daxdi wiči- n žibind- a muk’rat’ tu-na.*
dad(ERG) self- GEN pocket- INE scissors put-AOR
‘Dad put a pair of scissors into his pocket.’
(b) *Zun šaz-ni sentjabrdi- n exird-a Xivd- a xā- na.*
1:ABS last:year-too September- GEN end- INE Xiv- INE be- AOR
‘Last year, too, I was in Xiv at the end of September.’

The Basque locative case suffix *-n* ‘in’, ‘at’, ‘on’ is also routinely used with a temporal sense. Ex.

Basque (anonymous reader)

- (a) *Bilb-n*
Bilbao-LOC
'in Bilbao'
- (b) *negu-a-n*
winter-DET-LOC
'in the winter'

The evolution from locative to temporal IN is so widespread that these examples are merely meant to illustrate the process concerned. It is an instance of a more general process whereby spatial concepts, including motion in space, are used as structural templates to express temporal concepts; *see also* ABLATIVE; ALLATIVE; BEHIND; FRONT; INTERIOR; LOCATIVE.

INDEFINITE > COMMON (Gender)

Nama 'i indefinite article > marker of common gender (*genus commune*; Heine and Reh 1984: 227). Greenberg (1978: 79), who discusses this process, also mentions Chinook and Khasi as further examples.

In the absence of more detailed information we are listing this case only tentatively; more information is needed on the exact nature and crosslinguistic significance of the process concerned.

INDEFINITE PRONOUN > PERS-PRON, FIRST PLURAL

The impersonal pronoun *on* of French was grammaticalized to an informal first person plural pronoun 'we' of the spoken language (Coveney 2000: 459; Heine and Song 2011: 616). Ex.

Colloquial Modern French (Coveney 2000: 459)

C'est nous qu' on est les vainqueurs.
(that:is we who we is the:PL winners)
'It is us who's the winners.'

In the Spanish-based creole Palenquero of Colombia, the noun (*ma*) *hende* 'people', ultimately derived from Spanish *gente* 'people', has given rise to a pronoun (*h*)*ende*, which serves both as an impersonal pronoun 'one' and as a first person plural pronoun 'we' (Schwegler 1993: 152–3; Heine and Song 2011: 616).

Dixon (2010b: 205) notes that in the Caddo language of Oklahoma, the bound pronoun *di-* means 'someone' when used in the singular, but when the regular dual and plural pronominal prefixes are added, it indicates first person plural inclusive and first person plural exclusive, respectively. Furthermore, he observes that in the Ainu language of northern Japan, the plural indefinite form can be used for 'some people' and also for first person plural inclusive.

Many instances of this grammaticalization appear to constitute the second part of the following more extended pathway (*see* PERSON > PERS-PRON,

FIRST PLURAL): ‘people’ > indefinite or impersonal pronoun > first person plural pronoun.

Compare MAN, PERSON.

INSTRUMENT > (1) AGENT

Narrog (2014: 82) summarizes this pathway thus: “In many languages Passive agents are expressed as Instruments. This is, for example, the case in many Slavic languages including Russian and Czech, in Bantu and Dravidian languages . . . and in French Creoles” (Narrog 2014: 82).

Sanskrit is another example that can be mentioned. Instrumental or means adpositions, clitics or affixes have been argued to have given rise to agent markers in peripheral sentence constituents (see Palancar 2002: 203–4; Wiemer 2011a: 541). In Indo-European, passives are relatively new constructions in the individual language families while instrumental markers can be traced back to Proto-Indo-European (Luraghi 2001b: 396; Narrog 2014: 83).

There are in fact a number of languages that express instrumental participants with the same marker as agents. For example, the Indo-Aryan language Gujarī (Gojri) uses the morpheme *dũ* for both instrumental and agentive, and also for ablative participants (Noonan and Mihas 2007). Further examples can be found in some Bantu languages, where instrumental markers are also used to introduce the agent in passive constructions. For example, in the Venda language of South Africa, the marker *ngá-* has instrumental (but not comitative) function, but is also an agent marker in passive sentences (Fleisch 2005: 99–100).

See also COMITATIVE > AGENT; INSTRUMENT > ERGATIVE.

INSTRUMENT > (2) ERGATIVE

Markers for ergative case roles do not infrequently encode other case functions as well, in particular instrumental, locative, ablative, and genitival functions (see Blake 1994: 122), and in some languages there is evidence to suggest that the former are historically derived from the latter. This is perhaps most obvious in the case of ergative/instrumental polysemies (Palancar 2002: 234; Narrog 2008; 2014: 84; König 2011: 510; Heine 2011c). Languages mentioned are the Papuan language Gorokan and the Indo-European language Anatolian (Garrett 1990: 265).⁴¹

Note further that in the Caucasian language Avar, the instrumental case marker also denotes the ergative (Blake 1994: 122), and this is not an isolated case: as Noonan and Mihas (2007) demonstrate, there is a range of Sino-Tibetan languages where case syncretism involves not only the instrument. Tibetan *-gis* can mark both an instrument and an ergative (Long et al. 2012), but also the ablative case, especially in the following languages (the relevant case

⁴¹ According to Garrett (1990), the Hittite ergative suffix *-anza* (PL. *-anteš*), used with nouns of the neuter gender, is said to derive from the ablative/instrumental inflection *-anza*. This reconstruction is, however, controversial. As has been argued more convincingly, the ergative suffix originates rather from the derivational suffix *-ant-*, which forms adjectives and is also the suffix of the participle (see Goedegebuure 2013).

markers are added in parentheses): Akha (-*nɛ*), Chhitkuli (-*čĩ*), Darma (-*su*), Dulong (Derung) (-*t̪ɛ*), Gahri (-*čĩ*), Ghale (-*te*), Hakha Lai (-*ʔii*), Kaiké (-*e*), Manangba (-*tse*), Mizo (-*in*), Nar-Phu (-*se*), Kathmandu Newari (-*nā*), Rangkas (-*se*), Western Tamang (-*se*), Eastern Tamang (-*ce*), and Thakali (-*se*). Whether, or to what extent, this wide distribution is genetically or areally induced is unclear. Furthermore, there is also no information on the directionality in the development of these case markers.

For discussions of this pathway, see Garrett (1990) and Narrog (2014: 84). More data are needed to substantiate that we are dealing with a unidirectional grammaticalization process. *See also* INSTRUMENT > AGENT.⁴²

INSTRUMENT > (3) MANNER

Ancient Greek *metá* (with genitive case) ‘with’ was a comitative marker before acquiring also the function of an instrumental preposition. From Classical Attic onward, *metá* started to be used as a manner preposition with abstract nouns (Luraghi 2001b: 390–3).⁴³ German *mit* ‘with’, comitative and instrument preposition > manner preposition. Ex.

German

- (a) *Sie schlug ihn mit dem Schirm.*
 3:F:SG hit 3:M:SG:OBJ with DEF:DAT umbrella
 ‘She hit him with the umbrella.’
- (b) *Sie schlug ihn mit Absicht.*
 3:F:SG hit 3:M:SG:OBJ with purpose
 ‘She hit him on purpose.’

The Tibetan instrumental particle *kɛʔ* can also introduce a manner adverbial (Long et al. 2012). The Basque instrumental marker *-z* also serves to express manner. Ex.

Basque (anonymous reader)

- (a) *Luma-z idatzi d-u.*
 pen-INSTR write[PFV] PRES-AUX
 ‘He wrote it with a pen.’
- (b) *Barre-z egin d-u.*
 laughter-INSTR do[PFV] PRES-AUX
 ‘He did it laughingly.’

⁴² There is a possible source of confusion here. It appears to be well established that languages showing accusative properties may replace these with an ergative profile, and vice versa; hence, there is no directionality involved in such evolutions (Dixon 1994: 185). This observation is in no way at variance with the present hypothesis, which is related to the evolution of ergative case markers rather than to that of ergative constructions. While the former seems to conform to common principles of grammaticalization, since it concerns form–meaning units rather than syntactic structures, the evolution of constructions does not exhibit any significant correlation with unidirectionality, as has been shown convincingly by Harris and Campbell (1995).

⁴³ Note, however, that Silvia Luraghi (p.c., 19 October 2017) questions this pathway on the basis of evidence from Greek, Latin, and Slavic languages.

Ewe *kplé* ‘with’, instrumental preposition > manner preposition (Lord 1989: 126–8). Ex.

Ewe (Claudi and Heine 1986: 321)

é-wɔ dɔ kplé dzidzɔ.
3:SG-do work with happiness
‘She worked happily.’

Fon *kpôdô* ... *kpan*, comitative, instrumental adposition > manner adposition (Lord 1989: 128–9). Ga *kè* ‘with’, comitative, instrumental marker > manner marker (cf. Lord 1989: 117ff.). Yoruba *kpèlú* ‘with’, instrumental marker > manner marker. Ex.

Yoruba (Lord 1989: 122–3)

- (a) ó gé erǎ kpélú òbè.
he cut meat with knife
‘He cut the meat with a knife.’
(b) ó gé erǎ kpélú èbò.
he cut meat with care
‘He cut the meat with care.’

This appears to be a process whereby the use of grammatical markers associated with visible, tangible complements (instruments) is extended to abstract complements, thereby giving rise to a new grammatical function; see Heine et al. (1991a). Not uncommonly, INSTRUMENT markers appear to be derived from comitative markers; hence, there is a more extended pathway: COMITATIVE > INSTRUMENT > MANNER (see Heine et al. 1991a; Heine 2011c).

See also COMITATIVE > INSTRUMENT.

INTENSIFIER > (1) EVEN

French *même* ‘oneself’, intensive marker > scalar focus particle ‘even’. Dutch *zelfs*, Norwegian *selv*, German *selbst* intensifier or reflexive pronoun ‘oneself’ > ‘even’. Ex.

German

- (a) *Er selbst kommt.*
he himself comes
‘He himself will come’.
(b) *Selbst wenn er kommt ...*
even if he comes
‘Even if he comes ...’

While we have so far found only examples from Indo-European languages, we have nevertheless decided to include this case since it appears to be conceptually plausible. More research is needed on the exact nature and the genetic and areal distribution of this process, and on the question of whether ‘even’ really is a grammaticalized use or else a constituent part of the meaning of intensifiers (cf. König and Siemund 2000; Emkow 2001).

INTENSIFIER > (2) PERS-PRON, THIRD

Heine and Song (2011: 598–9) discuss this pathway as one of the main sources for third person pronouns whereby intensifiers (*himself* as in *John killed her herself*) may gradually give rise to personal pronouns.

One example of an intensifier source is provided by the Basque identity pronoun *ber-* ‘same, -self’. Grammaticalization induced by contact with Romance languages appears to have affected the system of (independent) personal pronouns in Basque, being held responsible by Haase (1992: 135–7) for the fact that *ber-* is on the way to developing into a third person pronoun.

In the Ethiopian Semitic language Amharic, intensifiers are commonly formed by means of a noun phrase consisting of the noun *ras* (Ge’ez *rās*) ‘head’ plus a possessive modifier (*see* HEAD > INTENSIFIER). These intensifiers appear to have provided the basis, e.g. for a range of third person pronouns (Heine and Song 2011: 599). Furthermore, in Turkish, the intensifier form *kendi-* expresses third person reference in certain contexts. Ex.

Turkish (Siewierska 2004: 226)

<i>Kendi-si</i>	<i>opera-ya</i>	<i>git-ti.</i>
self-3:SG	opera-DAT	go-PAST
‘He (respectful) has gone to the opera.’		

This grammaticalization can be described in terms of desemanticization, whereby the specific intensifier semantics is bleached out, with the effect that third person reference is the only semantic function that is left.

More language data on this pathway are urgently needed.

INTENSIFIER > (3) REFLEXIVE

Ibibio *idém* (‘body’ >) intensifier (emphatic reflexive) > reflexive marker. Ex.

Ibibio (Essien 1982: 103, 107)

- (a) *imé ké idém amò*
 (Ime ? body his)
 ‘Ime himself’
- (b) *imé amà átigha idem (amò)*
 (Ime ? shot body his)
 ‘Ime shot himself.’

See Faltz ([1977] 1985); Kemmer (1993); Heine (2000b); König and Siemund (2000) for more details. Intensifier markers appear to be one of the main sources for reflexives; *see also* BODY; HEAD.

INTERIOR > (1) IN (SPATIAL)

Archaic Chinese *nei* ‘inside’, noun > *nei* ‘in’, locative (Long et al. 2012). Basque *barru*, *barne* ‘interior’ is used to express ‘inside’ when used with a locative case suffix. Ex.

Basque (anonymous reader)

- (a) *etxe- a- (r)en barru- a*
 house- DET- GEN interior- DET
 ‘the interior of the house’
- (b) *Etxe- a- (r)en barru- ra korritu d- u.*
 house- DET GEN interior- ALL run[PFV] PRES-AUX
 ‘He ran inside the house.’

Kpelle *su* ‘interior’ > ‘in’, postposition (Westermann 1924: 12). Susu *kui* ‘interior’, ‘inner side’ > ‘in’, ‘to’, postposition. Ex.

Susu (Friedländer 1974: 40)

bankhi kui
 ‘in the house’

Turkish *iç* ‘interior’, noun > ‘in’, postposition (Lewis [1967] 1985: 90–91). Tamil *uḷ* ‘interiority’ + *ee* (clitic) > *uḷlee* ‘inside’, locative adverb (T. Lehmann 1989: 137).

Kakataibo *name* ‘interior’, noun > *name* ‘inside (e.g. a pot)’, postposition (Zariquiey 2018: 353).

Compare also Latin *pēnus* ‘interior of house’; ‘provisions’, ‘victuals’ > *pēnēs* (a form of *penus*) ‘at’, ‘on the side of’ (Kühner and Holzweissig [1912] 1966: 935).

We are dealing here with another instance of a more general process whereby relational nouns, including nouns for body parts, give rise to relational (typically spatial or temporal) grammatical markers; compare BOTTOM; SIDE; TOP.

INTERIOR > (2) TEMPORAL

Modern Written Chinese *nei* ‘inside’, noun > *nei* ‘within’, temporal postposition (Long et al. 2012). Tamil *uḷ* ‘interiority’, relational noun > ‘within’, temporal postposition. Ex.

Tamil (T. Lehmann 1989: 126)

Kumaar inta vaara-ttu-kk-uḷ veelai.y- ai
 Kumar this week-OBL-DAT-within work- ACC
muṭikk- a veenṭ- um
 finish- INF must- FUT:3:SG:NEUT
 ‘Kumar has to finish the work within this week.’

Other instances of this grammaticalization are easy to come by; we are dealing here with another case of a more general process whereby relational nouns (including nouns for body parts) give rise to spatial and subsequently also to temporal grammatical markers; compare INTERIOR > IN. At the same time, this is also an instance of a more general process whereby spatial concepts, including motion in space, are used as structural templates to express temporal concepts; *see also* ABLATIVE; ALLATIVE; BEHIND; FRONT; IN; LOCATIVE.

‘Intestines’ *see* BOWELS

ITERATIVE > (1) HABITUAL

Zongyang dialect of Jianghuai Mandarin *teiou mə* and Yuexi dialect of Gan *teiou mə*, iterative marker and habitual marker (Long et al. 2012).

In the worldwide sample of Bybee et al. (1994: 158–9) there are six languages having a marker to indicate both iterative and habitual actions. In the case of the iterative, the action is repeated on the same occasion, while habitual means that the different occurrences are on separate occasions. These languages are Atchin, Halia, Inuit, Krongo, Rukai, and Yessan-Mayo. These authors argue that iterative is the earlier meaning, while habitual results from an extension of the iterative, especially for the following reasons. Two languages of their sample, Trukese and Rukai, express the iterative/habitual polysemy by means of partial reduplication, and the authors observe that iterative is the earliest aspectual meaning of reduplication; hence, iterative is more likely to be the earlier form. Furthermore, they note: “Such a generalization is conceptually well motivated. Iterative means that an action is repeated on a single occasion. In order to include habitual, the only change necessary is the loss of restriction that the repetition be on a single occasion” (see Bybee et al. 1994: 159 for more details).

Note also that Smith (forthcoming) finds synchronic evidence in the Afro-Hispanic creole Palenquero for the hypothesis that in the habitual marker *asé* (< *acé* ‘do’ < Spanish *hacer* ‘do’), frequentative uses preceded habitual ones. To answer the question of whether this is an established pathway of grammaticalization, diachronic data are urgently needed.

ITERATIVE > (2) STILL

Medieval Chinese *hai* ‘again’, adverb > Early Modern Chinese *hai* ‘still’ (Long et al. 2012). Ket (isolate) *haj* ‘again’ > *hy* ‘still’ (van Baar 1997: 92). Usan *bo* ‘again’, ‘still’ (van Baar 1997: 92). Ewe *-ga-*, verbal iterative prefix > ‘still’ (van Baar 1997: 92). Maltese *għad-* ‘still’ is said to be derived from a verb meaning ‘to repeat’ (van Baar 1997: 92). Tayo CF *akor* ‘again’ > ‘still’. Ex.

Tayo CF (Kihm 1995: 239)

- (a) *Ta fini vja jer, ta vja m dema.*
 thou CPL come yesterday thou come again tomorrow
 ‘You came yesterday; you’ll come again tomorrow.’
- (b) *Tle fler-la, le fini puse e pi sa atra-de puse akor.*
 PL flower-DEF TAM CPL grow and then they PROG grow still
 ‘The flowers have been growing, and they are still growing.’

It would seem that the STILL-meaning arises when, instead of a repetition, the situation implies a duration that is longer than expected.

Itive, *see* **ANDATIVE**

K

KEEP ('to keep (on)', 'to hold') > (1) DURATIVE

Icelandic *halda* 'hold', verb > *halda áfram að* + INF 'continue to', verb (Kress 1982: 244). Imonda *ula* 'hold', verb > durative/intensity marker with durative verbs. Ex.

Imonda (Seiler 1985: 106)

- (a) *ablō ka-fa ne-i-ula-fna.*

crab 1-TOP CLASS-LNK-hold-PROG

'I was holding a crab.'

- (b) *na sne-ula-n-b ðkōba-na pe-m ha-pia.*

sago pound-hold-PAST-DUR sun-POSS fear-CAU MO-come

'I was pounding sago and then came back because of the scorching sun.'

Waata, dialect of Oromo, (*harka*) *k'awa* 'hold (in one's hand)', verb > continuous aspect marker, auxiliary. Ex.

Waata, dialect of Oromo (Stroemer 1987: 149)

utaal-ca harka k'aw-a.

run-NOMIN hand hold/have-3:M:SG:PRES

'He is running.'

Somali **hayn* 'keep' > auxiliary of durative aspect. Ex.

Muduug, dialect of Somali (Heine and Reh 1984: 124)

kari-n hay-s-ay.

cook-INF keep-you-PAST

'You kept cooking.'

English *keep* + *-ing* > durative marker; for example, *He keeps (on) signalling to me* (Hopper 1991: 23).

This grammaticalization appears to be an instance of a more general process whereby process verbs are grammaticalized to auxiliaries denoting tense or aspect functions; *see also* KEEP > DURATIVE. Compare BEGIN; COME FROM; COME TO; DO; FINISH; GO TO; LEAVE; PUT.

KEEP ('to keep (on)', 'to hold') > (2) H-POSSESSIVE

Catalan *tener* 'hold', 'keep', verb (< Old Catalan *tenir*) > 'have', 'own' (Steinkrüger 1997). Basque *eduki* formerly meant 'hold', 'hold in one's hand', 'grasp', and it still does in the east. In the west, it has become the ordinary verb 'have'. Ex.

Eastern Basque (anonymous reader; King 1994: 407)

- (a) *Eduk- ak eure athe-a hertsi-(r)ik.*
 keep- IMP your door-DET closed- ADVL
 ‘Keep your door closed.’

Western Basque (anonymous reader; King 1994: 407)

- (b) *Zenbat anai-arreba d-au-z-ka zu?*
 how:many brother-sister PRES-have[DISC]- PL-2:SG-ERG
 ‘How many brothers and sisters do you have?’

In the Western Nyulnyulan language Nyulyul of northwestern Australia, the inflecting verb *-BAKAND* ‘have’, ‘own’, ‘possess’, used as an H-POSSESSIVE, can also mean ‘hold’ and ‘keep’, and the same applies to the inflecting verb *-BA* of Warrwa belonging to Eastern Nyulnyulan. Furthermore, in Bardi, the inflecting verb *-INYA* combines the meanings ‘have’, ‘possess’ with, ‘catch’, ‘grab’ and ‘hold’ (McGregor in prep.).

This process is presumably part of the (>) TAKE > H-POSSESSIVE grammaticalization (see Vykypěl 2010); until it has been established that this is so, we list this as a separate process. For more details, see Heine (1997a).

KEEP (‘to keep (on)’, ‘to hold’) > (3) PROGRESSIVE

Swedish *hålla på att* ‘hold’ > progressive aspect marker (Blansitt 1975: 7). Ex.

Swedish (Lena Ekberg, p.c.)

Jag håller på att läsa en spännande bok.
 I hold:PRES on to read an exciting book
 ‘I am reading an exciting book.’

Waata, dialect of Oromo, (*harka*) *k’awa* ‘hold (in one’s hand)’, verb > continuous aspect marker, auxiliary. Ex.

Waata, dialect of Oromo (Stroemer 1987: 149)

utaal-ca harka k’aw-a.
 run- NOMIN hand hold/have-3:M:SG:PRES
 ‘He is running.’

This grammaticalization is conceivably a variant of the pathway KEEP > DURATIVE.

Compare BEGIN; COME FROM; COME TO; DO; FINISH; GO TO; LEAVE; PUT.

KNOW > (1) EVIDENTIAL

The label ‘EVIDENTIAL’ stands for markers where the data available do not allow us to reconstruct which particular type of evidentiality is involved (cf. EVIDENTIAL, DIRECT, INFERRED, QUOTATIVE, REPORTED). Chappell

(2001c: 61–2) observes: “There are two main pathways in Sinitic languages for the grammaticalization of the evidential: one is the verb ‘cross, pass through’ and the other is the verb ‘know’.” The former pathway is not well attested crosslinguistically and, hence, is not considered in this work (but *see* ANDATIVE > EVIDENTIAL, DIRECT). The latter, by contrast, is documented. Chappell (2010c: 63–5) finds evidence for the grammaticalization from a verb meaning ‘know’ to evidential marker, e.g. in the Min dialects including Taiwanese (Southern Min), Amoy (Xiamen dialect of Min; Southern Min), and Fuzhouese (Foochow; Eastern Min). In all of these languages there is a preverbal evidential marker which is homophonous with a verb meaning ‘know’.

More research is needed on the general process leading to the rise of evidential markers (see Willett 1988; Aikhenvald 2004; 2011). This is an instance of a process whereby speech act and mental process verbs, on account of some salient semantic property, give rise to grammatical markers for evidentiality. *See also* HEAR, PERFECT, SAY, SEE > EVIDENTIAL; compare KNOW > EXPERIENTIAL.

KNOW > (2) EXPERIENTIAL

Experientials are aspect markers dedicated to coding “that an event has taken place at least once at some point in the past” (Chappell 2001c: 57; see also Comrie 1976: 58; Dahl 1985: 141).⁴⁴ The present pathway has so far been documented in Min languages of the Sinitic family only, hence it is possibly genetically induced.

Southern Min (Taiwanese) *bat* ‘know’, *kòe* ‘cross, pass’, verbs > *bat* verb (*-kòe*) experiential marker (Chappell 2001c: 60). Lien (2015: 274) adds that the experiential marker *pat*⁴ of Southern Min developed approximately at the end of the nineteenth century out of the cognitive verb *pat*⁴ ‘know, recognize’, first in negative contexts, later on extended to positive contexts. Fuzhouese, Eastern Min *pai*³¹ ‘know, be familiar with’, *tseing*⁵² ‘once’, *kuo*²³ ‘cross’ > *pei*³¹ *tseing*⁵² verb-*kuo*²³, experiential marker (Chappell 2001a: 60; Lien 2015: 274).

See also CROSS, EVER, PASS, TASTE > EXPERIENTIAL.

KNOW > (3) HABITUAL

Moré *mi* ‘know’, verb > auxiliary marking habitual actions. Ex.

Moré (Alexandre 1953b: 251)

- (a) *f ka mi fwi.*
‘You know nothing’.
- (b) *a mi n lōda ka.*
‘He usually passes here’.

⁴⁴ Chappell (2001a) also uses the term ‘evidential’ for them.

See Hagège (1993: 221) for more details. In pidgin and creole languages there appears to be a fairly common grammaticalization: KNOW > ABILITY > HABITUAL. French *connaître* ‘know’ > Haitian CF *kônê* ‘know’ > *kôn* ‘be in the habit of’. Ex.

Haitian CF (Hall 1953: 30, 33)

- (a) *m-pa-t-kônê*.
(1:SG-NEG-PAST-KNOW)
‘I didn’t know.’
- (b) *li kôn bat mwé*.
(s/he HAB beat me)
‘S/he used to beat me.’

Dutch *kunnen* ‘be able’ > Negerhollands CD *kan*, habitual auxiliary. Ex.

Negerhollands CD (Stolz 1987b: 175)

En am a kan dif də blangku ši skun.
and he PAST HAB steal the white:man his turkey
‘And he used to steal the white people’s turkeys.’

One lexical source, though not the only one, can be traced back to Portuguese *saber*, which not only means ‘know’ but also ‘be able to do’ (Holm 1988: 160): Palenquero *sabé* ‘know’, verb > *sabé*, habitual marker (Smith 2018: 379). Papiamentu CS *sa* ‘know’ (< Portuguese or Spanish *saber* ‘know’) > ‘to do habitually’. Ex.

Papiamentu CS (Holm 1988: 160)

Maria sa bendé piská.
(Maria HAB sell fish)
‘Mary sells fish.’

Sranan CE *sabi*, *sa* ‘know how’, ‘be able’ > habitual uses; Cameroonian PE *sabi* ‘know how to do’ > habitual marker (Holm 1988: 160–1); Tok Pisin PE *save* ‘know’ > *save*, *sa* ‘be accustomed to’. Ex.

Tok Pisin PE (Aitchison 1996: 141–2)

- (a) *Mi no save tumas long kukim.*
I not know much about to:cook
‘I don’t know much about cooking.’
- (b) *Mi sa kukim long paia.*
I am:accustomed to:cook on fire
‘I customarily cook it on the fire.’

KNOW > (4) PI-POSSIBILITY (Ability)

Medieval Chinese *jie* ‘know, know of’, verb > Early Modern Chinese *jie* ‘can’, auxiliary (Long et al. 2012). Early Modern Chinese *hui* ‘know, know of’, verb > *hui* ‘can’, auxiliary (Long et al. 2012). This process

has also taken place in negative contexts in the tenth-century Chinese, involving the negation marker *bù* in combination with the verb *huì* ‘understand’. Originally restricted to negative contexts (*bù huì* ‘unable to understand’), later on *huì* lost its association with *bù*, and in Modern Chinese, *huì* expresses ability (‘can, be able’; Xing 2015: 600–1; see also above).

As Bybee et al. (1994) show, markers for mental ability may further develop into markers expressing also physical ability; for example, English *I know how to shoot a crossbow*. Danish *kunne* ‘know’, verb > mental ability (Bybee et al. 1994: 190).

Motu *diba* ‘know’, verb > ‘can’, ‘be able’, marker of physical and mental ability (Bybee et al. 1994: 190). English *know*, verb > *know how to*, marker of mental ability; for example, *I know how to speak French* (Bybee et al. 1994: 190). Baluchi *zən* ‘know how to’ (auxiliary + infinitive), verb > marker of mental ability (Bybee et al. 1994: 190). Nung *sha* ‘know’, auxiliary > mental ability (Bybee et al. 1994: 190). Sango *hinga* ‘know’, verb > ‘can’, ability marker (Thornell 1997: 122).

After the fifteenth century, Ottoman Turkish, the language of the Ottoman Empire, used the verb *bil-* ‘know’ as an auxiliary to express C-POSSIBILITY and PI-POSSIBILITY, e.g. *dön-ä bil-* ‘to be able to return’ (Johanson and Csató 2018: 162). Karakhanid *bil-* ‘know’, verb > *bil-* ‘be able to’, e.g. *ađr-a bil-* ‘to be able to distinguish’; Middle Kipchak and Chaghatay *bil-* ‘know’, verb > *bil-* ‘be able to’, auxiliary, e.g. *bil-i bil-* ‘be able to know’ (Johanson and Csató 2018: 162).

Evidence for this pathway comes also from pidgin and creole languages. Tok Pisin PE *save* ‘know’, verb > ‘be skilled at’. Ex.

Tok Pisin PE (Aitchison 1996: 141)

<i>mi</i>	<i>save</i>	<i>kukim</i>	<i>kaukau</i> .
I	know	to:cook	sweet:potato

‘I know how to cook sweet potato.’ / ‘I am skilled at cooking sweet potato.’

French *connaître* ‘know’, verb > Tayo CF *kone* ‘be able’, marker of physical ability. Ex.

Tayo CF (Kihm 1995: 239)

<i>La</i>	<i>fini</i>	<i>kone</i>	<i>parle</i>	<i>kom</i>	<i>nu</i> .
s/he	CPL	know	speak	like	We

‘S/he can speak like us now.’

See Ziegeler (2011: 599) for further details on this pathway. Markers for physical ability may further develop into PERMISSION and POSSIBILITY markers; see ABILITY.

L

LACK ('to lack', 'to lose') > NEGATION

Archaic Chinese *wu* 'lack' > *wu*, negative marker; Archaic Chinese *wang* 'lack' > negative marker (Alain Peyraube, p.c.). Bemba *-bula* 'lack', 'miss', negative/implicative verb > negation marker in counterfactual conditionals. Ex.

Bemba (Givón 1973: 917)

à-ba-bulaa-bomba ...
'Had they not worked ...'

Futa Toro, dialect of Fulfulde, *waas* 'lack', 'lose' > negation marker in focus constructions. Ex.

Fulfulde (Marchese 1986: 181)

- (a) *o waas-ii debbo makko.*
he lose-TNS woman his
'He has lost his wife.'
(b) *ko miin waas-i am- de.*
FOC me NEG-TNS dance-INF
'It's me who did not dance.'

In the Makwe language of northern Mozambique, the verb *-kósá* 'lack, miss' has been grammaticalized to an auxiliary of negation, with the main verb following in the infinitive (Devos 2004: 279; 2008; Heine and Dunham 2010: 42).

See also Givón (1979a: 222) and Marchese (1986: 189–91). More research is needed on the exact nature and the genetic and areal distribution of this process. Nevertheless, this appears to be an instance of a more general process whereby a verb, on account of some salient semantic property ("implied absence"), gives rise to a grammatical marker highlighting that property (negation).

See also LEAVE > NEGATION; NEGATION, EXIST > NEGATION.

'Lack, to', see also FAIL

'Land', see EARTH

LEAVE ('to leave', 'to abandon', 'to let') > (I) ABLATIVE

Big Nambas *da-*, continuative prefix + *-an* 'leave' > 'from', continuant relator. Ex.

Big Nambas (Fox 1979: 87)

nə- ma d- an a Ləv'iep'.
I:REAL- come CONT- leave at Levicamp
'I have come from Levicamp.'

Kwara'ae *fa'asi* 'leave', 'forsake', 'depart from' = (cognate to) Toqabaqita *fasi*, ablative preposition (Lichtenberk 1991b: 47).

Tswana *go tloga* (INF leave) 'leave', verb > *go tloga* 'from', preposition (Creissels in prep.a). Nama *xũ* 'leave', 'go away', 'let go', verb > *xũ* 'from', 'by', postposition. Ex.

Nama (Krönlein 1889: 52)

- (a) *Tā xũ bi ... bi ...*
 (PROH leave 3:M:SG) 3:M:SG
 'Do not let him go ...'
 (b) *Kūiasa xũ ta gye ti-ta ra hā.*
 (Kūias from SG:1 TOP SG:1 IMPFV come)
 'I am coming from Windhoek.'

Tamil *viṭu* 'leave', verb of motion > *viṭtu* (participle, PL-2:SG-ERG), postposition marking the ablative case. Ex.

Tamil (T. Lehmann 1989: 131)

kumaar viiṭ.t- ai viṭtu ooṭ- in- aan.
 Kumar house-ACC from run- PAST- 3:M:SG
 'Kumar ran away from home.'

This is an instance of a process whereby process verbs, on account of some salient semantic property, give rise to grammatical markers expressing case relations (Heine 2011c); compare COME FROM; FOLLOW; GIVE; GO TO; SEE; TAKE. Since ABLATIVE markers are a common source for COMPARATIVE markers (see ABLATIVE), LEAVE verbs may also develop further into COMPARATIVE particles or affixes: Tamil *viṭu* 'leave', verb of motion > *viṭa* (infinitive), postposition marking the standard in comparative constructions. Ex.

Tamil (T. Lehmann 1989: 131)

kumaar raajaa. v-ai viṭa uyaram-aaka iru-kkir- aan.
 Kumar Raja- ACC COMPAR height-ADVR be- PRES- 3:M:SG
 'Kumar is taller than Raja.'

LEAVE ('to leave', 'to abandon', 'to let') > (2) COMPLETIVE⁴⁵

Archaic Chinese *que* 'retreat, leave', verb > Early Modern Chinese *que*, completive marker (Long et al. 2012). Ts'ixaxúú 'leave behind', transitive verb > -xú 'do something to completion', completive suffix, changing atelic verbs into telic ones (Fehn 2014: 170). Tjwao *xuu* 'leave' > -xú, terminative

⁴⁵ The notion completive is a complex one, and a number of the examples discussed here are perhaps more appropriately treated as iimitive categories (Östen Dahl, p.c.). When consulting entries having COMPLETIVE as their target, the reader is advised to also check under IAMITIVE.

suffix (Admire Phiri, p.c.). Khwe *xũ* 'leave', 'abandon', 'loosen', verb > *-xu*, terminative/completive derivative suffix. Ex.

Khwe (Köhler 1981a: 503)

kx'ó- ró-xu 'è!
eat:meat- II-TERM IMP
'Finish eating!'

The following example probably also belongs here: Nama *!arí* 'leave someone', action verb > *-!arí* 'totally', 'entirely', 'completely', verbal suffix. Ex.

Nama (Krönlein 1889: 31)

!gũũ- !arí- ts ta?
(go- leave- 2:SG PROG)
'Are you going away completely?'

Korean *na-* 'exit', verb > *-ena-*, *-kona-*, completive aspect (Rhee 1996, 2016c). Korean *noh-* 'place, leave', verb > *-enoh-*, completive aspect auxiliary (Rhee 1996, 2016c). Tamil *viṭu* 'leave', verb of motion > auxiliary marking the perfective. Ex.

Tamil (T. Lehmann 1989: 209)

kumaar inta naaval-ai.p pati ttu viṭ.ṭ-aan.
Kumar this novel-acc read- PARTCP leave:PAST-3:M:SG
'Kumar has read this novel.'

A possible manifestation of this pathway can also be found in the Turkic languages Tuvan, Tofan, and Dukhan of Siberia, where the verb *kaɣ-* 'leave' expresses transformativity with a remaining result, as for example in *as-ïp kaɣ-* 'to hang up something so that it remains hanging', *baɣla-p kaɣ-* 'to tie something firmly so that it remains tied', *biži-p kaɣ-* 'to write and thus have written' (Johanson and Csató 2018: 155).

This grammaticalization appears to be an instance of a more general process whereby process verbs are grammaticalized to auxiliaries denoting tense or aspect functions; compare BEGIN; COME FROM; COME TO; DO; FINISH; GO TO; KEEP; PUT.

LEAVE ('to leave', 'to abandon', 'to exit') > (3) EGRESSIVE

Portuguese *deixar* 'let', 'leave', verb > *deixar (de fazer)* ('stop doing'), conclusive auxiliary. Ex.

Portuguese (Schemann and Schemann-Dias 1983: 13–15)

porque é que agora deixaste de o ajudar?
why is that now left:2:SG to him help:INF
'Why did you stop helping him now?'

Lingala *-tika* 'leave', 'let', verb > egressive marker. Ex.

Lingala (Mufwene and Bokamba 1979: 244–6)

- (a) *Kázi a-tík-i kalási na yé.*
 Kazi he-abandon-PERF school COM him
 'Kazi has left/quit school.'
- (b) *Kázi a-tík-i ko- koma.*
 Kazi he-abandon-PERF INF- write
 'Kazi has (just) stopped writing.'

This grammaticalization appears to be an instance of a more general process whereby process verbs are grammaticalized to auxiliaries denoting tense or aspect functions; compare BEGIN; COME FROM; COME TO; DO; FINISH; GO TO; KEEP; PUT.

LEAVE ('to leave', 'to abandon', 'to exit') > (4) IMPERATIVE

The Modern Chinese verb *qu* 'go to, leave' has a tendency to grammaticalize into an imperative marker (Long et al. 2012). Lingala *tika* 'leave', 'let', verb > imperative, hortative auxiliary, where the main verb follows in the subjunctive/optative mood. Ex.

Lingala (van Everbroeck 1969: 141)

- tíká tó- kende! tíká ná- koma!*
 (leave 1:PL-go) (leave 1:SG-write)
 'Let us go!' 'Let me write!'

Hausa *bàri*, imperative of *bari* 'abandon, leave', verb > 'how about', hortative marker (the following verb being in the subjunctive); cf. also Jaggar (2017: 64–5). Ex.

Hausa (Cowan and Schuh 1976: 148)

- bàri mù shiga zauré.*
 (let 1:PL go:into entrance:hut)
 'Let's go into the entrance hut.'⁴⁶

Albanian *lë* 'leave', 'let' > hortative marker. Ex.

Albanian (Buchholz et al. 1993: 273)

- lë të shkojë!*
 'Let him go!'

Compare English *Let's go!*. Kenya Pidgin Swahili (PS) *wacha* 'leave', 'let', transitive verb > imperative marker. Ex.

Kenya PS (own data)

- (a) *Yeye kwisha wacha kazi.*
 3:SG PFV leave work
 'He has left work.'

⁴⁶ Note that Jaggar (2017: 64–5) argues that *bàri* is used with a clausal subjunctive complement to express permissive *let*-causation.

- (b) *wacha yeye na-let-ia sisi biya!*
 HORT 3:SG IMPFV-bring-APPL 1:PL beer
 'Let him bring us beer!'

Netherhollands CD *laastan*, *lista* 'leave' (< Dutch *laat staan* ('let + stand') 'leave it!'), prohibitive auxiliary > *ta(a)*, hortative particle. Ex.

Netherhollands CD (Stolz 1986: 157, 177)

- (a) *Sinu a flig, lista di stibu.*
 (3:PL PERF flee leave DEF money)
 'They fled and left the money (behind).'
 (b) *Ta: ons lo: api de le be:.*
 (HORT 1:PL go where DEF light BE:LOC)
 'Let us go where there is light.'

French *quitter* 'to leave', verb > Haitian CF *kité* 'let', 'allow', verb > *té*, permission, hortative particle when followed by another verb or verbal phrase as complement. Ex.

Haitian CF (Hall 1953: 30, 55)

- té nou bwè. té-l-vini.*
 (let we drink) (let-s/he-come)
 'Let us drink.' 'Let her/him come.'

Occasionally, LEAVE verbs also give rise to grammatical concepts having obligation as their focal sense; for example, Nama *!ari* 'leave someone', action verb > *!ari(-!ari)* 'must', necessity marker. Ex.

Nama (Rust 1969: 29)

- //nou-/nam-!ari- ts ġe nî:.*
 (hear-love- leave-2:m:SG TOP FUT)
 'You must obey.' (lit.: 'You must love to hear.')

While this case is found commonly in pidgin and creole languages, the evidence available suggests that it nonetheless appears to be a more general process whereby certain verbs assume an interpersonal function in specific contexts involving commands and related interpersonal functions; compare COME > IMPERATIVE; GO > IMPERATIVE; LEAVE > PERMISSION.

LEAVE ('to leave', 'to abandon', 'to let') > (5) NEGATION

Dewoin *se* 'leave', transitive verb > negative auxiliary. Ex.

Dewoin (Marchese 1986: 182)

- ɔ séē sāyɛ pī.*
 he NEG:PERF meat cook
 'He has not cooked meat.'

Kagbo *tí* 'leave', 'let go', verb > negative auxiliary. Ex.

Kagbo (Marchese 1986: 183)

- (a) *tí* *nò* *yí.*
 leave him eyes
 'Let him alone!' / 'Leave him alone!' (lit.: 'Leave his eyes.')
- (b) *ɔ* *tí* *yí.*
 he NEG come
 'He didn't come.'

Bété *tĩ* 'leave', 'lose', verb > negative imperative auxiliary. Ex.

Bété (Marchese 1986: 184)

- (a) *ɔ* *tĩ-ɔ* *mí.*
 He leave-him there
 'He left him there.'
- (b) *ɔ* *tĩ-u* *síɔ́í.*
 he NEG-it build
 'He should not build it.'

See Marchese (1986: 182ff.) for more details on Kru languages; see Güldemann (1999c) on Bantu languages. In the Makwe language of northern Mozambique, the verb *-léká* 'leave' has been grammaticalized to an auxiliary of negation, with the main verb being encoded in the infinitive (Devos 2004: 279; 2008; Heine and Dunham 2010: 42). Ex.

Makwe (Devos 2004: 279)

uimba cáani wéepo kuléká kiwáleeke waalyé.
 you:sing what you INF:leave INF:you:leave they:eats:OPT
 'What is it that you are singing that does not let them (the birds) eat?'

This appears to be a case of grammaticalization that is limited in occurrence; more research is needed on the genetic and areal distribution of this process, whereby a verb, on account of some salient semantic property, gives rise to a grammatical marker highlighting that property; see, for example, DESCEND; FOLLOW; LACK; LIVE; SIT; STAND. LEAVE-verbs may also give rise to markers for negative ability; for example, Shona *-règà* 'leave off', 'omit to act', action verb > *-règò-* 'be not able to', verbal prefix (Brauner 1993: 114). For an unusually large series of grammaticalizations involving the Tamil *viṭu* 'leave', see T. Lehmann (1989: 209ff.).

See also LACK > NEGATION; NEGATION, EXIST > NEGATION.

LEAVE ('to leave', 'to abandon', 'to let') > (6) PERMISSION

In the Manding languages of western Africa (Bambara, Baninko Bambara, Jula, Kita Maninka, Korogan, Koyaga, Maninka, Maninka-mori, Mandinka, Marka, Maukakan, Niokolo Maninka, and Xasonga), the verb *bilá* 'leave' is regularly used to express permissive causation (Creissels in prep.b).

German *lassen* 'leave', 'let', action verb > permission auxiliary. Ex.

German

- (a) *Lass mich allein!*
 leave me alone
 'Leave me alone!'
- (b) *Lass ihn kommen.*
 let him come
 'Let him come, allow him to come.'

Bulgarian *ostavjam* 'leave', verb > *ostavjam*, permission marker. Ex.

Bulgarian

- (a) *Az ostavix багажа на гарата.*
 I leave:1:SG:AOR luggage:DEF at station:DEF
 'I left the luggage at the station.'
- (b) *Ostavix te da napraviš kako*
 leave:1:SG:AOR you to do:2:SG:PRES as
ti iskaše. Zašto si nedovolna sega?
 you want:2:SG:IMPERF why be:2:SG:PRES unsatisfied now
 'I let you do it the way you wanted. Why are you dissatisfied now?'

French *quitter* 'leave', action verb > Haitian CF *kité* 'let', 'allow', verb > *té*, permission, hortative particle when followed by another verb or verbal phrase as complement. Ex.

Haitian CF (Hall 1953: 30)

té l- vini.
 (let him-come)
 'Let him come.'

More research is needed on the exact nature and the genetic and areal distribution of this process. This appears to be a process whereby certain verbs assume an interpersonal function in specific contexts involving imperatives and related interpersonal functions; compare COME > HORTATIVE; GO > HORTATIVE.

'Leg', see FOOT.

'Let', see LEAVE.

LIE ('to lie (down)') > (1) DURATIVE

Yolngu *yukarra-* 'lie', stative verb > marker of durative aspect when used in conjunction with a main verb (Austin 1998: 32). Hoocak (*h*)*ak* 'be lying', verb > = *ak*, continuative aspect marker ('do in a horizontal position'), auxiliary (Helmbrecht in prep.). Mandan *wak* 'lie', verb > continuative aspect auxiliary (Helmbrecht in prep.).⁴⁷ Biloxi *mqki* 'lie', verb > continuative aspect marker in verbal clauses with a complex predicate (Helmbrecht in prep.). Cahuilla

⁴⁷ According to Mixco (1997: 61), the Mandan path is *wak-Æ* 'abide:lie' > imperfective or durative marker.

-qál- 'lie', verb root > *-qal-*, durative affix (Seiler 1977: 152, 170f.). Dutch *liggen* 'lie', verb > *liggen te* + INF, durative/habitual auxiliary with postural connotations (Stolz 1992b: 292). Tamil *kiṭa* 'lie', stative verb > auxiliary expressing a durative notion. Ex.

Tamil (T. Lehmann 1989: 223)

anta arai puuṭṭ- i.k kiṭa- kkiṭ- atu.
 that room lock- PARTCP lie- PRES- 3:NEUT:SG
 'The room is kept locked.' (In addition it indicates the speaker's
 negative attitude towards the state.)

In the Lewo language of Vanuatu, the verb *to* 'sit' indicates temporary duration when combined with the durative aspect, whereas the form *mo-*, presumably a grammaticalized form of the verb *mono* 'lie', indicates more permanent duration (Early 2000: 100; Moyse-Faurie 2018: 288).

This pathway is part of a more general process whereby postural verbs ('sit', 'stand', 'lie') are grammaticalized to durative, progressive, and other aspectual markers (see Bybee et al. 1994: 153–5; Austin 1998: 32); compare SIT; STAND; see also SIT > HABITUAL. Kuteva (1999) proposes the following four-stage grammaticalization development of the bodily posture verbs SIT, STAND, and LIE into continuous (progressive, durative) markers: human bodily posture verbs > canonical encoding of spatial position of objects > continuous (with inanimate subjects) > continuous (with both inanimate and animate subjects).

'Like, to', see LOVE; WANT.

LIE ('to lie (down)') > (2) PROGRESSIVE

Tatar *yat-* 'lie down', verb preceded by a gerund > progressive aspect (Blansitt 1975: 28). The Kazak verb form + *-p/-ip/-əp* + ... + *dʒatər* 'lie' forms a continuous construction (Long et al. 2012). Korean *cappaci* 'lie' (vulgar),⁴⁸ verb > progressive auxiliary. Ex.

Korean (Song 2000: 7, 21)

- (a) *Ku salam-i pang-ey cappaci (-e)- iss- ta.*
 the man-NOM room-LOC lie (vulgar) (F)- is- IND
 'The man is lying in the room.'
 (b) *Ku salam-un pwulphyeng ha-ko cappaci-e-iss-ta.*
 the man-TOP complaint do-CONJ lie(vulgar)-F-IS-IND
 'The man is complaining.'

⁴⁸ Song (2000: 6, 32) gives two verbs for 'lie' in Korean: *nwup-* 'lie' (plain) and *cappaci-* 'lie' (vulgar). The plain form expresses a higher degree of control than does the vulgar form. This may be related to the original meaning of the vulgar form *cappaci-*, 'to fall backward (and to sprawl out on one's back)'. Of the two forms, only the latter has been grammaticalized into an aspectual marker (see also Rhee 1996; Ahn 2005).

Note further that in the G/ui language of Botswana, the postural verb *llóé* or *llũũ* 'lie' is also used as an abilitative-habitual marker (Nakagawa 2016: 132). And in the Wintu language of Northern California, the postural verb *bEy* 'lie' ('be in a lying position, be in bed, spend the night') developed into an imperfective marker (Mithun 2018: 313). Ex.

Wintu (Mithun 2018: 313)

- (a) *Biya-da*.
lie:IND-1:SUBJ
'I am lying down.' = 'I am in bed.'
- (b) *Wira-bi-re*.
come-IMPV-INF
'They must be coming.'

This pathway is part of a more general process whereby postural verbs ('sit', 'stand', 'lie') are grammaticalized to progressive or durative markers (see Bybee et al. 1994: 153–5; Austin 1998: 32); compare SIT; STAND; *see also* SIT > HABITUAL.

LIMIT ('limit', 'boundary') > UNTIL

Swahili *m-paka* 'border', 'boundary', noun > (*m*)*paka* 'until', locative, temporal preposition, temporal clause subordinator. Ex.

Swahili

- (a) *m- paka wa Kenya*
c3- border of Kenya
'the border of Kenya'
- (b) *mpaka Mombasa mpaka kesho*
up to Mombasa until tomorrow
'up to/until Mombasa' 'until tomorrow'

Tamil *varai* 'limit', 'end', relational noun > *varai-kk-um* 'as long as', head noun of an adjectival clause in the form inflected for the dative case and followed by the clitic *-um*. Ex.

Tamil (T. Lehmann 1989: 343)

<i>kumaar</i>	<i>veelai</i>	<i>cey-t-</i>	<i>a</i>	<i>varai-</i>	<i>kk-</i>	<i>um</i>	<i>naaṇ</i>
Kumar	work	do- PAST-	ADJV	end-	DAT-	INCL	1:SG

kaattiru-nt- eeṇ
wait- PAST- I:SG
'As long as Kumar worked, I was waiting.'

Tamil *varai* 'limit', 'end', relational noun > 'until', temporal postposition. Ex.

Tamil (T. Lehmann 1989: 121)

<i>kumaar</i>	<i>aintu</i>	<i>maṇi</i>	<i>varai</i>	<i>tuṇk-</i>	<i>iṇ</i>	<i>aaṇ</i> .
Kumar	five	hour	until	sleep-	PAST- 3:M:SG	

'Kumar slept until five o'clock.'

This is an instance of a more general process whereby a noun, on account of some salient semantic property, gives rise to a grammatical marker highlighting that property; *see also* EARTH; FIELD; FOOTPRINT; SKY.

LIP (body part) > LOCATIVE

Meixian dialect of Hakka *sun* ‘lip’, noun > *sun* ‘edge’, locative (Long et al. 2012). Colonial Quiché *chi* ‘lip’, ‘edge’ > *chi* (sometimes reduced to *ch*, mostly before vowels) ‘in’, ‘within’, ‘into’, ‘out of’, general indicator of locative usage of noun phrases. Ex.

Colonial Quiché (Dürr 1988: 52)

ta x-e- pet-ic chi tulan.
 CONP CPL-3:PL:ABS- come-IS LOC Tulan
 ‘They came from Tulan.’

Compare also Colonial Quiché *chi* ‘lip’, ‘edge’ > ‘at the edge of’, locative adposition. Ex.

Colonial Quiché (Dürr 1988: 55)

anim x-e-be-c, x-e-opon ch-u-chi choh
 quick CPL-3:PL:ABS-GO-IS CPL-3:PL:ABS- arrive LOC-3:SG:ERG-edge oven
 ‘They left quickly and arrived at the edge of the oven.’

Albanian *buzë* ‘lip’, body part noun > *buzës* (lip-DEF:ABL) ‘along’, locative preposition. Ex.

Albanian (Buchholz et al. 1993: 73)

buzës së det-it
 (along ART ocean-DEF:ABL)
 ‘along the seaside’

This grammaticalization appears to be an instance of a more general process whereby certain body parts, on account of their relative location, are used as structural templates to express deictic location; *see also* BACK; BELLY; BUTTOCKS; EYE; FACE; FLANK; HEAD; NECK.

LISTEN > DISCOURSE MARKER

This pathway is restricted to imperative forms of verbs for ‘listen’, which are reinterpreted as markers of discourse management. Their function is, in most cases, to draw the hearer’s attention to the content of the following predication. English *listen!*, verbal imperative > *listen*, discourse marker. Colloquial German *hör (mal)!* ‘listen (once)’ ‘listen!’ > *hör (mal)*, discourse marker for drawing the hearer’s attention to new information (Auer and Günthner 2005: 346).

Swahili *ku-sikiliza* (INF-listen) ‘listen’, *sikiliza!* ‘listen!’ > marker used to attract the attention of the hearer.

More data from other languages are needed to establish this pathway, which cannot be described exhaustively in terms of grammaticalization. As argued in Heine et al. (2013; 2017), it also involves cooptation, a discourse strategy whereby a unit of sentence grammar is deployed for specific discourse purposes such as expressing functions of text organization, attitudes of the speaker, and/or speaker–hearer interaction. Whereas grammaticalization typically leads to semantic and morphosyntactic integration, cooptation has the opposite effect, that is, the unit is semantically and morphosyntactically unattached, frequently also being prosodically marked off. Thus, unlike most of the other data discussed in this book, the evolution of discourse markers is more complex, being the result of cooptation followed by grammaticalization (Heine 2013). In the present pathway, cooptation and grammaticalization take the imperative form of 'listen'/'hear'-verbs as a basis.

See also GOD > INTERJECTION; LOOK > DISCOURSE MARKER; MAN > INTERJECTION; RIGHT > DISCOURSE MARKER; NOW > DISCOURSE MARKER; THEN > DISCOURSE MARKER; WELL > DISCOURSE MARKER.

LIVE ('to live', 'to be alive', 'to stay') > (1) COPULA, LOCATIVE

Basque *egon* means historically 'wait', 'stay'. Otherwise, especially in the western varieties, it has become a locative copula 'be (in a place or a state)'. Ex.

Basque (anonymous reader; King 1994: 396–7)

Bilbo Bizkaia- n da-go.

Bilbao Biscay- LOC PRES-be

'Bilbao is in Biscay.'

Compare also Proto-Germanic **wes-* 'live' > English *was*, German *war* 'was, were' (Lehmann 1982: 27). Tunica *ʔúhki* 'he lives' > 'he is' (Haas 1941: 41ff.; quoted from Lehmann 1982: 27). Note also that according to Matisoff (1991), verbs meaning 'dwell', 'be in/at a place' can sometimes function as locative prepositions in languages of Southeast Asia (Lord 1993: 17).

More examples are needed to substantiate this pathway, which appears to be an instance of a process whereby a verb, on account of some salient semantic property, gives rise to a grammatical marker highlighting that property, in this case a copular function; compare, for example, CROSS; EXCEED; FINISH; PASS; SIT; STAND.

LIVE ('to live', 'to be alive', 'to stay') > (2) HABITUAL

LIVE-verbs give rise to progressive markers that can acquire an habitual function, as may have happened in the Ewe language of Ghana and Togo: *nɔ* 'be', 'stay', 'remain' > *-na* (after intransitive, *-a* after transitive verbs) > habitual aspect marker. Ewe of Benin *nɔ* 'be', 'stay', 'remain', verb > *nɔ*, habitual aspect marker (Westermann 1907: 65). Ex.

Ewe of Benin (Westermann 1907: 65)*m-no-sa.*

1:SG-stay-sell

'I sell (habitually).'

English *live* (+ *for*), verb > West African PE (nineteenth and early twentieth centuries) *live for* progressive/habitual ("nonpunctual") marker (Huber 1996).

Bybee et al. (1994: 154) observe that verbs meaning 'live' may serve as sources for habitual auxiliaries, but more research is needed on this pathway. Compare GO; REMAIN; SIT; USE.

LIVE ('to live', 'to be alive', 'to stay') > (3) PROGRESSIVE

Xishuangbanna Dai *ju*⁵ 'live', verb > *ju*⁵, continuous marker. Dehong Dai *ju*⁵ 'live', verb > *ju*⁵, continuous marker (Long et al. 2012). Debaio Zhuang *²jou*⁵ 'live', verb > *²jou*⁵, continuous marker (Long et al. 2012).

Kisi *wa* 'remain', 'stay', 'be', verb > past progressive marker. Ex.

Kisi (Childs 1995: 233, 244)(a) *ò wá náá kòòlì.*

he was us behind

'He was behind us.'

(b) *ò wá wayndá kùndikùndiò.*

he AUX people hit

'He was striking the people.'

Kikuyu *-tũũra* 'live', 'exist', verb > auxiliary marking continuous, durative actions. Ex.

Kikuyu (Barlow 1960: 268)*i-ti-ngũ-tũũra i-nor-ete ã- guo.*

(CIO-NEG-FUT-live CIO-be:fat-PERF CI4- PRON)

'They (the cattle) will not remain fat like that.'

Aztec *nemi* 'live', verb > *nemi* 'do incessantly', (excessive) continuous auxiliary. Ex.

Aztec (Launey 1979: 256)*Tlein ti-c-chiuh-ti-nemi?*

(INTER 2:SG-OBJ-DO-LIG-CONT)

'What are you doing there all the time?'

Burmese *ne* 'stay' > progressive auxiliary (Park 1992: 16). According to Matisoff (1991), verbs meaning 'dwell', 'be in/at a place' can sometimes function in languages of Southeast Asia as locative prepositions and typically develop into progressive auxiliaries.

In Tariana and Piapoco of Brazil, the posture verb *-ya-* has given rise to a durative aspect marker (Aikhenvald 2013: 36). Ex.

Piapoco (Aikhenvald 2013: 36)

i-witsúa-ida i-ya-ka ida.
 3:SG:NF-cut-CAUS 3:SG:NF-stay-DEC canoe
 ‘He kept cutting (out) a canoe.’

English *live* (+ *for*), verb > West African PE (nineteenth and early twentieth centuries) *live* for progressive/habitual (“nonpunctual”) marker. Ex.

West African PE (nineteenth and early twentieth centuries; Huber 1996)

- (a) *Him live.*
 3:SG COP
 ‘He is here.’
 (b) *Me live for take.*
 1:SG PROG take
 ‘I am taking.’

The (a) sentence appears to represent an intermediate stage where *live* serves as a locative/existential copula. Tok Pisin PE *stap* (< Engl. *stop*) ‘stay’ > continuous or durative actions. Ex.

Tok Pisin PE (Sankoff 1979: 44–5)

- (a) *na em wanpela istap long haus ah, ...*
 (and he alone stay at home uh)
 ‘and he alone stayed home uh, ...’
 (b) *Ol kaikai istap nau, disfela meri go insait*
 (they eat stay ? this woman go inside)
 ‘While they were eating, this woman went inside.’

Compare REMAIN.

LIVE (‘to live’, ‘to be alive’, ‘to stay’) > (4) EXIST

English *live*, verb > West African PE (nineteenth and early twentieth centuries) *live*, locative/existential copula. Ex.

West African PE (nineteenth and early twentieth centuries; Huber 1996)

no live
 ‘is not’ / ‘there is not’ / ‘he is not there’

While so far only few examples have been found, this appears to be an instance of a more widespread process whereby a verb, on account of some salient semantic property (‘be alive’), gives rise to a grammatical marker highlighting that property (‘exist’). Compare LOCATIVE; COPULA; LOCATIVE > H-POSSESSIVE.

LIVER (body part) > LOCATIVE

Ngbandi *bé* ‘liver’, noun > ‘(in the) middle’, (spatial) relational noun. Ex.

Ngbandi (Lekens 1958: 47; Helma Pasch, p.c.)

ndó bé da
 place liver house
 ‘in the middle of the house’

Mixe-Zoque **paʔ-t* ‘liver’ > Lowland Mixe *-paʔt* ‘underneath’, nominal suffix (Wichmann 1993: 53–4). Eastern Basque *gibel* ‘liver’ is commonly used to construct postpositions meaning ‘behind’ (lit.: ‘at my liver’, etc.). Ex.

Eastern Basque (anonymous reader)

mendi- a- (r)en gibel- (e)an
 mountain- DET- GEN liver- LOC
 ‘behind the mountain’

The Proto-Bantu noun **-jini* ‘liver’ appears to have given rise to an inessive marker **-jini* ‘in(side)’, and eventually to a general locative suffix in many eastern and southern Bantu languages, such as Swahili (*-ni*), Pokomo, Lomwe, or Tswana (Samson and Schadeberg 1994; Güldemann 1999b: 51–3). This grammaticalization appears to be part of a more general process whereby body parts, on account of their relative location, serve as conceptual templates for spatial orientation; see, for example, BACK; BELLY; EYE; FACE; FLANK; FOOT; HEAD; HEART; NECK. What is remarkable about this particular source concept is that, unlike other body parts, it appears to have given rise to a number of different spatial notions. The primary target, however, is the locative notion ‘in’; Bowden (1992: 36), for example, found five Oceanic languages where terms for ‘liver’ have given rise to IN-markers.

LOCATIVE > (I) AGENT

The Chinese verb *yú* ‘go’ grammaticalized first into a goal marker and from there into a locative marker, and the latter became the source of the later passive agent marker (Yan 2003: 147; Narrog 2014: 74). Ex.

Old Chinese (Mencius; adopted from Alain Peyraube, p.c.)

- (a) *Xue yu zhong guo.*
 learn at central state
 ‘(He) learned (it) in the Central States.’

Old Chinese (Liji; quoted from Sun 1996: 25)

- (b) *xizhe wu jiu si yu hu.*
 yesterday my father:in:law die by tiger
 ‘Yesterday my father-in-law was killed by a tiger.’

Albanian *prej* ‘at’, locative preposition > preposition marking the agent of an action. Ex.

Albanian (Buchholz et al. 1993: 441)

shkruar prej meje
 (PARTCP:write by I:SG:ABL)
 ‘written by me’

Jeri *munu*, adessive or possessive postposition (used with animate nouns only) > *munu*, agent marker in passive constructions. Ex.

Jeri (Tröbs 1998: 126–7)

- (a) *dio do da nbe Awa munu...*
 child INDEF TOP:COP TAM Awa POST
 ‘There was a small child with Awa ...’
- (b) *dio wa keli do munu.*
 child CRS call INDEF POST
 ‘The child was called by somebody.’

In the Bantu languages Tonga and Ila, the locative marker serving as a passive agent marker consists of a locative noun class prefix, which is *a-* (noun class 16) in Tonga and *ku-a-* (*ku-*, locative noun class 17 + *-a-*, genitive marker) in Ila (Fleisch 2005: 98–9). In Luba, another Bantu language, the locative noun class 17 prefix *kù-* combines with the copula *dì-*, yielding *kù-dì* ‘there (where) is’ > agent marker. Ex.

Luba (Heine and Reh 1984: 99)

- bà- sùm- ine mu-âna kù- dì nyòka.*
 they- bite- PERF CI-CHILD there:where- is snake
 ‘The child has been bitten by a snake.’

See Fleisch (2005: 98–9) for a discussion of this pathway in Bantu languages.

Perhaps related to this process is Turkish *taraf* ‘side’, which, when having the possessed marker *-in* and the ablative marker *-dan* on it – *tarafından* – is a common agent marker in passive sentences. Ex.

Turkish (anonymous reader; Lewis [1967] 1985: 93)

- kardes-i taraf-in-dan uzaklas-tir-il-di.*
 brother-his side-POSS-ABL go:away-CAUS-PASS-PAST
 ‘He was sent away by his brother.’

Palancar (2002: 206) found eighteen languages showing locative–agentive syncretism, and there was only one Indo-European language among them, namely Ancient Greek. He notes that ablative- and perlocative-based agent markers thrive in Indo-European languages (see ABLATIVE > AGENT, PERLOCATIVE > AGENT), but not locative-based ones. Languages showing locative–agentive syncretism include (the relevant marker is added in parentheses): Gulf Arabic (*bî*), Kuku-Yalanji (*-nda*), Ngarinjin (*-la*), Ngarluma (*-la*), and Kayardild (*-(ki)ya*) of Australia, Korean (*ey*), Japanese (*ni*), the African languages Hausa (*gà*) and Venda (*nga-*), Nuxalk (Bella Coola; *x-*) of North America, Purépecha (Tarascan; *jimpo*) and Zapotec (*lo*) of Mexico, Evenki (*-du*) and Itelmen (*-enk*) of Russia, and the Oceanic languages Woleaian (*ree*), Tuvaluan (*i*), and Maori (*i*) (Palancar 2002: 207, table 9).

This appears to be an instance of a more general process whereby locative markers assume the function of marking clausal participants (see Keenan 1985:

275; Palancar 2002; Wiemer 2011a); compare LOCATIVE > CAUSE; LOCATIVE > COMPARATIVE; LOCATIVE > CONCERN; LOCATIVE > TEMPORAL.

LOCATIVE > (2) BENEFACTIVE

The Proto-Germanic form **fura* ‘before’ originally had locative meaning but developed in some modern Germanic languages into prepositions whose meanings include that of benefactive, e.g. English *for*, German *für* (Luraghi 2016: 361); *see also* LOCATIVE > CAUSE.

Latin *pro* ‘in exchange for’, ‘before’ had originally spatial meaning, retained to a limited extent in Classical Latin. Latin *pro* gave rise to the benefactive preposition *pour* of Modern French (Luraghi 2016: 362). The Ancient Greek form *hupér* had a spatial meaning (‘over’). In Classical Greek of the New Testament, *hupér* served as preposition expressing benefactive and other abstract case functions (Luraghi 2016: 361). The Turkish postposition *için* has a range of case functions, one of which is benefactive. The postposition appears to have a locative origin; it can be traced back to the genitive form of *iç* ‘interior’ or *uç* ‘edge’ (Luraghi 2016: 361). Ex.

Turkish (Luraghi 2016: 361)

sizin için bir kitap getirdim.

2:PL:GEN for one book bring:PAST:1:SG

‘I took a book for you.’

See Luraghi (2016) for more detailed discussion of this pathway. Locative markers are clearly the most important source of case markers of all kinds (see the other entries under LOCATIVE).

LOCATIVE > (3) CAUSE

Archaic Chinese *shang*, locative noun > Early Modern Chinese *shang* ‘this/that side, here/there > Early Modern Chinese *shang*, causal postposition (Long et al. 2012).

The Proto-Indo-European locative adverb **prh₂ó/i* ‘in front (next to)’, developing into the Proto-Germanic adverb and preposition **furi* ‘in front’, gave rise to the English preposition *for* (cf. LOCATIVE > BENEFACTIVE). Already since Old English, *for* introduced causal clauses, either together with the dative/accusative/instrumental case of the demonstrative ‘that’ (*forþam/þæm, forþon, forþy*) or together with *þam/þæm, þon* or *þy* and the relative marker *þe* (*forþam/þæmþe, forþonþe, forþyþe*; Greisinger 2016: 93–97, 116–18). Greisinger (2016) proposes that this development was part of the following grammaticalization chain from Proto-Indo-European to Middle English: ADVERB > ADVERB/PREPOSITION > PREPOSITION > CAUSE > COMPLEMENTIZER.

Imonda *-ia*, locative marker > *-ia* ‘because’, cause marker. Ex.

Imonda (Seiler 1985: 71f.)

- (a) iëf-ia ia
house-LOC
'at the house'
- (b) Bob-na-ia adeia së e-fë-i-me.
Bob-POSS-because work NEG DU-DO-PAST-NEG
'We did not do any work because of Bob.'

Albanian *prej* 'at', locative preposition > preposition marking reason. Ex.

Albanian (Buchholz et al. 1993: 441)

Dridhet prej së ftohti.
(shiver.3:SG:PRES from ART cold)
'He shivers from cold.'

This appears to be an extremely widespread process whereby locative markers are grammaticalized to markers of cause; concerning English examples, see Radden (1985).

LOCATIVE > (4) COMITATIVE

Luraghi (2001b: 390) reconstructs the following pathway of grammaticalization, following Heine et al. (1991a: 159) and Stolz et al. (2005; 2006): Location > Comitative > Instrument.

Proto-Indo-European **me* 'in the mid (of), within' > German *mit* 'with', comitative and instrumental preposition. Homeric Greek *metá* (taking dative or accusative case) 'between', 'among', locative preposition > Attic 'with', comitative preposition. Greek *metá* had mostly a locative meaning in Homeric Greek before its comitative meaning evolved; cf. Modern Greek *me* 'with', comitative and instrumental preposition (Luraghi 2001b: 391–2).

See also Luraghi (2014), Narrog (2014: 74). Compare LOCATIVE > INSTRUMENT; COMITATIVE > INSTRUMENT.

LOCATIVE > (5) COMPARATIVE

Old Chinese *yu* 'at', locative adposition⁴⁹ > marker of standard of comparison. Ex.

Archaic Chinese (Peyraube 1989b)

Ji shi fu yu Zhou gong.
Ji family rich more:than Zhou duke
'The Ji family was richer than the Duke of Zhou.'

Primi *to*⁵⁵ 'top of ...', locative particle > *to*⁵⁵, comparative particle (Long et al. 2012). Naga *ki* 'on' > comparative marker. Ex.

⁴⁹ The meaning of *yu* includes incorporated location, source, and goal in Old Chinese; that is, *yu* appears to have been a more general multipurpose locative marker (see Sun 1996: 25).

Naga, Sino-Tibetan (Stassen 1985: 147)

Themma hau lu ki vi-we.
 man this that on good-is
 ‘This man is better than that man.’

Akie *nen* ‘at’, locative preposition > ‘than’, marker of standard in comparative constructions of inequality (König et al. 2015: 95–6).

See Stassen (1985) and Heine (1997b: 114–15) for this common process, whereby locative markers are grammaticalized to introduce the standard of comparison. This appears to be a more general process according to which grammatical markers having a spatial base serve as conceptual templates for comparative markers; see ABLATIVE; UP. This pathway is also suggestive of a process whereby locative markers assume the function of marking clause participants; compare LOCATIVE > AGENT; LOCATIVE > CONCERN; LOCATIVE > TEMPORAL.

LOCATIVE > (6) COMPLETIVE

In a number of European languages, locative particles such as adverbs and adpositions can be added to activity verbs to turn them into accomplishment verbs with a completive flavour, indicating that something is done thoroughly and to completion, and/or expressing telicity and change of state.

English *eat* vs *eat up*, *come* vs *come in*, *write* vs *write off*, *run* vs *run away*. German *gehen* (go:INF) ‘to go’ vs *weggehen* (away:go:INF) ‘to go off’, *trinken* (drink:INF) ‘to drink’ vs *austrinken* (out:drink:INF) ‘to empty (a glass, cup, etc.)’, *schalten* (switch:INF) ‘to switch’ vs *abschalten* (off:switch:INF) ‘to switch off’.

In Bulgarian, the preposition *do* ‘near, next to, next to and touching, up to (proximity, contact)’, see (a), has developed into a telic prefix meaning that the verb situation is being viewed as reaching – or having reached – its end, see (b). Ex.

Bulgarian

- (a) *Toj sedi do prozorec-a.*
 he sit:3:SG:PRES near window-DEF
 ‘He is sitting near the window.’
- (b) *Do-vārši si rabota-ta!*
 near-do:2:SG:IMPV:IMP REFL work-DEF
 ‘Do your work until the end!’/‘Complete your work!’

Brucale and Mocciano (2017: 230) propose the following development of the erstwhile Latin locative preposition and preverb *per/per-* ‘through’: LOCAL VALUES (PATH) > INTENSIFICATION > COMPLETION/CHANGE OF STATE.

It would seem that underlying most of these processes there is grammaticalization from (locative particle – verb) compounding to derivation, whereby the locative marker turns from free form into a clitic and derivational affix. At the same time, this is rarely a fully productive development; more commonly, the two forms fuse, ending up in new lexicalized verbs. For example, in its development towards a marker of completion and telicity, the erstwhile locative marker *per/per-* ‘through’ of Latin lost its compositionality, lexicalizing into new, unanalysable verbs (Brucale and Mocciaro 2017).

More research is needed to establish that this pathway is not restricted to Indo-European languages of Europe.

LOCATIVE > (7) CONCERN

Markers used to express concern have markers for the locative concept UP as one of their primary sources. It would seem, however, that in addition, other kinds of locative markers may be grammaticalized to CONCERN markers. Thus, the Archaic Chinese verb *jiu* ‘approach, go near’ developed into locative *jiu* in Medieval Chinese, and in Early Modern Chinese *jiu* acquired uses as a marker of concern (Long et al. 2012).

In Silacayoapan, the noun *sàʔà* or *šàʔà* ‘foot’ has given rise to a locative marker ‘bottom of’, whose use appears to have been extended to also express concern. Ex.

Silacayoapan (Shields 1988: 318; quoted from Hollenbach 1995: 180)

ndítúʔún ndè sàʔà ñuu ndè.
discuss we:EXCL foot town our:EXCL
‘We are talking about our town.’

Similarly, in Alacatlalzala, the etymologically related noun *šàʔà* ‘foot’ seems to have given rise to a marker of concern in specific contexts (see Hollenbach 1995: 181). *See also* GIVE; UP. More research is needed on the conceptual nature and areal distribution of this grammaticalization, which appears to be an instance of a widespread process whereby spatial and temporal markers are grammaticalized in specific contexts to markers of “logical” grammatical relations, such as adversative, causal, concern, concessive, and conditional relations; see, for example, ALLATIVE; SINCE; TEMPORAL; UP.

LOCATIVE > (8) EXIST

Limbu *ya.kmaʔ* ‘to be somewhere’, locative copula > existential copula with locative implications. Ex.

Limbu (van Driem 1987: 63–4)

(a) *khuneʔ yo. ya.k.*
he below be
‘He is below.’

- (b) *yum me- ya.k- nen.*
 salt NEG- be- NEG
 ‘There is no salt [in it].’

English

- (a) *Théré is my beer.* (Spatial)
 (b) *There is beer at home.* (Existential)

Swahili *-ko* locative copula > existential copula when used without a locative argument. Ex.

Swahili

- (a) *Pombe yangu iko nyumba-ni.*
 beer my be:at home- LOC
 ‘My beer is at home.’
 (b) *Pombe i-po.*
 beer n9-be:at
 ‘There is beer’ / ‘beer exists’

English *there*, adverb > Sranan CE *de(e)* ‘be (somewhere)’, ‘exist’. Ex.

Sranan CE (Boretzky 1983: 158)

taig mi, pe den de.
 (tell me where they exist)
 ‘Tell me where they are.’

In many languages this appears to be a context-induced reinterpretation of a locative copula that assumes the function of an existential marker when there is not a locative argument. More research is needed on the exact nature and the genetic and areal distribution of this process.

LOCATIVE > (9) INSTRUMENT

Evidence for this grammaticalization has been found in Indo-European languages (e.g. Blake 2001: 173; Luraghi 2003: 35, 88, 322) and in Finno-Ugric languages (Grünthal 2003: 139–41). For the English preposition *by* an original meaning of position ‘at the side or edge of’ is proposed (Narrog 2014: 75). But there is also evidence from other languages, such as languages of the Bantu family. For example, the locative noun class marker **ku* (c16) of Proto-Bantu in combination with the genitive marker **-a* has given rise to both a locative and an instrumental preposition: Swahili *ku*, locative noun class 16, + *-a*, genitive marker > *kwa* ‘at’, locative preposition > *kwa* ‘with’, instrumental preposition, e.g. *kwa kisu* ‘with a knife’.

Compare LOCATIVE > COMITATIVE; COMITATIVE > INSTRUMENT.

LOCATIVE > (10) PERS-PRON

Hagège characterizes the relevant conceptual transfer in the following way: there are “languages which use spatial adverbs with the meaning

of personal pronouns: Japanese *kotira* ‘here’ often refers to the speaker, Vietnamese *đây* ‘here’ and *đây* (or *dó*) ‘there’ are used with the meanings ‘I’ and ‘you’ respectively when one wants to avoid the hierarchical or affective connotations linked to the use of personal pronouns ...” (Hagège 1993: 216–17).

In Korean, the following expressions for distal space can serve as third person pronouns: the noun phrases *ce ccok/phyen* ‘that side’, *ce kos* ‘that place’, and the locative adverb *ceki* ‘there’. In addition, the distal adverb *ceki* ‘there’ may be used in the function of a second person pronoun ‘you’ (Heine and Song 2011: 607).

There are rarely clear instances of fully grammaticalized categories arising in this way. One example is provided by the Japanese second person pronoun *anata*, which originates in a spatial deictic noun signalling roughly ‘over there’ (or ‘that part’) in Late Old Japanese, having been used as a third person marker (‘person over there’) in Early Modern Japanese before it shifted to a second person pronoun *anata* around 1750 (Traugott and Dasher 2002: 230). A shift from third to second person pronoun is also documented in German, where the third person plural pronoun *sie* ‘they’ acquired the additional function of a second person pronoun (*Sie* ‘you’, plural and singular) in the eighteenth century (Heine and Song 2011: 619).

See also HERE > PERS-PRON.

LOCATIVE > (II) A-POSSESSIVE⁵⁰

Early Modern Chinese *di/gendi*, locative > *di/gendi*, attributive possessive marker (Long et al. 2012). Akie *pa* ‘in, at’, locative preposition > *pa* ‘of’, marker of attributive possession used when the possessee has some locative significance (König et al. 2015: 82, 88). Ex.

Akie (König et al. 2015: 82)

<i>íkí</i>	<i>keélie</i>	<i>chu</i>		<i>pa</i>		<i>sáaen</i>		<i>chu</i>
these	foot:PL	DEM:DISTAL:PL		GEN:LOC		buffalo:PL:OBJ		DEM:DISTAL:PL
‘those footprints of those buffaloes’								

Albanian *prej* ‘at’, locative preposition > preposition marking the genitive. Ex.

Albanian (Buchholz et al. 1993: 441)

<i>shuall</i>	<i>prej</i>	<i>gome</i>
sole	GEN	rubber
‘rubber sole’		

Faroese *hjá* ‘at’, preposition > marker of attributive possession. Ex.

⁵⁰ A-POSSESSIVE refers to markers of attributive possession (cf. English *of*; see Heine 1997a).

Faroese (Lockwood 1955: 104–5, quoted from Koptjevskaja-Tamm forthcoming)

hestur-in Hjá Jógván-i
 horse- DEF:SG:M:NOM at John- SG:DAT
 ‘John’s horse’

Scottish Gaelic *aig* ‘at’ > marker of attributive possession. Ex.

Scottish Gaelic (Koptjevskaja-Tamm forthcoming)

an taigh aig a’ mhinistear
 THE:M:SG:NOM house:NOM:SG at the:M:SG:DAT minister:M:SG:NOM
 ‘the minister’s house’

Irish *ag* ‘at’ > marker of attributive possession. Ex.

Irish (Koptjevskaja-Tamm forthcoming)

an chathaoir seo ag Peadar
 the:M:SG:NOM CHAIR:NOM:SG this at Peter:NOM:SG
 ‘this chair of Peter’

This pattern of grammaticalization is described as an instance of the Location Schema in Heine (1997a: 114–15).

This is an example of a more general process whereby participant marking within the clause is extended to the syntax of the noun phrase. *See* BENEFACTIVE > A-POSSESSIVE, ABLATIVE > A-POSSESSIVE.

LOCATIVE > (I2) H-POSSESSIVE**Russian**

U menja kniga.
 at me book
 ‘I have a book.’

So -o, -a, locative case suffix > marker of predicative possession. Ex.

So (Carlin 1993: 68)

mek Auca eo-a kus-in
 NEG Auca home-LOC skin-PL
 ‘Auca has no clothes.’

This fairly common case of grammaticalization is described as an instance of the Location Schema in Heine (1997a: 114–15).

LOCATIVE > (I3) PROGRESSIVE

Suzhou dialect of Wu *ləʔ* ... *lã* ‘be on top of’ > *ləʔ lã* ‘be on top’ > *ləʔ lã* ‘be at’, verb/‘at’, preposition > *ləʔ lã*, progressive marker (Long et al. 2012).

Imonda -ia, locative marker > progressive marker as (a) a nominal suffix with nouns denoting activity, and (b) as a verbal suffix. Ex.

Imonda (Seiler 1985: 72)

tôbtô soh-ia ale-f.
 fish search-LOC stay-PRES
 'He is looking for fish.'

Diola Fogny verbal noun + copula *-em* + locative preposition *di* > progressive construction. Ex.

Diola Fogny (Blansitt 1975: 17)

burɔk nɛn di bɔ (nɛn di < nɛmdi)
 work I:am in it
 'I am working.'

Irish *ag* 'at' + verbal noun > continuous marker. Ex.

Irish (Blansitt 1975: 19)

Tá sé ag dúnadh an dorais
 be he at shutting the of:door
 'He is shutting the door.'

In Chinese, the marker *zhe*, which in Old Chinese was a verb whose meanings included 'to attach', appears to have developed into a prepositional locative marker in Middle Chinese and, after stative verbs like *zuo* 'sit', may have been a source for durative uses (Sun 1998: 163).

In some French-based creoles, it is the locative notion 'behind', that is, terms derived from French *après*, which appears to have given rise to progressive markers; for example, Seychelles CF (*a*)*pe*, which serves to denote progressive and inchoative events. Ex.

Seychelles CF (Corne 1977: 65)

môti ape sate i pe malad.
 (1:SG: PAST *ape* sing) (3:SG *ape* be:sick)
 'I was singing.' 'He is getting sick.'

This grammaticalization appears to be an instance of a more general process whereby grammatical aspect functions are conceptualized and expressed in terms of locative concepts; compare NEAR > PROXIMATIVE. The description of this grammaticalization is, however, somewhat misleading since, more often than not, locative markers are but one constituent in the relevant source construction, which typically also involves a copular predicate. There are a number of different locative concepts that give rise to progressive constructions; for more details, see Heine (1993: 32–3). That locative constructions constitute the primary source for progressives in Atlantic creoles has been shown by Boretzky (1983) and Holm (1988: 154–7), and since progressives may acquire habitual meanings (see Bybee et al. 1994: 151–3), this very schema can also be held responsible for the fact that instances of the

Location Schema (see Heine 1997a) may also (but need not) express habitual functions (cf. Holm 1988: 157ff.).

LOCATIVE > (I4) RELATIVE

The present pathway is proposed by Rubin (2005: 49–50):

A few Semitic languages exhibit a relative pronoun which derives from a noun **'aθar*- 'place' (cf. Akkadian *ašrum*, Aramaic *'atrā* 'idem'). This development is best known from Biblical Hebrew, where *'āšer* has become the normal relative pronoun (and, later, complementizer), and the lexical form has been lost: Biblical Hebrew: *hā- 'ānāšîm 'āšer bā 'û* 'the men who came' (Gen. 19:5); *ham-māqôm 'āšer 'āmad* 'the place where he had stood' (Gen. 19:27). (Rubin 2005: 49)

Rubin found evidence in Semitic languages for the following chain of grammaticalization: locative > locative relative > general relative clause marker.

In Akkadian, the construction was mainly limited to locative relative uses, but there are also examples of a general relativizer in Akkadian (Old Assyrian), e.g. *ašar damqūni lū nīpuš* 'let us do **what** is proper' (Rubin 2005: 50). In Biblical Hebrew, the form *'āšer* turned into a general relative pronoun, e.g. *hā- 'ānāšîm 'āšer bā 'û* 'the men **who** came' (Gen. 19:5; Rubin 2005: 50). This form underwent erosion to *še-* (dialectal *ša-*), and already in some early Hebrew dialects, and in Late Biblical Hebrew and Mishnaic Hebrew, as well as in Modern Hebrew, the reduced form has replaced the full one.

Rubin (2005: 50) finds parallels to the present pathway in Danish, dialectal German, and Modern Greek, where the locative relative 'where' has become a general relative clause marker. This applies, for example, to the German dialect of Swabian, where the question word and locative relativizer *wo* 'where' is used, either on its own or combined with the demonstrative-derived relative marker *d-*, as a general relativizer. Ex.

Swabian German usage (own data)

Helmut ist der, wo Samstags sein Auto wäscht.
 Helmut is the:one where on:Saturdays his car washes
 'Helmut is the one who washes his car on Saturdays.'

More crosslinguistic data are needed to establish this pathway of grammaticalization. Compare WH-QUESTION > RELATIVE.

LOCATIVE > (I5) SUBORDINATOR

The locative postposition *na* of Classical Tibetan was extended to also serve as a clause subordinator ('if/although', 'when/while/after') (Genetti 1991: 229; Heine and Kuteva 2007: 222). Khwe 'o 'at', locative postposition > 'o, subordinator of temporal, causal, and modal clauses. Ex.

Khwe (cf. Köhler 1981a: 550; Yvonne Treis, p.c.)

tíú pòò yáá xàm' ún-á-xu-a-ta 'ò.
 then jackal come lion hunt-I-TERM-I-PAST SUB
 'Then the jackal came, when the lion had left for hunting.'

Proto-Germanic **umbi* 'around, about', adverb, preposition > Old High German *um*, purpose clause marker. From Old High German to Modern German in the eighteenth century, *um* could occur either with the demonstrative *das* 'that' and the subordinator or the complementizer *daß* (*um das daß* 'in order that'), or just with the complementizer *daß* (*um daß*) (Isabella Greisinger, p.c.; Greisinger 2016: 114–16).

Mithun (2016) hypothesizes that the particle *tsi* of the Iroquoian language Mohawk was extended from use as a place nominalizer to time, manner, and degree, and ultimately to events that function as clausal complements. Saramaccan CE *ká* 'where', 'at that place' (< Portuguese *acá* 'here', 'this way') > marker of adverbial locative clauses (Byrne 1988).

Locative markers appear to be one of the most common sources for clause subordinators (cf. Radden 1985). See also HERE > CAUSE.

LOCATIVE > (I6) TEMPORAL

Early Modern Chinese *bian* 'place', locative postposition > *bian*, temporal postposition (Long et al. 2012). Tamil *-il* 'on', 'at', locative suffix > *-il* 'in', 'at', temporal suffix. Ex.

Tamil (T. Lehmann 1989: 39)

- (a) *kurivi mara-tt-il ut.kaar- kir- atu.*
 bird tree-OBL-LOC sit- PRES- 3:NEUT:SG
 'The bird is sitting on the tree.'
- (b) *kumaar oru vaara-tt-il inta.p pustaka-*
 Kumar one week-OBL-LOC this book
tt-ai.p paṭi- tt- aan.
 OBL-ACC study- PAST- 3:M:SG
 'Kumar read this book in one week.'

This is perhaps one of the most frequently employed conceptual metaphors; see, for example, Givón (1979a: 217), Lord (1989), Heine et al. (1991a), Haspelmath (1997b). It is hard to find languages where some expressions for locative concepts are not extended to also refer to temporal concepts. At the same time, a reverse directionality has also been observed: the Archaic Chinese form *zi* 'now' developed a polysemy where *zi* expressed both 'here' and 'now' (Bo Hong, own data).

See also ABLATIVE; ALLATIVE; BEHIND; FRONT; IN; INTERIOR.

LOOK > DISCOURSE MARKER

The present pathway is restricted to imperative forms of verbs for ‘look (at)’, which are reinterpreted as markers of discourse management whose function it is in most cases to draw the hearer’s attention to the content of the following predication. English *look!*, verbal imperative > *look*, discourse marker; see Brinton (2008a: 184–202) for diachronic analysis, where *look* is discussed as a comment clause. Colloquial German *schau-en* (look-INF) ‘look’, *schau!* ‘look!’ > *schau*, discourse marker for drawing the hearer’s attention to new information (see (Auer and Günthner 2005: 346).

Lingala *ko-tála* (INF-look) ‘look’, *tála* ‘look!’, singular imperative > *tála*, discourse marker (see Nzoimbene 2016: 280–311 for detailed analysis). Akie *taak* (imperfective), *sowa* (perfective) ‘see’, *sow-en* (see:PFV-IMP) ‘look!’, imperative plural > *sowen*, discourse marker, drawing attention to the following discourse unit (König et al. 2015: 136).

This pathway cannot be described exhaustively in terms of grammaticalization. As argued in Heine et al. (2013; 2017), it also involves cooptation, a discourse strategy whereby a unit of sentence grammar is deployed for specific discourse purposes such as expressing functions of text organization, attitudes of the speaker, and/or speaker–hearer interaction. Whereas grammaticalization typically leads to semantic and morphosyntactic integration, cooptation has the opposite effect, that is, the unit is semantically and morphosyntactically unattached, frequently also being prosodically marked off. Thus, unlike most of the other data discussed in this book, the evolution of discourse markers is more complex, being the result of cooptation followed by grammaticalization (Heine 2013).

In the present pathway, cooptation and grammaticalization take the imperative form of ‘look’/‘see’-verbs as a basis. Usually, this is a singular imperative but, as the Akie example illustrates, it may as well be a plural imperative form.

See also GOD > INTERJECTION; LISTEN > DISCOURSE MARKER; MAN > INTERJECTION; RIGHT > DISCOURSE MARKER; NOW > DISCOURSE MARKER; THEN > DISCOURSE MARKER; WELL > DISCOURSE MARKER.

‘Lose, to’, see LACK

LOVE (‘to love’, ‘to like’) > (1) AVERTIVE

Cahuilla -*páyaw*- ‘to love’, transitive verb > avertive marker, “indicating that the process portrayed by the nucleus was intended, and ‘almost’, but not wholly, realized” (Seiler 1977: 221). Ex.

Cahuilla (Seiler 1977: 221)

hem- píčalaw- páyaw- ʔi.
 3:PL- get:there- love- ABS
 ‘They almost got there.’

A detailed reconstruction of this process in Tok Pisin PE can be found in Romaine (1999). This instance is probably a special case of the (>) WANT > PROXIMATIVE pathway.

LOVE ('to love', 'to like') > (2) FUTURE

Albanian *do* 'love', 'need', 'wish' > auxiliary expressing future tense. Ex.

Albanian (Buchholz et al. 1993: 693)

Do tẽ çilen tẽ tjera galeri.
(FUT ART open:3:PL:PRES PART other galleries)
'More galleries will be opened.'

English *like*, verb > Tok Pisin PE *laik*, future marker. Ex.

Tok Pisin PE (Bybee et al. 1994: 255)

mi laik wokabaut.
'I shall walk.'

This is probably a special case of the (>) WANT > FUTURE grammaticalization.

LOVE ('to love', 'to like') > (3) INTENTION

Lingala *-linga* 'love', 'want', verb > auxiliary expressing intentions. Ex.

Lingala (van Everbroeck 1969: 140)

na- ling- i ko- kende.
(1:SG- love- PAST⁵¹ to- go)
'I intend to go.'

As the crosslinguistic analysis by Bybee et al. (1991) suggests, the evolution LOVE/WANT > INTENTION is a common intermediate step in the development leading to new FUTURE markers (*see also* WANT). The conceptual distinction between LOVE and WANT is fuzzy in many languages. No attempt is made here to make a rigid separation of the two. Accordingly, both share similar patterns of conceptual shift (*see* WANT).

LOVE ('to love', 'to like') > (4) PROXIMATIVE

Lingala *-linga* 'love', 'want', verb > marker of proximative aspect. Ex.

Lingala (van Everbroeck 1969: 140)

o-ling-i oyéb-i lingála.
(2:sg-love-PAST know-PAST⁵² Lingala)
'You almost know Lingala.'

English *like*, verb > Tok Pisin PE *laik*, proximative marker. Ex.

⁵¹ It is very likely that the past marker *-i* has a function other than past tense in this example.

⁵² See note 51 above.

Tok Pisin PE (Bybee et al. 1994: 255)*em i laik wokabaut.*

'He is about to walk.'

A detailed reconstruction of this process can be found in Romaine (1999). This instance is probably a special case of the (>) WANT > PROXIMATIVE grammaticalization.

M**'Make, to' see DO****MAN ('man', 'male') > (I) CLASSIFIER**

Zhuang *pou*⁴ 'man', noun > *pou*⁴, classifier (Long et al. 2012). Kilivila *tau* 'man', noun > *to/te*, classificatory particle for persons of male sex and for human beings (Senft 1996: 20, 22, 353). Thai *khon* 'man', 'person' > classifier for humans in general (Bisang 1999: 128). Ex.

Thai (Bisang 1999: 168)

- (a) *khon- khây sām khon*
 CN:man- sick three CLASS:man
 'three patients'
- (b) *phûu-khôn-khwáa sîi khon*
 researcher four CLASS
 'four researchers'

Akatek *winaj* 'man', noun > *naj*, noun classifier for human beings, saints, and mythological animals (Zavala 2000: 134–5). Ex.

Akatek (Zavala 2000: 136)

naj me'
 CLASS sheep
 'the sheep'

Concerning the rise and development of classifiers in Chinese, see Peyraube (1998; Aikhenvald 2000). This grammaticalization appears to be part of a more general process whereby certain nouns, on account of some specific semantic characteristic, are recruited as structural templates for a folk taxonomic classification of nominal concepts; *see also* BRANCH; CHILD; PIECE; SONG; TREE; WOMAN. More research is needed on the genetic and areal distribution of this process. Compare PERSON.

MAN ('man', 'male') > (2) INTERJECTION

English *man*, noun > *Man!*, interjection, e.g. *Man, this curry is delicious!*. German *Mann* 'man', noun > Colloquial German *Mann!*, utterance-initial exclamation, e.g. *Mann, schmeckt das Bier gut!* 'Man, how good this beer tastes!'

Moré *dawa* 'man (vir)' > *dawa!* 'Hi, you there!' (exclamative particle; Alexandre 1953b: 79f.). Ik *ɲɔtɔ*- 'men, husbands', suppletive plural noun > *ɲɔtɔ=ni* ('These men!'), interjection of surprise (Schrock 2014: 459, 667). Swahili *bwana* 'man', 'sir', noun > *bwana!* 'you there!' Ex.

Swahili (own data)

u- si- ni- sumbu- e, bwana!
 2:SG- NEG- 1:SG:OBJ- discomfort- SUBJUNCT man
 'Don't disturb me!' (can be used in some dialects even if a female person is addressed)

The present pathway cannot be described exhaustively in terms of grammaticalization. As argued in Heine et al. (2013; 2017), it also involves cooptation, a discourse strategy whereby a unit of sentence grammar – which in this case is a noun – is deployed for specific discourse purposes such as expressing functions of text organization, attitudes of the speaker, and/or speaker–hearer interaction. Whereas grammaticalization typically leads to semantic and morphosyntactic integration, cooptation has the opposite effect, that is, the unit is semantically and morphosyntactically unintegrated, frequently also prosodically marked off. Thus, unlike most of the other data discussed in this book, an evolution of this kind is more complex, being the result of cooptation followed by grammaticalization (Heine 2013).

See also GOD > INTERJECTION; NOW > DISCOURSE MARKER; RIGHT > DISCOURSE MARKER; THEN > DISCOURSE MARKER; WELL > DISCOURSE MARKER.

MAN ('man', 'male') > (3) INDEFINITE PRONOUN

Latin *homo* 'man', 'person', noun > French *on*, indefinite pronoun. Old Italian (*l')*uomo 'man', noun > Abruzzese *nome*, human non-referential indefinite marker (Giacalone Ramat and Sansò 2007). Icelandic *maður* 'man', 'person', noun > 'someone', indefinite pronoun. Ex.

Icelandic (Stolz 1991b: 13)

maður leita-r til hin- s
 PRON:NOM draw-3:SG to other- NEUT:SG:GEN
kyn-s-in-s.
 SEX-GEN:NEUT:SG-DET-NEUT:SG:GEN
 'One is inclined toward the other sex.'

Old German *Mann* 'man', noun > *man*, indefinite pronoun (subject only). Ex.

German

Man tut das nicht.
 someone does that not
 'One doesn't do that.'

The grammaticalization of nouns for 'man' into a non-referential indefinite form and, in some European languages, into an indefinite pronoun is discussed in detail in Giacalone Ramat and Sansò (2007); see also Lehmann (1982: 51–2). Haspelmath (1997a: 182) describes the process thus: the generic noun is “first used in a noun phrase without modifiers to render meanings like ‘somebody’, ‘something’, and . . . gradually acquires phonological, morphological and syntactic features that set it off from other nouns”.

This appears to be an instance of a process whereby generic nouns like 'person' and 'thing', either on their own or as part of some noun phrase, are grammaticalized to pronouns; compare PERSON; THING.

MAN ('man', 'male') > (4) MALE

Nouns for 'man (*vir*)' have been grammaticalized in some languages to closed-class categories denoting male participants, typically as adjectival modifiers or derivational affixes. Huojia dialect of Chinese *nan*⁴ 'man' > *nan*⁴-, marker of male animals (Long et al. 2012). !Xun, N1 dialect *lòq*, PL *nlae* 'man', 'male', noun > -*lòq*, PL -*nlae* 'male', derivational suffix mostly on animal names. Ex.

!Xun, N1 dialect (Bernd Heine, field notes)

!xó-lòq, PL !xó-nlae !hm-lòq, PL !hm-nlae
'male elephant(s)' 'male leopard(s)'

Ewe *ɲútsu* 'man', noun > -*ɲútsu* 'male', derivative suffix of limited productivity. Ex.

Ewe (see Westermann 1907: 48–9)

<i>nɔvi-</i>	<i>ɲútsu</i>	<i>srɔ-</i>	<i>ɲútsu</i>
sibling-	man	spouse-	man
'brother'		'husband'	

Ewe *atsú* 'husband', noun > -*tsú* 'male', derivative suffix mostly on animal and plant names. Ex.

Ewe (see Westermann 1907: 48)

nyi *nyi-tsú*
'cattle' 'bull'

This is an instance of a process whereby human nouns, on account of some salient semantic characteristic, give rise to grammatical markers highlighting that characteristic; see also CHILD; FATHER; MOTHER; WOMAN.

MAN ('man', 'male') > (5) PERS-PRON, THIRD

!Ani *khó(e)-mà* 'male person', 'man', noun > *khó(e)-mà*, *khó-m* 'he', third person masculine singular pronoun. Ex.

!Ani (Heine 1999: 28)

[. . .]	<i>kána</i>	<i>khó-m</i>	<i>hin-lòè</i>	<i>kx'éí-hè</i> .
	because	person-M:SG	do-HAB	manner-F:SG

'[The crocodile catches her] because this is the way he (= the crocodile) does it.'

Lendu *ke* 'man', *ndrú* or *kpà* 'people', noun > *ke*, third person singular pronoun, *ndru* or *kpa*, third person plural pronoun. Ex.

Lendu (Tucker 1940: 392)

<i>ma- zhi</i>	<i>ndru</i>	<i>ke</i>	<i>zhi</i>	<i>kpa.</i>
1:SG-LOVE	3:PL	3:SG	love	3:PL
'I love them.'		'He loves them.'		

Zande *kumba* (**ko*) 'man', 'male' > *kó*, masculine gender pronoun (Heine and Reh 1984: 223; Claudi 1985).⁵³

There are examples of this grammaticalization from three different language families, but all are confined to Africa; conceivably, we are dealing with an areal phenomenon. See also Heine and Reh (1984: 223–4, 272). In a number of languages, nouns for 'man' also mean 'person, human being', expressed by the same lexeme, and it remains frequently unclear which of the two was responsible for the grammaticalization concerned; *see also* PERSON > PERS-PRON, THIRD.

This appears to be another instance of a process whereby generic nouns like 'person' and 'thing' are grammaticalized to pronouns; compare PERSON; THING.

MANNER ('manner', 'kind') > SIMILATIVE

Treis (2017: 132) observes that in the Highland East Cushitic and Omotic groups of northeastern Africa, some languages still use the standard marker of similitive constructions as a full noun meaning 'manner' or 'kind'. Furthermore, the grammatical markers used for similitive functions have retained important nominal features in some languages. For example, the similitive marker *màtó* of the Ethiopian Cushitic language Yemsa is no longer attested as a noun but the fact that it forms the head of genitive constructions appears to bear witness to its earlier nominal status (Zaugg-Coretti 2017: 344). On the basis of such observations we hypothesize that such nouns form one of the sources for similitive markers to evolve (*see also* HOW > SIMILATIVE and SAY > SIMILATIVE).

Treis (2017) reconstructs the manner nominalizer =*g* of the Ethiopian language Kambaata to a masculine noun meaning 'manner'. The functions of this enclitic include that of a similitive marker. Ex.

Kambaata (Treis 2017: 94)

- (a) *lal-i=g-a*
cattle-M:GEN=g-M:ACC/OBL
'(the) manner of (the) cattle, the cattle's way of doing things'
- (b) [*Adan-ch-ó=g-a*] *gá'l-a* *agg-óomm*
cats-SG-F:GEN=g-M:ACC/OBL shard-M:OBL drink-1:SG:PFV
'I drank from a shard [**like** a cat] (lit.: in the manner of cats).'

⁵³ Helma Pasch (p.c.) considers this reconstruction to be conjectural.

Archaic Chinese *-ran* adverbials may either express manner of an action or mean ‘like . . .’, that is, they have similitive meaning (Long et al. 2012). Thai *yàaŋ* ‘way’, ‘manner’, noun > *yàaŋ-kàb* (lit.: ‘way/manner-with’), comparison marker ‘as if’ (Bisang 1998b: 777). Kenya Pidgin Swahili (PS) *namna* (*ile*) ‘manner (which)’ > ‘like’, ‘as’. Ex.

Kenya PS (own data)

Fanya namna (ile) wewe na- taka.
do manner (DEM) you PRES- want
‘Do it as you like.’

See the contributions in Treis and Vanhove (2017) for further data supporting the present pathway. Nevertheless, more crosslinguistic data are needed to substantiate it.

MATTER > (I) CAUSE

‖Ani *mùqóá-sì* ‘matter’ (matter-F:SG), noun > ‘because of’, postposition. Ex.

‖Ani

Tí fiàâ- tè tsá dì mùqóá-sì kà.
I:SG come-PRES 2:M:SG POSS reason- F:SG LOC
‘I came because of you.’

Baka *ʔeè ná kè . . . nè* (‘matter’-ART DEM . . . REL) ‘therefore’ (conjunction of reason). Ex.

Baka (Christa Kilian-Hatz, p.c.)

<i>ʔá</i>	<i>jàè</i>	<i>peè</i>	<i>mòni</i>	<i>kòpɛ.</i>
3:SG	take:PAST	BEN:I:SG	money	all
<i>ʔeè ná kè</i>	<i>ma</i>	<i>gbóɛ</i>	<i>li</i>	<i>nè.</i>
therefore	1:SG	beat:PAST	him	REL

‘He has stolen all my money; therefore I have beaten him.’

Vai *kò* ‘matter’, ‘affair’, ‘news’, ‘thing’, ‘case’, noun > *-kòá* (< *-ko* + *a*) ‘to’, ‘in order to’, ‘on account of’, subordinator of purpose or reason clauses. Ex.

Vai (Koelle [1854] 1968: 190)

- (a) *mbé kò bɛ́ níe?*
(what news COP here)
‘What is the news here?’
- (b) *i:fára: sá na: djé:kò:a.*
(2:SG:be:glad 1:SG:POSS see:REAS)
‘Thou art glad on account of seeing me.’

Lingala *zambí* ‘matter’, noun > ‘because’, conjunction (van Everbroeck 1958: 160). Kikuyu *ũndũ* (noun class 14/16) ‘act’, ‘deed’, ‘event’, ‘matter’, ‘affair’, noun > *niũndũwa* (COP:matter of) ‘because of’, preposition. Ex.

Kikuyu (Mathias Schladt, p.c.)

- (a) *gu- ti- Rí ãndũ*
 C15- NEG- Be matter
 ‘no matter’
- (b) *nĩ n- gũ igua ãũru ní ãndũ*
 PART- 1:SG- FUT- feel bad COP matter
wa ã- horo ã- cio.
 of C14- affair C14- that
 ‘I feel unhappy because of that affair.’

Bulu *ajô* ‘talk’, ‘matter’, ‘palaver’ + *te*, anaphoric demonstrative > *ajôte* ‘therefore’, conjunction (Hagen 1914: 210). The Basque noun *gai* ‘matter’, ‘material’, when used with the ablative suffix *-tik*, serves to express cause in various contexts. Ex.

Basque (anonymous reader)

zer- ga(i)- tik?
 what- material- ABL
 ‘Why?’

This grammaticalization appears to be an instance of a more general process whereby certain generic nouns are pressed into service as markers of clause combining; compare PLACE.

MATTER > (2) COMPLEMENTIZER

Japanese *koto* ‘matter, thing’, noun > marker of propositional and factive complements (Ohori 2011: 636). Nama *!xáis* ‘matter’, ‘story’; *!xáisà* (oblique case), noun > *!xái’è*, *!xáisà* ‘that’, ‘whether’, object clause complementizer. Ex.

Nama (Krönlein 1889: 206; Hagman 1977: 138)

Tiita ke kè /’úú’ iĩ !úũ- ts ta !xái- sà.
 I:SG TOP PAST not:know PAST go- 2:SG:M IMPFV COMP- 3:SG:M
 ‘I didn’t know that you were going.’

Ik *mɛn^a* ‘matter, problem’, noun > *mɛn^a (ni)* (‘matter (which)’, ‘that’, complementizer.⁵⁴ Ex.

Ik (König 2002)

- (a) *tírr- a mɛná- k^a.*
 have- a problem- ACC
 ‘He has a problem.’

⁵⁴ Since Ik nouns retain their case inflections even when grammaticalized to complementizers, the result is that this language has several case-inflected clause subordinators (see König 2002).

- (b) *ntá iye-i mená tód-at^a.*
 NEG know-NEG what:ACC say-3:PL
 ‘He does not know what they say.’

This grammaticalization appears to be an instance of a more general process whereby certain generic nouns serving as nominal complements are pressed into service as markers of clause subordination. In many languages, this process has not proceeded beyond an incipient stage where it remains controversial whether, or to what extent, the relevant noun constitutes a noun or a clause subordinator. *See also* PLACE; THING.

MATTER > (3) PURPOSE

Thai *kaan* ‘fact’, ‘matter’, noun > *kaan-thîi-cà?* (fact/matter-COMP-FUT) ‘in order to’ (Bisang 1998b: 777). Nama *!kèiï/!kèië/!kèisa [!xáis]* ‘matter’, ‘story’, noun > purpose clause marker. Ex.

Nama (Krönlein 1889: 206)

Nesa ta ra miba tsi !gũnts ní !kèië.
 this:F 1:SG PROG say:APPL 2:SG go:2:M:SG FUT COMP
 ‘I tell you this so that you go.’

Susu *fe* ‘matter’, ‘affair’, noun > *-fe, -fera* (*-ra* = multipurpose particle), purpose marker (de-verbal nominalizer). Ex.

Susu (Friedländer 1974: 50)

A nakha si sukhu a fakha-fera.
 (3:SG TAM goat catch 3:SG kill-PURP)
 ‘She seized the goat in order to kill it.’

This grammaticalization appears to be another instance of a process whereby certain generic nouns are pressed into service as markers of nominal or clausal participants; compare MATTER > CAUSE.

‘Middle’, *see* CENTRE

‘Miss, to’, *see* FAIL

MORE > ADVERSATIVE

This pathway, whereby degree adverbs of comparison (‘more’) give rise to sentence connectives expressing adversative contrasts, is proposed by Giacalone Ramat and Mauri (2011: 658), although there is so far no detailed documentation of it. Old Serbian *veće* ‘bigger’ > Serbian ‘but’. Latin *magis* ‘more’, adverb > Italian *ma* ‘but’, French *mais* ‘but’ (Giacalone Ramat and Mauri 2011: 658).

Note also that the pathway is so far attested only in Indo-European languages of Europe. *See also* AGAIN, HERE.

MOTHER > (I) AUGMENTATIVE

The Proto-Tibeto-Burman form **nu* ‘mother, elder female relative’ shows up as an augmentative element in compounds in languages such as Jingpho, Lushai, and the Naga group (Matisoff 1992: 25). In Burmese, the form *?əma* ‘female, mother’ is a semi-productive constituent (*-ma*) with augmentative function in compounds, denoting ‘first, oldest among many, original, chief among many, main, principal’. Ex.

Burmese (Matisoff 1992: 32)

<i>lām-ma</i>	<i>mrui-ma</i>	<i>lak-ma</i>
road-mother	town-mother	hand-mother
‘main road’	‘metropolis, capital, principal town’	‘thumb’

The Vietnamese noun *cái* ‘female, mother’ has developed the augmentative sense ‘big, chief, principal’ and became grammaticalized into a classifier or formative of nouns, for example, *cong cái* (stem mother) ‘main stem of plant or vegetable’, *hòn cái* (island mother) ‘main, big island’ (Matisoff 1992: 18–19).

In Indonesian (“Malay/Indonesian”), the noun *ibu* ‘mother’ forms a partially productive derivational augmentative marker meaning ‘chief, source, big’ when used as the head noun in compounds, e.g. *ibu jari* (mother finger) ‘thumb’, *ibu kaki* (mother foot) ‘big toe’, *ibu kapal udara* (mother ship air) ‘aircraft carrier’, cf. *kapal udara* ‘aircraft’ (Matisoff 1992: 9). Similarly, in Thai the noun *mêe* ‘mother’ serves as an augmentative derivational marker in a number of compounds, e.g. *mêe-bôt* (mother-text) ‘heading, chief part of a text’, *mêe-sii* (mother-colour) ‘primary colors’ (Matisoff 1992: 10).

In White Hmong, the augmentative morpheme *niag* appears to be derived from the noun *niam* ‘mother, woman’, e.g. *lub niag tsua* (class mother limestone) ‘great limestone mountain’ (Matisoff 1992: 15).

The augmentative derivational suffix *-bá* found in Manding languages is presumably a grammaticalized form of the noun *bá* ‘mother’ (Creissels in prep.b).

The present pathway exhibits a clear areal patterning in Southeast Asian languages. Based on Matisoff (n.d.: 41), the pathway might be argued to be one that is suggestive of a chain of conceptual change of the following kind (where intermediate stages can be ignored): MOTHER > FEMALE > ORIGIN/SOURCE/MATRIX > AUGMENTATIVE.

Note, however, that this pathway hardly ever gives rise to fully productive grammaticalized morphemes. The source construction is typically one of noun–noun compounds, where ‘mother’ gradually develops in the direction of an augmentative marker. Accordingly, the construction is one that combines features of both lexicalization and grammaticalization.

This is an instance of a more general process whereby nouns expressing specific social roles lose salient lexical features, on the one hand, and highlight

semantic features believed to be characteristic of the social role concerned, on the other. *See also* CHILD; FATHER.

MOTHER > (2) FEMALE

Nouns for ‘mother’ have been grammaticalized in some languages to closed-class markers denoting female participants, typically as adjectival modifiers or derivative affixes. In Chinese varieties such as Xiang, Hakka, Gan, and Hui, nouns meaning ‘mother’ serve as modifiers denoting female animals (Long et al. 2012). !Xoõ *qáe* ‘mother’, noun > *qáe* ‘female’, modifier. Ex.

!Xoõ (Traill 1994: 154, 174; Güldemann 1999b: 69)

<i>Táa</i>	<i>qáe</i>	<i>gúmi</i>	<i>qáe</i>
person	mother	cattle	mother
‘woman’		‘cow’	

!Xun, N1 dialect *dé* ‘mother’, noun > *-dé* ‘female’, derivative suffix. Ex.

!Xun, N1 dialect (Bernd Heine, field notes)

<i>!xó-dé</i>	<i>!hm-dé</i>
‘female elephant’	‘female leopard’

Ewe *nɔ* ‘mother’, noun > *-nɔ* ‘female’, derivational suffix used especially with nouns for animals and some plants. Ex.

Ewe (see Westermann 1907: 48)

<i>nyí</i>	<i>nyí-nɔ</i>
‘cattle’	‘cow’

Thai *mêɛ* ‘mother’, noun > *mêɛ* ‘female’, derivational marker. Ex.

Thai (Matisoff 1992: 10)

<i>kàj</i>	<i>mêɛ-kàj</i>
‘chicken’	‘hen’

This is an instance of a process whereby human nouns, on account of some salient semantic characteristic, give rise to grammatical markers highlighting that characteristic; *see also* CHILD; FATHER; MAN; WOMAN.

MOUTH (body part) > FRONT

!Xun *ts’i* ‘mouth’, noun > ‘in front of’ (Svorou 1994: 71). Susu *dè* ‘mouth’, ‘opening’ + *-ra*, multipurpose particle > *dèra* ‘in front of’, ‘at’, locative postposition. Ex.

Susu (Friedländer 1974: 40)

<i>M</i>	<i>ma</i>	<i>bankhi</i>	<i>na</i>	<i>baa</i>	<i>dèra</i> .
(1:SG	GEN	house	be	sea	in:front:of)
‘My house is located at the sea.’					

Zande (*bara* 'place' +) *ngba* 'mouth' > *bara-ngba* 'in front of', 'before', preposition (Canon and Gore [1931] 1952: 13, 101). Mursi *-tutuo* 'mouth of' > 'in front'. Ex.

Mursi (Turton and Bender 1976: 543)

dori- *tutuo*
house- mouth:of
'in front of the house'

This grammaticalization appears to be an instance of a more general process whereby certain body parts, on account of their relative location, are used as structural templates to express deictic location; *see also* BACK; BELLY; BUT-TOCKS; EYE; FACE; FLANK; HEAD; NECK.

N

NEAR ('near', 'close to') > (1) AFTER

German *nahe* 'close', *nächster* 'closest', 'next', adjective > *nach* 'after' (Haspelmath 1997b: 64). Latin *ad pressum* 'at close' > French *après* 'after'. Basque *ondo* 'ground'; 'vicinity'; 'consequence' > *ondoan* 'after' (Haspelmath 1997b: 64).⁵⁵

This grammaticalization appears to be an instance of a more general process whereby spatial concepts are used to also express temporal concepts. More data, especially data from non-European languages, are needed to determine the exact nature of this process.

NEAR ('near', 'close to') > (2) AVERTIVE, PROXIMATIVE

Archaic Chinese *ji* 'be near to, be close to' > *ji* 'almost, nearly', adverb (Long et al. 2012). Kirgiz *dʒ aqə nda* 'be near to, be close to' > *dʒ aqə nda* 'almost' (Long et al. 2012). Swahili *karibu* + subjunctive main verb > avertive marker. Ex.

Swahili (Heine 1997d: 11)

- (a) *a- li- kuwa karibu.*
3:SG- PAST- be near
'He was nearby.'
- (b) *Karibu ni- f- e maji.*
near 1:SG- die- SUBJUNCT water
'I nearly drowned.'

⁵⁵ Basque *ondo* has been borrowed from Romance; its original and still current meaning is 'bottom'. From this there are two formations for 'after': *ondoan* (*ondo-an*, bottom-LOC) and *ondoren* (*ondo-(r)en*; bottom-GEN). Ex. Basque (anonymous reader)

<i>Jan</i>	<i>ondo-</i>	<i>an</i>	or	<i>jan-</i>	<i>ondo-(r)en</i>
eat[PFV]	side-	LOC		eat[PFV]	side-GEN
'after eating'				'after eating'	

Tsonga *kusuhina ku* ‘near to’ > avertive marker (Heine 1997d: 11). English *nearly* > *nearly*, avertive adverb. Seychelles CF *pros* ‘near’ > ‘be on the point of’, proximative marker. Ex.

Seychelles CF (Corne 1977: 149)

Zot pros pur (zot) ale.
(they near for they go)
‘They are on the point of leaving.’

For more details, see Heine (1997d: 11–12) and Kuteva (1998a). A detailed reconstruction of this process can be found in Romaine (1999).

This grammaticalization appears to be an instance of a more general process whereby grammatical aspect functions are conceptualized and expressed in terms of locative concepts; compare LOCATIVE > PROGRESSIVE.

B-NECESSITY (Intention) > (1) FUTURE

For details of this pathway, see Bybee et al. (1991; 1994: 254–7), who propose the following continuum of grammaticalization (Bybee et al. 1994: 256): DESIRE > WILLINGNESS > INTENTION > PREDICTION (future).

B-NECESSITY (Intention) > (2) PURPOSE

Bybee et al. (1994: 229–30) conclude that intention is the most commonly mentioned agent-oriented use that gives rise to purposive forms, and that there is a common continuum extending from intention via future to purpose uses. Markers including intention, future and purpose uses can be found in languages like Tuareg, Abkhaz, and Yagaria (Bybee et al. 1994: 229, table 6.11). But there are also languages where there is no evidence for an intermediate stage of future use; in the Tigre language of Ethiopia and Djibouti, for example, “the intention marker appears to move into purpose clauses without first being used for future” (Bybee et al. 1994: 230).

D-NECESSITY (Obligation) > (1) FUTURE

This process appears to be well documented across languages; see Bybee et al. (1991) and Bybee et al. (1994: 258–9). Not uncommonly, the process is triggered by specific contexts relating to personal deixis: while the obligation meaning may be retained in contexts where second person subject referents are involved, the future meaning tends to arise in contexts where third person subjects are involved (see Schäfer-Prieß 1999: 102–4 for observations on Romance languages).

More data from languages other than European ones are needed to establish this as a crosslinguistically plausible pathway.

D-NECESSITY (Obligation) > (2) B-NECESSITY (Intention)

According to Bybee et al. (1994: 178, 187, 240, figure 6.4), this is a common pathway of grammaticalization. Markers for obligation can come to be used in sentences expressing the intentions of the agent, especially in the case

of first person agents. For example, in Middle English, the auxiliary *shall*, having an obligation source, was used to express first person intentions (Bybee et al. (1994: 178). In Present-Day English, *have to* and *gotta* literally report an obligation but they can also be used to express an intention, as in the following example:

I have to go now. I gotta go now. (Bybee et al. (1994: 178))

We are including this pathway here on account of the generalization proposed by Bybee et al. (1994), even though so far no evidence has been adduced for it in genetically and areally unrelated languages.

D-NECESSITY (Obligation) > (3) E-NECESSITY (Probability)

This constitutes a well-researched pathway of grammaticalization (see, e.g., Bybee et al. 1994: 199–202, 224ff.; Narrog 2005; 2012). Medieval Chinese *bixu*, marker of obligation > Early Modern Chinese *bixu*, marker of probability (Long et al. 2012).

English auxiliaries *will*, *must*, *should*, and so on were used for obligation (deontic modality) before their use was extended to also express probability (epistemic modality; see, e.g., Sweetser 1982; Bybee and Pagliuca 1985; Traugott 1989; Heine et al. 1991a; van der Auwera and Plungian 1998). Ex.

English (Bybee et al. 1994: 284)

- (a) *The letter must arrive some time next week.* (Obligation)
- (b) *The letter must be in the mail.* (Probability)

German *müssen* ‘must’, auxiliary expressing strong obligation > strong probability, inferred certainty. Ex.

German

- (a) *Er muss sofort kommen.*
he must instantly come
‘He has to come immediately.’
- (b) *Er muss gestern gekommen sein.*
he must yesterday come be
‘He must have come yesterday.’

The Archaic Chinese item *ke* ‘should’ was first used for obligation (deontic modality) before its use was extended to also express probability (epistemic modality; Peyraube 1999: 38). Early Modern Chinese *děi*, marker of obligation > *děi*, marker of probability (Long et al. 2012).

Evidence for this pathway comes also from a creole language: Seychelles CF *bezuê* ‘have to’, marker of obligation > marker of probability. Ex.

Seychelles CF (Corne 1977: 136)

- (a) *nu it bezuê desan â-vil.*
(1:PL PAST have:to go to-town)
‘We had to go to town.’
- (b) *i bezuê pe ale.*
(3:SG have:to PROG leave)
‘He is probably leaving.’

There is also evidence for this pathway in first language acquisition (Diessel 2011: 138–9).

Various hypotheses exist on how this process is to be explained. According to the one perhaps most frequently voiced, the development from obligation to probability is suggestive of metaphorical transfer (see, e.g., Sweetser 1982; Bybee and Pagliuca 1985: 73; Heine et al. 1991a: 175–8). Sweetser (1990: 52) argues that this development can be accounted for in terms of “sociophysical concepts of forces and barriers”, and Traugott (1989) suggests that we are dealing with an instance of subjectification in semantic change (see also Hopper and Traugott 1993: 86). Concerning a treatment of modality as a semantic map, see van der Auwera and Plungian (1998).

D-NECESSITY (Obligation) > (4) D-POSSIBILITY (Permission)

Van der Auwera and Plungian (1998: 99) demonstrate that the German modal *dürfen* underwent a change from deontic necessity to its present meaning of deontic possibility; see Narrog (2012a: 190–2) for diachronic evidence, see also Bybee et al. (1994: 228–30).

There is, however, also a process in the opposite direction; see D-POSSIBILITY > D-NECESSITY (Narrog 2012a: 185–6); hence, this seems to be a bi-directional process.

D-NECESSITY (Obligation) > (5) PURPOSE

Bybee et al. (1994: 229, table 6.11) find markers whose uses include obligation and purpose in the following languages: Guaymí of Panama and Costa Rica, Guugu-Yalandji of Queensland in Australia, and Nakanai of Papua New Guinea. They propose the following continuum of grammaticalization, suggesting that purpose clauses can, and not uncommonly do arise via context-induced reinterpretation of markers of obligation (Bybee et al. 1994: 240, figure 6.4): OBLIGATION > INTENTION (> FUTURE) > PURPOSE.

More information on this so far poorly documented pathway is needed.

NEED > D-NECESSITY (Obligation)

Archaic Chinese *xu* ‘need to’, verb > Medieval Chinese *xu*, auxiliary of obligation. English *need* (to) + infinitive > marker of medium obligation (Denning 1987: 46). Basque *behar* is the ordinary noun for ‘need’, ‘necessity’. Combined with a transitive auxiliary, its meanings include that of marking deontic modality (‘have to’, ‘must’). Ex.

Basque (anonymous reader)

- (a) *Diru- a behar d-u-t.*
money- DET need PRES-AUX-1:SG:ERG
‘I need money.’
- (b) *Etxe- ra joan behar d-u-t.*
house- ALL go[PFV] need PRES-AUX-1:SG:ERG
‘I have to go home.’

Hausa *kàmātà* ‘ought to’, ‘be fitting’, verb > *kàmātà*, deontic marker of obligation. Ex.

Hausa (Herms 1987: 87; Ma Newman 1990: 178; Philip Jaggard, p.c.)

yā kàmātà mù tafi.
(3:M:SG: PFV be:fitting 1:PL:SUBJUNCTIVE go)
‘We should go.’

Acholi *myero* ‘need’, ‘be suitable’, ‘fit’, ‘becoming’, verb > *o-myero* (third person singular past form), deontic marker of necessity and obligation, epistemic marker. Ex.

Acholi (Bavin 1995: 121–2)

- (a) *Ci omyero en o-cwal jami-ni weng loca kulu.*
and must he 3:SG-take thing-DEM all across river
‘And he needed to take all these things across the river.’
- (b) *In omyero i-cam mot.*
you must 2:SG-eat slowly
‘You should eat slowly.’

See Denning (1987: 46ff.), *see also* OWE. For a treatment of modality as a semantic map, see van der Auwera and Plungian (1998).

This is an instance of a process whereby a verb, on account of some salient semantic property, gives rise to a grammatical marker highlighting that property; see, for example, DESCEND; FOLLOW; GET; GO.

NECK (BODY PART) > LOCATIVE

Vai *kan* ‘neck’, noun > *kando* (= *kan* + *ro*, ‘neck’ + ‘in’) ‘above’, locative postposition. Ex.

Vai (Koelle [1854] 1968: 39)

Subahanalai ábe tére- kando.
(Subahanalai 3:SG:COP sun- above)
‘Subahanalai was above the sun.’

Susu *könyi* ‘neck’ + *-ra*, multipurpose particle, *-na* after dental nasals > *könna* ‘along’, ‘in’, ‘at a prolonged object’; *wuri könna* ‘along the tree’ (Friedländer 1974: 40).

So far, only examples from the Mande branch of the Niger-Congo family have been found, and it might, therefore, be a case of areal or genetically defined grammaticalization. Nevertheless, this case appears to be an instance of a more general process whereby certain body parts, on account of their relative location, are used as structural templates to express deictic location; compare, for example, BACK; EYE; FACE; FOOT; HEAD; HEART; NECK.

NEGATION > (I) LEST

This grammaticalization path involves a more complex construction, where a marker for negation or negated subordination ('so that ... not', 'if not') assumes the function of a LEST-clause.

In the Austronesian language Papapana, negative purpose adverbial clauses function as LEST-clauses and these are marked by the preverbal negative mode marker *te* in conjunction with the general irrealis mode enclitic =*i*. The main clause may be an imperative or a prohibitive (Smith 2015: chapter 5.1.2). Ex.

Papapana (Smith 2015)

O=orete egoego, o=te pu=i pu=i.
 2.SG:SBJ=walk well 2.SG:SBJ=PROH fall=IRR fall=IRR
 'Walk carefully, lest you fall.'

In Bulgarian, the negative purpose clause is marked by means of the subordinate clause linkage (*za*) *da ne* + verb (for), and it is also used with 'lest' meaning. Ex.

Bulgarian

Zatvori vratata, (za) da ne nastineš.
 close door.DEF (for) CONJ:PART NEG get.a.cold:2SG:PRES
 'Close the door, lest you get a cold.'

In English, the historical origin of the LEST-marker – or the *lest*-clause – is *þy læs þe* (that:INSTR less that) = 'so that less that', P so that less (that) Q > P so that not Q (undesirable) happens (López-Couso 2007).

In Malayalam, there is a bi-clausal construction where the first verb is marked for imperative mood and is followed by the word *illenkil* 'lest'. This form results from the fusion of the two different morphemes *illa* 'no' and *enkil* 'if ... then'. Thus the literal translation of the word *illenkil* would be 'if not, then'. Ex.

Malayalam (Jacob and Mehta 2017)

saṭṭam para illenkil ninne ja:n kollum.
 truth tell:IMP if.not 2.SG:ACC I:SG:NOM kill:FUT
 'Tell the truth lest I will kill you.'

In the Fali language of Cameroon, the negation marker *ɓɛ* serves in appropriate contexts as a LEST-marker. Ex.

Fali (Kramer 2016)

- (a) *ɲgè: mì rí: wé:tè.*
 CONJ 1:SG eat:PFV beans
 '... so that I eat beans.'
- (b) *tá: mì rí: wé:tè ɓɛ.*
 CONJ 1:SG eat:PFV beans NEG
 '... lest I eat beans.'

For more examples of this pathway, see Angelo and Schultze-Berndt (2016).
See also TEMPORAL > LEST.

NEGATION > (2) S-QUESTION

The present pathway instantiates one of the four main processes that have been identified as leading to the emergence of polar question markers (Metslang et al. 2017: 494; see also Bencini 2003).⁵⁶ In this pathway, the source of grammaticalization is provided by markers of alternation ('or not', 'or', 'not') typically appearing on the right periphery of an utterance; *see also* VP-AND, OR > S-QUESTION.

The particles *es*, *eks*, *eps* and *eis* found in Old Written Estonian can be traced back to a negation marker (plus an earlier polar question particle). For example, the Estonian expression *ei-ko-s* (NEG-Q-CONFIRMATIVE) gave rise to the polar question marker *eks* between the seventeenth and nineteenth centuries (Metslang et al. 2017: 491).

Harris and Campbell (1995: 294–5) describe the structure illustrated below as the “A-not-A structure” which may be a source for S-QUESTION markers. Archaic Chinese *bu*, negative adverb > Medieval Chinese *bu*, question particle. Medieval Chinese *wu*, negative verb > Medieval Chinese *wu*, marker of yes-no question (Long et al. 2012).

Mandarin Chinese *bu*, negation marker (see also Peyraube 1996: 197). Ex.

Mandarin Chinese (Li and Thompson 1984: 52ff.; Harris and Campbell 1995: 295)

- (a) *tā bu zài jiā.*
 3:SG NEG at home
 ‘S/he is not at home.’
- (b) *tā zài jiā bu zài jiā?*
 3:SG at home NEG at home
 ‘Is s/he at home?’

In some Tibeto-Burman languages the negative marker **ma* was grammaticalized to a marker of yes-no questions. Ex.

Cantonese (Harris and Campbell 1995: 79)⁵⁷

Nee zek- mu- zek iŋ ah?
 You smoke- NEG- smoke iŋ ah
 ‘Do you smoke?’

⁵⁶ The four sources are (a) markers of coordination ('or', 'and', 'also', 'but'), typically on the left periphery of an utterance, (b) markers of subordination (insubordination of complementizers 'if', 'whether'), typically on the left periphery, (c) markers of alternation ('or not', 'or', 'not'), typically on the right periphery, and (d) markers of epistemic modality ('perhaps', 'maybe'). Underlying most of the processes concerned there seems to be a presupposition to the effect that the speaker is seeking confirmation from the hearer on the truth value of an utterance (Metslang et al. 2017: 494, 514).

⁵⁷ Alain Peyraube (p.c.) doubts whether this is a suitable example to substantiate the present process.

In Vietnamese, the particle *không* serves both as negation and as a question marker. Ex.

Vietnamese (Metslang et al. 2017: 496)

Anh có mệt không?

2:SG AFFIX be:tired Q/NEG

'Are you tired?'

Conceivably, tag questions (e.g. English *He has left, hasn't he?*) may also be linked to the present grammaticalization process. Harris and Campbell (1995: 295) observe: "The expression *or not* functions in a way similar to tags in many languages, though its structure suggests that it may be derived from an A-not-A structure." Metslang et al. (2017: 492) observe a tendency in Estonian for rhetorical questions to develop into information-seeking questions.

More research is needed on the exact nature and the genetic and areal distribution of this process. *See also* VP-AND, OR, PERHAPS > S-QUESTION.

NEGATION, EXIST ('there is not') > NO, NEGATION

This pathway has received wide attention, discussed under the label of Jespersen Cycle (Dahl 1979) or Negative Existential Cycle (Croft 1991a). According to this pathway, negation markers can be traced back to markers of emphasis in a negative expression, which frequently is a negative existential phrase. Via the desemanticization of the emphatic function and – in the case of verbal existential forms – of verbal features, the expression gradually develops into a general verbal negator, a process that has been observed to occur recurrently in some languages (Croft 1991a; van Gelderen 2008; 2009; Willis, Lucas, and Breitbath 2013a; Veselinova 2014; 2015).

In Central Pomo of California, the verb form *čʰó-w* (not.exist-PFV) 'not exist' has given rise both to a negation marker and the word for 'no' (Mithun 2018: 316), e.g. *čʰów* 'No'. In the Polynesian language East Uvean, the form *mole* may occur either as a verb 'not exist, disappear', or as a negation marker, able to modify the positive existential verb *iai*, having replaced the older negation marker *he'e* (Moyse-Faurie 2018: 298–9).

Wari' 'om 'not exist' > 'om, negation marker. Ex.

Wari' (Everett and Kern 1997: 82)

<i>'Om</i>	<i>ca</i>	<i>camain'</i>	
not:exist	INFLECTION:NEUT:REAL:PRES/PAST	bitter	
<i>ne</i>	<i>ca</i>	<i>tomi'</i>	<i>wa.</i>
3:NEUT	INFLECTION:NEUT:REAL:PRES/PAST	speak	INF
'Speaking is not bitter.'			

Turkish *yok* 'there is not', negative existence marker > 'no!', interjection for negation. Ex.

Turkish (Lewis [1967] 1985: 142; Ergun Cehreli, p.c.)

- (a) *kışede bir kahve yok.*
 ‘There is no café on the corner.’
 (b) *onu seviyormusun? yok!*
 ‘Do you love him? No!’

Swahili *ha-pa-na* (NEG-LOC:n16-be) ‘there is none’ > *hapana* ‘no’. Ex.

Swahili

- (a) *Ha-pa-na sukari.*
 NEG-C16-have sugar
 ‘There is no sugar.’
 (b) *U-na sukari? Hapana.*
 2:SG- have sugar no
 ‘Do you have sugar? No.’

Turku PA *mafi* (*ma* NEG + *fi* ‘exist’) > *mafi*, sentence-final negation marker (Tosco and Owens 1993: 198, 202). This appears to be another classical instance of desemanticization (“semantic bleaching”) whereby a more complex meaning is reduced to its nucleus, viz. negation; see, for example, COPULA, LOCATIVE > LOCATIVE.

New-event marker, see COME; GO

NOMINALIZER > (I) DISCOURSE MARKER

In Japanese the nominalizer *koto* (which derives from the basic noun *koto* ‘thing’) has given rise to the sentence-final particle *-koto*, which functions as a discourse marker expressing Speaker’s subjective exclamation (or Speaker’s intersubjective indirect order). Ex.

- (a) **Japanese ([Kaidan botan dooroo, 1884] cited in Onodera 2017: 107)**

Nigeru koto mo nara zu tada urouro shite iru tokoro e
 escape NOM EMP cannot just hanging do-GER be place to
 ‘Being in a state of turmoil, being unable to escape’

- (b) **Japanese ([Tajoo takon, 1896] cited in Onodera 2017: 107)**

Iya, koohosha no aru koto aru koto
 oh candidate LNK exist FP exist FP
 ‘Oh, there are so many candidates!’

In Chinese the nominalizing particle *de* (which derived from the demonstrative pronoun *de* ‘that, which’ in the eighth century and which also took over the functions of complementizer and middle connector between modifiers and heads in general) has given rise to a sentence-final particle which functions as a discourse marker expressing certainty (of a future event). Ex.

Chinese (Shi 2010: 417)

chi *de*
eat de
'food/ the people who eat'

Chinese (Shi 2010: 424)

Zhe-jian *shi* *mama* *hui* *wen* *de*.
this-Cl thing mother will ask de
'My mother will definitely ask about this matter.'

Conceivably, it was not the nominalizers in Japanese and Chinese that gave rise to the discourse markers but rather their respective sources, that is, the noun *koto* in Japanese and the demonstrative *de* in Chinese. More research is needed on this pathway.

NOMINALIZER > (2) PASSIVE

The development of markers for nominalization into passive or anticausative markers can be described as the epiphenomenal product of a constructional change, described by Sansò (2016) as involving nominalization-based agent-defocusing constructions. Note that compared with the finite verbs from which they are derived, action nominalizations tend to reduce the number of arguments and, when losing their association with nominalization, the elements marking nominalization can be reinterpreted and used for other grammatical purposes such as valency reduction.

According to Schneider (2011: 382), the passive marker *-an* of the Abma language of Vanuatu is derived from nominalization; note that one of the functions of *-an* is that of a de-verbal nominalizer (see Sansò 2016: 935–7). In the Bola language of Papua New Guinea, the passive prefix *ni* can possibly be traced back to the nominalizer *ni* (van den Berg and Boerger 2011; Sansò 2016: 937–8).

The present pathway has been the subject of alternative analyses, and not all are in support of the hypothesis proposed here (see Sansò 2016 for an insightful discussion of this issue). Compare also ANTICAUSATIVE > PASSIVE.

NOMINALIZER > (3) RELATIVE

In the Guarijío language of northwestern Mexico, the nominalization suffix *-me* (or *-yáme*) was grammaticalized to a subject relative clause marker. Ex.

Guarijío (Estrada-Fernández 2015)

tihoé *kari* *mete-yáme* *ko'korépa-re*.
man house build-NOMIN get:sick-PFV
'The man who builds houses got sick.'

Similar grammaticalizations have been observed in other Uto-Aztecan languages of northwestern Mexico, such as Névome (*-cama*, *-came*),

Opata (-*ka*, -*kame*), Northern Tepehuan (-*kame/-kami*), Southern Tepehuan (-*me*), Tarahumara (-*ame/-ka-me*), and Yaqui (-*me*) (Estrada-Fernández 2015).

The examples provided are all from Uto-Aztecan languages but, more generally, this seems to be an instance of a crosslinguistically widespread process whereby the use of markers belonging to the noun phrase is extended to introduce subordinate clauses; compare DEMONSTRATIVE > RELATIVE; DEMONSTRATIVE > COMPLEMENTIZER.

NOW (TEMPORAL) > (I) DISCOURSE MARKER

English *now*, temporal adverb > *now*, discourse marker serving topic change, subjective modality, and other discourse functions (e.g. Schiffrin 1987: 316; Aijmer 2002; Schourup 2011). Ex.

English (Schiffrin 1987: 228, 231)

(a) *Sue teaches linguistics now.*

(b) A: *It's nice there.*

B: *Now our street isn't that nice.*

German *nun* 'now', temporal adverb > *nun*, discourse marker expressing topic change, speaker attitudes, and a range of other discourse functions. Ex.

German (own data)

(a) *Nun kannst du kommen.*

now can you come

'You can come now.'

(b) *Nun, was sollen wir jetzt machen?*

DM what shall we now make

'Well, what shall we do now?'

Hungarian *most* 'now', adverbial > *most*, discourse marker (Dér and Markó 2010). Modern Hebrew *axshav* 'now', temporal adverbial > discourse marker whose procedural functions relate to segmentation and evaluation (Gonen et al. 2015). Korean *icey* 'now' (from 'this time') > discourse marker (Lee 1995; Sohn and Kim 2008).

Swahili *sasa* 'now', temporal adverb > *sasa*, discourse marker for text continuity (Dunn 1990). Akie *kɔrɔɔ* 'now', temporal adverb > discourse marker, cohesive connective of spoken discourse (König et al. 2015: 135). Ex.

Akie (König et al. 2015: 152)

leeláá iraráak-ó-n dé kɔrɔɔ pee.

folks pour.out-VEN-IMP DM DM water.ACC

'Folks! Pour out water ... !'

The present pathway cannot be described exhaustively in terms of grammaticalization. As argued in Heine et al. (2013; 2017), it also involves cooptation, a discourse strategy whereby a unit of sentence grammar – which in this case is typically an adverb – is deployed for specific discourse purposes such as expressing functions of text organization, attitudes of the speaker, and/or speaker–hearer interaction. Whereas grammaticalization usually leads to semantic and morphosyntactic integration, cooptation has the opposite effect, that is, the unit, such as Akie *kɔrɔ* above, is semantically and morphosyntactically unattached, frequently also prosodically marked off. Thus, unlike most of the other data discussed in this book, the evolution of discourse markers is more complex, being the result of cooptation followed by grammaticalization (Heine 2013).

See also GOD > INTERJECTION; MAN > INTERJECTION; RIGHT > DISCOURSE MARKER; THEN > DISCOURSE MARKER; WELL > DISCOURSE MARKER; WHAT > DISCOURSE MARKER.

NOW (TEMPORAL) > (2) STILL

Hausa *haɾ yànzɔ* ‘until now’, ‘still’ (van Baar 1997: 93; Philip Jaggard, p.c.). Basque *oraindik* ‘from now’, ‘still’ (van Baar 1997: 94). Lithuanian *dabar* ‘now’ > *dar* ‘still’ (van Baar 1997: 94). Note also that in Cakchiquel, the adverbial particle *tan* ‘now’ in combination with the aspect markers has given rise to a tense marker (Harris and Campbell 1995: 75–6).

More research is needed on the exact nature and the genetic and areal distribution of this process, which has been proposed by van Baar (1997).

Numeral, *see* ONE; THREE; TWO

O

Obligation, *see* D-NECESSITY

‘On’, *see* UP

ONE (NUMERAL) > (1) ALONE

Hausa *ɗaya* ‘one’ > *kaɗai* ‘only, alone’ (Philip Jaggard, p.c.).

Ewe *ɖeká* ‘one’, cardinal numeral > ‘alone’ in certain contexts. Ex.

Ewe (own data)

Éyá ɖeká

3:SG one

‘he alone’

German **alle* ‘all’ + *ein* ‘one’ > *allein* ‘alone’. Tondano *əsa* ‘one’, numeral > ‘alone’. Ex.

Tondano (Sneddon 1975: 131)

Si piŋkan nu əsa
CM:SG Pingkan PM one
‘Pingkan herself’ / ‘Pingkan alone’

More research is needed on this process. Not uncommonly, it is not the cardinal numeral ‘one’ on its own that assumes the ‘alone’-function; rather, it tends to be modified by some other marker. Compare ALONE > ONLY; ONE > ONLY.

ONE (NUMERAL) > (2) INDEFINITE

Modern Beijing dialect of Chinese $i^{35} k\alpha^{51}$ (‘one’ + classifier) > $i^{35} \alpha$ > i^{35} , indefinite article (Long et al. 2012). English *one* > *a(n)* (indefinite article); see also Kortmann and Schneider (2011: 278) for further examples from English varieties. German *ein* ‘one’, numeral > indefinite article. French *un* ‘one’ (M), numeral > *un*, indefinite article (M). Albanian *një* ‘one’, numeral > *një* ‘a(n)’, indefinite article. Ex.

Albanian (Buchholz et al. 1993: 367)

- (a) *një e një bëjnë dy*.
(one and one 3:PL:PRES:MAKE two)
‘One plus one is two.’
(b) *një djalë një grua*
‘a boy’ ‘a woman’

Basque *bat* ‘one’, numeral > weakly grammaticalized indefinite article; for example, *etxe bat* ‘one house’ or ‘a house’ (anonymous reader). Turkish *bir* ‘one’, numeral > *bir*, weakly grammaticalized indefinite article. Ex.

Turkish (anonymous reader; Lewis [1967] 1985: 54)

- (a) *bir büyük tarla*
(one big field)
‘one large field’
(b) *büyük bir tarla*
(big one field)
‘a large field’

Ewe *ɖeká* ‘one’, numeral > *ɖe*, indefinite article. Moré *a yémré* ‘one’, numeral > ‘some’, ‘a’ (indefinite article); for example, *dara yémré* ‘a/some day’ (Alexandre 1953b: 469). Hungarian *egy* ‘one’, numeral > *egy* ‘a(n)’, indefinite article. Ex.

Hungarian (Szent-Iványi 1964: 73)

Keres-ek egy tanítót.
 search-1:SG:PRES one teacher
 ‘I am looking for a teacher.’

Lezgian *sa* ‘one’, numeral > *sa*, indefinite article. Ex.

Lezgian (Haspelmath 1993: 230)

- (a) *sa tar*
 one tree
 ‘one tree’
- (b) *Žiraf- di qib sa q’aq’an tarci- n xile- l ecig- na.*
 giraffe- ERG frog one high tree- GEN twig- SRESS put- AOR
 ‘The giraffe put the frog on a twig of a tall tree.’

The numeral *sa* ‘one’ of the Lezgian language Agul is very frequently used in non-numerical contexts in the function of an indefinite article, especially with noun phrases introducing new participants (Maisak 2015).

Rapanui (Easter Island) *etahi* ‘one’, numeral > *etahi*, indefinite article. Ex.

Rapanui (Chapin 1978: 148, 158)

- (a) *Etahi o matou i ta’e haga mo hoki mai mai Tahiti.*
 one GEN we PERF NEG want INF return here from Tahiti
 ‘One of us didn’t want to come back from Tahiti.’
- (b) *i tu’u mai ai etahi miro o te harani mai Tahiti.*
 PERF arrive here PART one boat GEN the France from Tahiti
 ‘A French boat arrives here from Tahiti.’

Mongghul *nige* ‘one’, numeral > *-nge*, indefinite article, e.g. *kun nige* ‘one person’ vs *kunge* ‘a person’ (Nugteren 2013: 230). Tamil *oru* ‘one’, numeral > *oru*, indefinite article. Ex.

Tamil (T. Lehmann 1989: 112)

oru nalla paṭam
 one/a good movie
 ‘one/a good movie’

See Rubin (2005: 18) for further examples from Semitic languages. In Iraqi Muslim Baghdadi Arabic, Rubin (2005: 18) finds the form *fad* used as an indefinite article, which derives from Classical Arabic *fard* ‘single’ rather than the numeral ‘one’, e.g. *endi fad-bēt* (I:have INDEF-house) ‘I have a house’. Note that in none of the Semitic languages studied by him has the indefinite article been grammaticalized to the extent that its use is obligatory.

The process from numeral ‘one’ to indefinite article, as it can be observed in the history of most languages of western and central Europe, has been described as a case of contact-induced grammaticalization (Heine and Kuteva 2006: 119–33).

Rather than a conventionalized indefinite article, a number of languages have an incipient indefinite marker derived from a numeral for ‘one’. Such a language is spoken Taiwan Mandarin, where the form *yige* ‘one’ “typically serves to mark a new but unfamiliar referent and is becoming a marker of indefiniteness ... and *zero* may still be preserved for type-referring or generic NPs” (Liu 2010: 286).

The present pathway has been also shown to result from “forced grammaticalization” (*Zwangsgrammatisierung*; Nau 1995: 121–2; Metslang 2011; 2017), imposed by language planners on the model provided by some other language. For example, the early ethnically German language reformers of Latvian and Standard Estonian introduced the use of the numerals for ‘one’ (Latvian *viens*, Estonian *üks*) as indefinite articles on the model of German, thereby being responsible for, or contributing to, the growth of an incipient indefinite article in these two languages (for a detailed account, see Metslang 2017).

See Givón (1981; 1984: 432–5), Hopper and Martin (1987), Heine (1997b: 66–82), and Robbeets (2013: 149) for further information on this grammaticalization. The present grammaticalization is confined to the numeral ‘one’ used as a nominal determiner rather than as a pronoun; for details on the development of ‘one’ into an indefinite pronoun, see ONE > INDEFINITE PRONOUN.

ONE (NUMERAL) > (3) INDEFINITE PRONOUN

Archaic Chinese *yi* ‘one’, numeral > *yi* ‘someone, sometimes’, indefinite pronoun (Long et al. 2012). This process involves the use of the numeral ‘one’ as a pronoun rather than as a nominal attribute (cf. ONE > INDEFINITE). Lehmann (1982: 51–2) cites German *einer* ‘one’ (M:SG), Italian and Spanish *uno* ‘one’ (M:SG), and Abkhaz *a-k’(ə)* as examples. Ex.

German

- (a) *Nur einer ist gekommen.*
 only one is come
 ‘Only one has come.’
- (b) *Kann einer mir sagen, wo mein Glas ist?*
 can one to:me tell where my glass is
 ‘Can someone tell me where my glass is?’

In many cases it is not the numeral on its own that undergoes this process; rather the numeral tends to be accompanied by some modifying or specifying element; compare English *someone*, *anyone*. Vulgar Latin **aliqui-unu* ‘any-one’ > Italian *alcuno* ‘someone’. French *quelque* ‘some’ + *un* ‘one’ > *quelqu’un* ‘someone’ (see Lehmann 1982: 52).

For a discussion of this grammaticalization, see Haspelmath (1997a: 183–4); see also Lehmann (1982: 51–2).

ONE (NUMERAL) > (4) ONLY

Archaic Chinese *yi* ‘one’ > *yi* ‘only’ (Long et al. 2012). English *only* derives historically from ‘one’, similarly German *einzig* ‘only’. Nama /*gui* ‘one’, numeral > /*gui* ‘only’. Ex.

Nama (Dempwolff 1934–5: 114f.)

/gui Elo-b /gui-b hã.
 (one God-3:M:SG one-3:M:SG exist)
 ‘There is one God only.’

Ewe *ɖeká* ‘one’, numeral > *ɖeká*, ‘only’, adverb. Ewe *nye ɖeká* (lit.: ‘I one’) ‘me only’. Baka *kpóde* ‘one’, numeral > *kpóde* ‘alone’. Ex.

Baka (Christa Kilian-Hatz, p.c.)

kò kò- lè kpóde kò kò- mò kpóde
 only body- 1:SG:POSS one only body- 2:SG:POSS one
 ‘me alone’ ‘you alone’

Lezgian *sa* ‘one’, numeral > *sa* ‘only’, restrictive marker. Ex.

Lezgian (Haspelmath 1993: 230, 238)

- (a) *sa tar*
 one tree
 ‘one tree’
- (b) *Sa za-z waʔ č̣i wiri xürü-*
 only I-DAT not we:GEN all village-
n- buru- z č̣i- da.
 GEN- SBST:PL- DAT know- FUT
 ‘Not only I, everyone in our village knows (it).’

Bulgarian *edin* ‘one’, numeral > *edinstveno* (*edin* + adjectival suffix) ‘only’, restrictive marker. Ex.

Bulgarian

Tja iskaše edinstveno da go vpečatli.
 she want:3:SG:IMPERF only to him impress
 ‘She only wanted to impress him.’

Krio CE *wan* ‘one’, numeral > ‘only’. Ex.

Krio CE (Boretzky 1983: 221)

Na Gɔd wan no wetinmek wi finga den difren.
 (it:is God one know why our finger are different)
 ‘It is God only who knows why our fingers are different.’

This appears to be a fairly widespread process but more research is needed on the exact contextual frame leading to this grammaticalization. *See also* ONE > ALONE.

ONE (NUMERAL) > (5) OTHER

Bulu *fok* ‘one’, numeral, when counting > *-vok* ‘another’, ‘other’, indefinite modifier. Ex.

Bulu (Hagen 1914: 50, 243)

kelek! miŋga mbok a za'ak!
 (go woman C1:other TAM come)
 ‘Go! The other woman should come!’

Yagaria *bogo* ‘one’, numeral > *bogo* ‘another’, modifier. Ex.

Yagaria (Renck 1975: 73)

yo' bogo-vi' bei- d-i-e.
 house one- INE LIVE-PAST-3:SG-IND
 ‘He lives in another house.’

More research is needed on the contextual conditions leading to this grammaticalization. Vykypěl (2010: 140) volunteers the following observations on Slavic languages: “etymologists assume that the meaning ‘other’ arose in contrastive contexts when *inъ* ‘one’ was used in two clauses referring to two possibilities to be chosen, and the second *inъ* referred thus to the second possibility”.

ONE (NUMERAL) > (6) SAME

Archaic Chinese *yi* ‘one’, numeral > *yi* ‘same’, adjective (Long et al. 2012). Albanian *një* ‘one’, numeral > *një*, ‘(the) same’, adverb. Ex.

Albanian (Buchholz et al. 1993: 367)

- (a) *një e një bëjnë dy.*
 (one and one 3:PL:PRES:make two)
 ‘One plus one is two.’
 (b) *për mua është një.*
 (for 1:SG:ACC 3:SG:PRES:be one)
 ‘For me it is the same.’

Swahili *-moja* ‘one’, numeral > *-moja* ‘the same’. Ex.

Swahili

- (a) *m- lango m- moja*
 c3- door c3-one
 ‘one door’
 (b) *Yote ni moja tu.*
 all COP one only
 ‘It is all the same.’

ONE (NUMERAL) > (7) SINGULATIVE

East Cushitic **tokko* ‘one’, numeral > Saho *-to*, singulative marker (Heine and Reh 1984: 273; Marcello Lamberti, p.c.). In Akatek, the numeral *jun* ‘one’

functions as a singulative, that is, a marker that restricts the reference to a single entity. Ex.

Akatek (Zavala 2000: 118–19)

- (a) *tol chinchi jun a- wakax ti' an.*
 that I:bite one a cow PROXIM 1:SG
 'I am going to eat your bull.'
- (b) *jaton b'ey jun yaax k'ultaj tu' xin.*
 there at one green forest DISTAL then
 '[So the boy went] through the mountain.' (lit.: 'green forest')

More research on the areal and genetic distribution of this process is needed. This is an instance of a more general process whereby lower numerals are pressed into service as number markers, typically on nouns; compare THREE; TWO.

ONE (NUMERAL) > (8) SOME

Cangluo Monpa *t'or*⁵⁵ 'one' > *t'or*⁵⁵ 'some, a number of', indefinite numeral modifier (Long et al. 2012). Western Guyu *bir* 'one' + *me* 'something' > *birme* 'some' (Long et al. 2012). Tatar *bir* 'one', numeral > *biraz* 'some' (Long et al. 2012). Kazak *kej* 'some' + *bir* 'one' + *-ew* > *kejbirew* 'some people' (Long et al. 2012).

Basque *bat* 'one' means 'about' when attached to another number. Ex.

Basque (anonymous reader)

hogei- (r)en bat or *hogei bat*
 twenty- GEN one twenty one
 'about twenty'

Lezgian *sa* 'one', numeral > *sa* 'about', marker of approximate small numbers. Ex.

Lezgian (Haspelmath 1993: 236)

sa wad deq'iq'adi- laj
 one five minute- SREL
 'about five minutes later'

Compare also Lezgian *sa* 'one', numeral > *sašumud* ('one' + interrogative pronoun 'how many') 'some', 'several', scalar quantifier. Ex.

Lezgian (Haspelmath 1993: 254)

Sa šumud ktab
 one how:many book
 'some books'

Ada sa šumud seferd-a Nurbaladi-q^h galaz q'üler- na.
 she:(erg) one how:many time-? Nurbala-poess with dance- aor
 'She danced with Nurbala several times.'

Tamil *oru* ‘one’, numeral > *oru* ‘some’, modifying adjective. Ex.

Tamil (T. Lehmann 1989: 113)

oru ampatu peer
some fifty people
‘some fifty people’

Yagaria *bogo* ‘one’, numeral > *bogo* ‘some’, indefinite pronoun. Ex.

Yagaria (Renck 1975: 73)

- (a) *yo’ bogo-ko’ hano-d-i-e.*
house ONE- RES exist-PAST-1:SG-IND
‘There is only one house.’
- (b) *yale bogo*
people one
‘some people’

The indefinite determiner *dɔ* ‘some’ in the Manding languages of western Africa, which include Bambara, Baninko Bambara, Jula, Kita Maninka, Korogan, Koyaga, Mandinka, Maninka, Maninka-mori, Marka, Maukakan, Niokolo Maninka, and Xasonga, can be reconstructed back to the Proto-Mande numeral **do* ‘one’ (Creissels in prep.b).

¶Ani /*úú* ‘one’, numeral > /*ú* ‘some’, ‘other’, quantifier. Ex.

¶Ani (Heine 1999)

- (a) *ɸ’úú-è xòrò tí à’à /úú*
dove-IMP give 1:SG OBJ one
ɸ’uru /oan- ñ kà!
dove child- M:SG LOC
‘Dove, give me one of your eggs!’
- (b) /*ú* /’è
some day
‘some days’ / ‘another day’

Seychelles CF (Seselwa) *é* ‘one’, ‘a’, numeral, indefinite article > indicator of approximate quantities (when used before cardinal numerals). Ex.

Seychelles CF (Corne 1977: 12–13)

- (a) *é pom-d-amur*
(a tomato)
‘a tomato’
- (b) *é sâ rupi*
(a hundred rupee)
‘about a hundred rupees’
Cf. *sâ rupi* ‘100 rupees’.

This grammaticalization appears to arise when the numeral ‘one’ can be used as a modifier on noun phrases denoting quantities.

ONE (NUMERAL) > (9) TOGETHER

Archaic Chinese *yi* ‘one’ > *yi* ‘together’, adverb (Long et al. 2012).⁵⁸ Swahili *pa-moja* (locative noun class 16 + ‘one’) > ‘together’. Ex.

Swahili

- (a) *Wa- li- kaa mahali pa- moja.*
 3:PL- PAST- stay place c16- one
 ‘They stayed at one and the same place.’
- (b) *Wa- li- kaa pamoja.*
 3:PL-PAST- stay together
 ‘They stayed together.’

Ewe *ɖeká* ‘one’, numeral > ‘together’; for example, *bla* ‘tie’, ‘fasten’, *bla ɖeká* ‘tie together’. Bulgarian *edno* ‘one’, numeral > *záedno* (*za* ‘for’, ‘to’, preposition + *edno* ‘one’) ‘together’. Ex.

Bulgarian

- (a) *V тази стая има само едно огledalo.*
 in this room there:is only one mirror
 ‘There is only one mirror in this room.’
- (b) *Xajde da otidem zaedno v Kjoln!*
 lets to go together in Cologne
 ‘Let’s go to Cologne together!’

In Nigerian Pidgin (English), *one* ‘one’ has in specific contexts the function ‘doing something together’. Ex.

Nigerian Pidgin PE (Mazzoli 2017: 237)

- Yù and who dè follow do dat one?*
 you and who IMPFV follow do that one
 ‘You and who else are doing that thing together?’

More research on the areal and genetic distribution of this process is needed.

OR > S-QUESTION

The present pathway instantiates one of the four processes that have been identified as leading to the emergence of polar question markers (Metslang et al. 2017: 494; see also Bencini 2003).⁵⁹ In this pathway, the source of grammaticalization is provided by markers of alternation (‘or not’, ‘or’, ‘not’); *see*

⁵⁸ Archaic Chinese *yi* ‘one’ has undergone various other grammaticalizations in addition, acquiring meanings such as ‘all’, ‘once’, ‘just now’, ‘unexpectedly’, and ‘really, actually’ (Long et al. 2012).

⁵⁹ The four sources are (a) markers of coordination (‘or’, ‘and’, ‘also’, ‘but’), typically on the left periphery of an utterance, (b) markers of subordination (insubordination of complementizers ‘if’, ‘whether’), typically on the left periphery, (c) markers of alternation (‘or not’, ‘or’, ‘not’), typically on the right periphery, and (d) markers of epistemic modality (‘perhaps’, ‘maybe’). Underlying most of the processes concerned there seems to be a presupposition to the effect that the speaker is seeking confirmation from the hearer on the truth value of an utterance (Metslang et al. 2017: 494, 514).

also VP-AND, NEGATION > S-QUESTION. Metslang et al. (2017: 497) observe that interrogative particles with origins in the meaning ‘or’ are widespread in the Baltic region, e.g. Estonian sentence-final *või/vä*, Livonian *või*, South Estonian, Votic, Finnish and North Sami *vai*, Central-Southern Sami *vaj*, Veps *vā*. Latvian *vai* ‘or’ > interrogative marker (Stolz 1991b: 66–8).

In the Mandinka language of West Africa, the alternative conjunction *fó* ‘or’ appears to have been grammaticalized to an S-QUESTION marker, signalling yes-no questions (Q). Creissels (in prep.b) argues that this process resulted from the conventionalization of the ellipsis of the first conjunct of two clauses. Ex.

Mandinka (Creissels in prep.b)

- (a) *Í yé sùbôo bóndì, fó*
 2:SG CPL meat:D put:aside or
wùlôo yè a tãa lè?
 dog:D CPL 3:SG take FOC
 ‘Did you put aside the meat, or did the dog take it?’
- (b) *Fó wùlôo yè sùbôo tãa?*
 Q dog:D CPL meat:D take
 ‘Did the dog take the meat?’

Moré *bi* ‘or’, listing connective > question particle. Ex.

Moré (Alexandre 1953b: 39)

- (a) *ya fkyěma bi fyao:*
 ‘Is this your big brother or your little brother?’
- (b) *a wā mé bi?*
 ‘Did he come?’

Hausa *kō* ‘or’, ‘either (. . . or)’ > question particle. Ex.

Hausa (Cowan and Schuh 1976: 216; Philip Jaggar, p.c.).

- (a) *kō nī kō kai*
 (either 1:SG. or 2 M:SG).
 ‘either me or you’.
- (b) *kō kã sãmi gyàdã màì yawã?*
 (Q 2:M:SG:PFV get peanuts with abundance.)
 ‘Did you get a lot of peanuts?’

Khwe *re* ‘or’, alternative conjunction between noun phrases and verb phrases > marker of polar questions (Yvonne Treis and Christa Kilian-Hatz, p.c.). Basque *ala* ‘or’ has a limited interrogative function. Ex.

Basque (anonymous reader)

- (a) *beltz- a ala zuri- a?*
 black- DET or white- DET
 ‘red or white (wine)?’

- (b) *Nun ibili z-ara? lapur(r)-eta-n ala?*
 Were move[PFV] 2:SG:ABS-AUX thief-PL-LOC or
 ‘Where have you been? Among thieves?’

Turku PA (Arabic-based pidgin) *wala* ‘or’ > marker of yes-no questions. Ex.

Turku PA (Tosco and Owens 1993: 200, 202)

laam da shuf anina wala?
 animal DEF saw us Q
 ‘Did the animal see us?’

Further examples can be found, for example, in Hua and Khmer (anonymous reader). *See also* NEGATION > S-QUESTION. Apart from alternative conjunctions (‘or’), negation markers figure prominently in the genesis of polar question markers, and the two are often combined. Harris and Campbell (1995: 295) observe: “The expression *or not* functions in a way similar to tags in many languages . . . We refer to this as an alternative tag.” Ex.

Modern Georgian (Harris and Campbell 1995: 295)

movā vano, tu ara?
 s/he:come Vano or not
 ‘Will Vano come, or not?’

Evidence for a pathway leading from an alternative conjunction ‘or’ to a marker of polar questions also comes from language contact situations. One case concerns the Balto-Slavic contact area in northeastern Europe involving the Baltic languages Lithuanian and Latvian and the Slavic languages Belorussian, Ukrainian, and adjacent varieties of Russian, where the question particle is identical or almost identical to the conjunction ‘or’ (Koptjevskaja-Tamm and Wälchli 2001: 714; Heine and Kuteva 2005: 207–8).

Another example is provided by a study of language contact in the Indian village of Kupwar between Indo-European (Urdu and Marathi) and Dravidian languages (Kannada, Telugu; Gumperz and Wilson 1971: 160). The Standard Hindi-Urdu interrogative *dii* ‘what?’ is assumed to have been grammaticalized into a particle for polar questions. Much the same process can be reconstructed for the language varieties spoken in Kupwar: The interrogative for ‘what?’ in Kupwar Urdu (*kya*), Kupwar Marathi (*kay*), and Kupwar Kannada (*yan*) are also used as clause-final markers for polar questions (see Heine and Kuteva 2005: 210).

Further investigation is needed to study the exact nature of this process as well as the interaction of conjunctions and negation markers. *See also* VP-AND, NEGATION, PERHAPS > S-QUESTION.

OSTENSIVE PREDICATOR > COPULA

Creissels (2017b) proposes a process whereby verbs for ‘see’ and/or ‘look’ when used in their imperative form (‘Look at X!’) give rise to ostensive

predicators ('Here is X!'), and the process can lead further to the rise of new copulas (see SEE > OSTENSIVE PREDICATOR). The present pathway thus constitutes the second part of the following grammaticalization chain: SEE > OSTENSIVE PREDICATOR > COPULA.

In the Kpelle language of Liberia, the verb *ka* 'see' functions not only as an ostensive predictor but also as a copula and we follow Creissels (2017b: 52) in hypothesizing that grammaticalization proceeded from the former to the latter. Ex.

Kpelle (Westermann and Melzian 1930: 3, 10, 11, 12; Creissels 2017b: 52)

ɲaloŋ ka belei mu.
man COP house In
'The man is in the house.'

In the Kita Maninka variety of Manding, the imperative form of the verb *yé* 'see' has also given rise to an ostensive predictor and a locative and equative copula. Ex.

Kita Maninka (Creissels 2017b: 53–4)

Nénè yé Kita.
cold.D COP Kita
'It is cold in Kita.'

In the Bambara language of Bamako, the verb *yé* 'see' has also grammaticalized into an ostensive predictor and an equative copula, but not into a locative copula (Creissels 2017b).

There is further evidence for the present pathway from some Semitic languages, where instead of ostensive predictor, the term 'presentation particle' tends to be used. The extinct Ethiopian language Ge'ez had a presentation particle *na-* 'behold, here is, there is' (e.g. *yana* 'Here I am') which may have been similar to the source of the base *n(ä)-* of the modern Amharic present copula, for example, *yäne näw* 'It is mine' (Rubin 2005: 42–3). Evidence comes also from some dialects of Algerian, Tunisian, and Moroccan Arabic, where the presentation particle *ṛā-* (+ object suffixes) has become a grammaticalized copula (Rubin 2005: 43; see also Creissels 2017b: 57).

Creissels (2017b: 58) argues that the grammaticalization from ostensive predictor to copula was due to a relaxation of the constraints characterizing the former, leading to a change in the type of speech act expressed. This change involved, on the one hand, the loss of the deictic component that ostensive predictors have and, on the other hand, a change from a clause type whose main function it is to draw the addressee's attention to an obvious fact, to an assertive clause type. Compare SEE > OSTENSIVE PREDICATOR.

OWE > D-NECESSITY (Obligation)

Tunchang dialect of Min *xiɔm*³⁵ 'owe', verb > *xiɔm*³⁵, auxiliary for obligation (Long et al. 2012). Breton *dle* 'owe', verb > marker of strong obligation

(Denning 1987: 47). Latin *dēbēre* ‘owe’, verb > marker of strong obligation (Denning 1987: 47). American Sign Language *OWE* > *MUST* (Roland Pfau, p. c.; see also Janzen and Shaffer 2002).

See Denning (1987) for further information. Note that the examples available so far are severely limited. More research is needed on the exact nature and the genetic and areal distribution of this process. *See also* NEED.

OWNER > INTENSIFIER

Western Yugur **eye* ‘owner’ + *-sə*, third-person affix > **eyesə* > *ehsə* ‘self’, reflexive (Long et al. 2012). Swahili *mw-enye* ‘owner (of)’, **mw-enye-we* (‘his/her owner’) > *mw-enyewe* ‘oneself’, intensifier. Ex.

Swahili

Mimi mw-enyewe
I c1-self
‘I myself’

Baka *mòmóló* ‘owner’, ‘possessor’, noun > *momóló* or *móló* ‘oneself’, intensifier (preceded by an emphatic personal pronoun). Ex.

Baka (Brisson and Boursier 1979: 260)

- (a) *Maà muε ngbala, ma nyi mòmóló ná ode.*
1:SG:ASP see:PAST machete 1:SG know owner ART NEG
‘I’ve found a machete; the owner I don’t know.’
- (b) *ʔá buùle lo ngé mòmóló/móló!*
3:SG cut:PAST tree 3:SG:EMPH self
‘He cut the tree himself!’

Bagirmi *mala* ‘master’, ‘owner’, noun > emphasizing pronoun (Stevenson 1969: 46). Luo *wyq̣n*, PL *wę-gí* ‘owner’, noun > emphatic reflexive (Tucker 1994a: 151–2). Khwe *dixamà* ‘owner’, ‘master’, noun > *dixamà*, intensifier. Ex.

Khwe (Köhler 1973a: 31a, 59)

xà-má dixamà
he owner
‘he himself’

||Ani *dixà-* (+ person-gender-number marker) ‘owner’, noun > intensifier. Ex.

||Ani (Heine 1999: 43)

Tsá díxà- tsì tamaxa xá- tsí- ka-xà mún!
2:M:SG self- 2:M:SG also DEM- 2:M:SG- ADV see
‘Even you yourself will see [them]!’

Rather than an intensifier, an emphatic form of the third person pronoun appears to have been derived in several Manding languages of West Africa from the noun phrase 'its owner'. Thus, the Bambara phrase *à tìgì* means not only 'its owner' but also 'the person in question' (Creissels in prep.b).

Martin Haspelmath (p.c.), giving examples from Russian (*sam*) and Latin (*ipse*), observes that this process is not necessarily unidirectional. For more details, see Heine (2000b) and Schladt (2000).

We seem to be dealing with another instance of a more general process whereby relational nouns (including nouns for body parts) give rise to relational grammatical markers; compare BACK; BODY; BOTTOM; EYE; HEAD; SIDE; TOP.

P

PASS ('to pass (by)', 'to pass through') > (1) AFTER

Lithuanian *praėti* 'pass', verb > *praėjus* 'after' (Haspelmath 1997b: 65). French *passer* 'pass by', verb > *passé* 'after'. Ex.

French (Haspelmath 1997b: 65)

Passé une heure du matin
(passed one hour of morning)
'after one o'clock in the morning'

English *pass*, verb > *past* 'after'; for example, *five minutes past twelve* (Haspelmath 1997b: 65).

Although there are only examples from European languages that have been found so far, we have included this case considering its conceptual plausibility. It appears to be an instance of a pathway whereby process verbs, on account of some salient semantic property, give rise to locative and temporal markers; *see*, for example, ARRIVE; CROSS; DESCEND; EXCEED; FOLLOW; RESEMBLE; RETURN.

PASS ('to pass (by)', 'to pass through') > (2) COMPARATIVE

Twi *seɲ* 'pass on', 'surpass', 'pass by', 'pass away', verb > 'more than', comparative marker. Ex.

Twi (Lord 1989: 245–6)

- (a) *Asu bi seɲ ne daɲ akyi.*
river a pass his house behind
'A river flows behind his house.'
(b) *me-seɲ wo adəw.*
1:SG-surpass you tilling
'I till more than you do.'

Baka *wɔtɔ* 'pass', 'go on', 'overtake', verb > comparative marker. Ex.

Baka (Brisson and Boursier 1979: 486f.)

- (a) *Bìtì à wɔtò -ngì batà.*
 night ASP PASS-PAST three
 'Three days have passed.'
- (b) *b̀̀ngɔ́ kɛ́ búbà à wɔtò yékè*
 dress DEM white ASP pass DEM
 'This dress is brighter than that.'

Kisi *hiòù* 'pass', verb > comparative marker. Ex.

Kisi (Childs 1995: 20)

- Ò hiòù yá nàṅṅó.*
 She pass me goodness
 'She's more handsome than I.'

Tswana *go feta* (INF pass) 'pass', verb > 'more than', preposition (Creissels in prep.a).

This pathway is also encountered in the Mainland Southeast Asia area, most commonly involving verbs meaning 'pass' or 'cross' that gave rise to markers for the standard of comparison, with the standard noun phrase being presented as the sentence object (Ansaldo 1999; 2010). Lao *kua*¹ 'pass', action verb > *kua*¹, comparative marker. Ex.

Lao (Ansaldo 2010: 933)

- khòoj⁵ suung³ kua¹ caw⁴.*
 I tall pass you
 'I am taller than you.'

Evidence for this process also comes from pidgin and creole languages. Turku PA *fut* 'pass', verb > 'more than', comparative marker of inequality. Ex.

Turku PA (Tosco and Owens 1993: 210–11)

- Ínte awán fut Kedabgel*
 You bad pass Kedabgel
 'You are worse than Kedabgel.'

Ndjuka CE *pasa* 'pass' (< English *pass*), verb > 'more than', comparative marker of inequality. Ex.

Ndjuka CE (Huttar and Koanting 1993: 165)

- A Dagu ya bigi pasa den taawan*
 the:SG Dog here big pass the:PL other:one

or

- A dagu ya pasa den taawan anga bigi*
 the:sg dog here pass the:pl other:one with big
 'This dog is bigger than the others.'

For more details, see Stassen (1985) and Heine (1997b). This appears to be a grammaticalization that is common in African languages but less common elsewhere, except for the languages of the Mainland Southeast Asian area (Ansaldò 1999; 2010). Furthermore, this is a common channel of grammaticalization in Atlantic creoles; see, for example, Holm (1988: 188–90). It is an instance of a process whereby a verb, on account of some salient semantic property, gives rise to a grammatical marker highlighting that property; *see* for example, ARRIVE; CROSS; DESCEND; EXCEED; FOLLOW; RESEMBLE.

PASS ('to pass (by)', 'to pass through') > (3) EXPERIENTIAL

Experientials are aspect markers dedicated to coding “that an event has taken place at least once at some point in the past” (Chappell 2001c: 57; see also Comrie 1976: 58; Dahl 1985: 141).⁶⁰ The present pathway has so far been documented essentially in Sinitic languages only, hence it might conceivably be genetically induced.

Shanghainese of Wu *ku*³⁴ ‘pass, accompany’, *ɕiɿʔ*⁵ ‘a moment’ > *-ku*³⁴ (*ɕiɿʔ*⁵), postverbal experiential marker (Chappell 2001c: 60). Mandarin *kuo*⁵¹ ‘cross, pass’, verb > *-ku*, experiential marker when following the main verb (Chappell 2001c: 60). Changsha dialect of Xiang *ko*⁴⁵ ‘cross, pass’, verb > *-ko*⁴⁵, postverbal experiential marker (Chappell 2001c: 60). Hong Kong Cantonese *kwo*³³ ‘cross, pass’, verb > *-kwo*³³, postverbal experiential marker (Chappell 2001c: 60). Taiwanese, Southern Min *bat* ‘know’, *koe* ‘cross, pass’, verbs > *bat* (*-koe*), experiential marker (Chappell 2001c: 60).

Vostrikova (2007) observes that in a number of African and Asian languages an auxiliary is used to encode an experiential function and that this auxiliary frequently has a verb meaning ‘cross over, pass by’ or ‘get used to’ as its lexical source. Ex.

Zhuang (Vostrikova 2007)

*ków*¹ *pǎj*¹ *kwa*³ *wu*³ *m̃ɲ*².
I go EXPER Wuming
‘I have been to Wuming.’

See also CROSS, EVER, KNOW, TASTE, TOUCH > EXPERIENTIAL.

PASS ('to pass (by)', 'to pass through') > (4) PAST

Swahili *ku-pita* (INF-pass) ‘pass’ is used to refer to past events and time spans. Ex.

Swahili

mw-ezi *u- li-o-pita*
C3- month C3-PAST-REL-pass
‘last month’

⁶⁰ Chappell (2001a) also uses the term “evidential” for them.

Compare English *past*, which is etymologically related to *pass*. French *passé*, perfect participle of *pass-er* 'to pass' > 'past time'. Note that these examples do not involve verbal tense and, in fact, no language has been found so far where a 'pass'-verb has given rise to a past tense marker.

More research is needed on the exact nature and the genetic and areal distribution of the present process.

PASS ('to pass (by)', 'to pass through') > (5) PATH

Archaic Chinese *yue* 'pass by, pass through', verb > *yue*, preposition expressing a time span (Long et al. 2012). Turkish *geç* 'pass', verb > *geç-e* 'past' (Svorou 1994: 112). Ewe *tó* 'pass', 'go through', action verb > 'through', preposition (Lord 1989: 252; Heine et al. 1991a: chapter 7).

More examples are needed to document this pathway of grammaticalization (see also CROSS > PERLATIVE). Nevertheless, it appears to be an instance of a more general process whereby verbs denoting location or motion serve as structural templates to express relational (adpositional) concepts (Heine 2011c); compare ARRIVE; COME FROM; COME TO; CROSS; GO TO; LEAVE; CROSS > PERLATIVE.

PASSIVE > POTENTIAL

Narrog (2012a: 261) finds evidence for this pathway in some form or other in the following languages: Gulf Arabic, Brahui, Dongolese, Nkore-Kiga, Nubian (Nobiin), Finnish, Georgian, Greek, Kashmiri, Marathi, Punjabi, Swahili, and Zazaki. Not all constructions involved in the present pathway are canonical passives; more generally, they include what is commonly described as 'stative' (Nkore-Nkiga, Swahili), or impersonal passive constructions (Gulf Arabic). Typically, the source constructions involve a deranked agent, the sentence exhibits reduced transitivity, and the subject referent is characterized by lack of control and/or volition.

The resulting meaning of a potential ('be cabable of') is not always fully grammaticalized but constitutes one of the conventional readings of the construction. Ex.

Gulf Arabic (Holes 1990: 183; Narrog 2002: 261)

hal-xatt ma yingara.
this-the.handwriting NEG 3:SG:M:PASS:read
'This handwriting cannot be read.'

Swahili *-ik-/-ek-* agent-deleting derivational suffix > *-ik-/-ek-* potential marker. Ex.

Swahili (Ashton 1959: 227–8)

- (a) *Ki-kombe ki-me-vunj-ika.* Cf. *-vunja* 'break (trans.)'
C7-cup C7-PERF-break-STAT
'The cup is broken.'

- (b) *Kazi* *hii* *ya-fany-ika*.
 C9.work C9.this C9:PRES-do-STAT
 ‘This work is capable of being done, *or* can be done.’

For a detailed description of this pathway see Narrog (2012a: 260–8).

PATH > (1) AGENT

Path markers (‘through’, ‘via’) have been shown to develop into markers for agents in passive constructions. Examples proposed include the Dutch preposition *door*; German *durch*, Polish *przez* ‘through’ (Palancar 2002: 183; Narrog 2014: 75). See Yamaguchi (2004) for discussion.

PATH > (2) INSTRUMENT

Narrog (2014: 75) summarizes this pathway thus:

Path markers can become the source of instrumental markers, as has been hypothesized by Palancar (2002: 170) for the Russian instrumental inflection. A historically documented case is presented by Luraghi ... who shows that this extension is also valid for Ancient Greek *διά*. English *through* had a path sense from Old English on, and developed an instrumental sense later in the 14th century (cf. *OED*: *through*, *prep.* and *adv.*).

See Yamaguchi (2004), Narrog (2014) for discussion.

PEOPLE > (1) PERS-PRON, FIRST PLURAL

In the Central Sudanic language Ngiti of the Nilo-Saharan family, the noun *ale* ‘person, people’ appears to have given rise to a first person plural inclusive pronoun *àlê* ‘we’ (Kutsch Lojenga 1994: 195). Another example is provided by languages of the West Atlantic Cangin group of Senegal: three languages of this group, namely Laala, Palor (of Khodoba), and Saafi-Saafi, have experienced a similar grammaticalization whereby a noun for ‘person’ or ‘people’ appears to have given rise to a first person plural pronoun (Ursula Droic, p.c.; Heine and Song 2011: 613, table 3).

In the Labwor language of northeastern Uganda, the noun *jə* ‘people’ has been grammaticalized to the inclusive first person plural pronoun *jə* ‘we (including you)’. This pronoun is only weakly grammaticalized, mostly used as an object pronoun (see (a)) and with a limited number of head nouns as a possessive attribute (see (b)). Ex.

Labwor (Heine and König 2010b; Heine 2012; Heine and Song 2011: 613)

- (a) *én* *ónènɔ* *jə*.
 3:SG see:PFV:3:SG people
 ‘He has seen us all.’
- (b) *éthínɔ* *jə*
 children people
 ‘our children (including yours)’

In Portuguese, the feminine singular noun phrase *a gente* ‘the people’ has been grammaticalized to a first person plural pronoun, a process that is said to have started in the seventeenth century. Ex.

European Portuguese (Merlan 2006: 230, 236; Heine and Song 2011: 614–15)

- (a) *A gente fala mais tarde.*
(the people talk more late)
‘We’ll talk later.’
- (b) *Pode ficar na casa da gente.*
can remain in.the house of.the people
‘You can stay in our house (or with us).’

In the Spanish-based creole Palenquero of Colombia, the noun (*ma*) *hende* ‘people’, ultimately derived from Spanish *gente* ‘people’, developed into a pronoun (*h*)*ende* which serves both as an impersonal pronoun ‘one’ and as a first person plural pronoun ‘we’ (Schwegler 1993: 152–3; Heine and Song 2011: 616).

The Romanian pronoun *lumea*, which is historically derived from the feminine noun *lume* ‘people, the people, human beings’ plus definite article *-a*, has given rise to a first person plural pronoun,⁶¹ even if the pronoun is ignored in grammars of written Romanian (Merlan 2006: 227; Heine and Song 2011: 616). Ex.

Romanian (Merlan 2006: 227)

- (a) *Lumea a râs.*
(people:DEF have laughed)
‘The people have laughed.’
- (b) *Hai, Mihaela, că lumea pleacă.*
(come Michaela here people:DEF go:away)
‘Come on, Michaela, we go away.’

The result of this process is for the most part *inclusive* first person plural pronouns, but this is not always the case, as the examples above demonstrate. This pathway tends to involve an intermediate stage of an indefinite or impersonal pronoun, hence (see PERSON > PERS-PRON, FIRST PLURAL): ‘people’ > indefinite or impersonal pronoun > first person plural pronoun.

For example, in Brazilian Portuguese, *a gente* ‘the people’ was first used as an indefinite pronoun before it turned into a personal pronoun ‘we’ in the nineteenth century (Travis and Silveira 2009: 249).

For a more detailed discussion of this pathway, see Heine and Song (2010; 2011), Heine (2012), see also PERSON > PERS-PRON, FIRST PLURAL; PEOPLE > PERS-PRON, THIRD PLURAL. This appears to be an instance of a more

⁶¹ Ultimately, Romanian *lumea* goes back to Latin *lūmen* ‘light’, which acquired the additional meaning ‘world’ under the influence of Slavic *světŭ* ‘light, world’ (Merlan 2006: 226).

general process whereby generic nouns give rise to pronominal categories; compare INDEFINITE PRONOUN; MAN; PERSON; THING.

PEOPLE > (2) PERS-PRON, THIRD PLURAL

The Proto-Southern Lwoo noun **jó/*jò* ‘people’ is retained in the Ugandan language Alur in the form *jò* both in its inherited meaning ‘people’ and as a third person plural pronoun ‘they’. In Adhola, another Southern Lwoo language of the Western Nilotic sub-family, the nominal meaning is lost, but the third person plural pronoun *jó* ‘they’ is presumably a grammaticalized form of **jó/*jò* ‘people’ (Heusing 2004: 218; Heine 2012).

The Central Sudanic language Lendu has two forms for ‘people’, namely *ndrú* or *kpà*, and both have developed into third person plural pronouns, but the pronouns *ndru* and *kpa* ‘they’ lack tonal features of the corresponding nouns (Tucker 1940: 392; Heine and Song 2010; 2011: 597). Ex.

Lendu (Tucker 1940: 392)

ma- zhi ndrú.
1:SG- love 3:PL
‘I love them.’

In the Afro-Brazilian Calunga language, which arose in the course of the last centuries among African slaves in the state of Minas Gerais, the noun phrase *os camano* ‘the persons, people’ has given rise to the third person masculine plural pronoun *oscamano* ‘they’ (Byrd 2006: 114; Heine and Song 2010: 140–2).

Evidence for this pathway has so far been found mostly in African languages. Furthermore, it is unclear under what conditions nouns for ‘people’ develop on the one hand into third person plural pronouns and on the other hand, and much more commonly, into first person plural pronouns (see PEOPLE > PERS-PRON, FIRST PLURAL).

This appears to be another instance of a process whereby generic nouns like ‘person’ and ‘thing’ are grammaticalized to pronouns; see also PERSON; MAN; THING.

PEOPLE > (3) PLURAL

In the present grammaticalization process, nouns for ‘people’ are desemantized and pressed into service as nominal plural markers. Typically, this process first involves plural marking of human nouns before the expression for ‘people’ is extended to inanimate nouns.

Medieval Chinese pronoun or noun + *bei* ‘people’ (‘people of same group or kind’) > *-men*, plural marker for human beings. Early Modern Chinese *hang* ‘people of same kind’ > *-hang*, plural marker for human beings (Long et al. 2012).

!Xóõ *túu* ‘people’, noun > *-tú*, plural suffix of human nouns (noun class 4; Tom Güldemann, p.c.). Seychelles CF *ban* ‘group (of people)’ (< French *bande*), noun > plural marker of definite nouns. Ex.

Seychelles CF (Corne 1977: 13–14, 34)

- (a) *ban koma u*
 (people how you)
 ‘people like you’
- (b) *ban pirog*
 (PL canoe)
 ‘the canoes’

In the Sema variety of Naga Pidgin (Sreedhar 1977: 137), human plurals are marked with the item *log* ‘people’; for example, *suali* ‘girl’, *sualilog* ‘girls’ (see Janson 1984: 318 and Romaine 1988: 137). In the Warekena language of Xié of the Upper Rio Negro region, the noun *-nawi* ‘people’ has developed into a marker of excessive plural, where ‘excessive plural’ refers to ‘very many, a whole group of’, e.g. *kueSi-nawi* (game-EXCESSIVE:PLURAL) ‘a lot of game (animals)’, *abida-pe-nawi* (pig-PL-EXCESSIVE:PLURAL) ‘very many pigs’ (see Aikhenvald 1998: 301).

Etymologically the same form, *-nawi*, gave rise to a collective plural in Bahuana, a now extinct Arawak language from the Middle Rio Negro area (Ramirez 1992: 42). This is echoed by the development of the common Arawá noun *deni* ‘person’ into a collective plural marker in Kulina and Dení, two Arawá languages from southern Amazonia (Adams and Marlett 1990; Mateus Carvalho, p.c.; Alexandra Aikhenvald, p.c.).

Conceivably, this process is related to (>) CHILDREN > PLURAL, where also the plural form of a human noun is grammaticalized to a plural marker. More research is needed on the exact nature and the genetic and areal distribution of this grammaticalization, which might be an instance of a more general process whereby generic nouns give rise to pronominal and eventually to inflectional categories; compare CHILDREN; MAN; PERSON; THING.

PERFECT > (1) EVIDENTIAL, INFERRED

The first to draw attention to this grammaticalization pathway was presumably Willett (1988), who observed that inferring evidentials arise from perfects of verbs of observation. Bybee et al. (1994: 95–7) finds examples of resultative or perfect (anterior) categories that have given rise to evidentials of indirect evidence in Turkish, Bulgarian, Macedonian, Georgian, Udmurt, Inuit, and Tucano. They suggest that it is a resultative stage that gives rise to the evidential meaning. Chappell (2001c: 64–5) finds that in most of the Sinitic languages a semantic extension of a marker with perfect or completive features can be used as an evidential. Note further that Lhasa Tibetan possesses a cumulative verbal suffix *-bzhaḡ* (from the verb *bzhaḡ* ‘put’) that combines a perfect and an inferred evidential meaning (Tournadre 1996, Mélaç 2014).

Rather than a perfect construction, in the Tundra Nenets language of northern Russia it was the perfective participle *-miə* in predicative function that

appears to have been responsible for the presence of an inferential (INFERRED) evidential construction (Nikolaeva 2014: 93); cf. PERFECT > PERFECTIVE.

More research is needed on the general process leading to the rise of evidential markers (see Willett 1988; Aikhenvald 2004; 2011). *See also* HEAR; KNOW; SEE; SAY > EVIDENTIAL.

PERFECT > (2) MIRATIVE

With the term ‘mirative’ we refer to markers expressing surprise because of the speaker’s sudden awareness of a fact hitherto unknown, unappreciated or not considered relevant to the present (Perry 2000: 237).⁶² A mirative is not normally the default meaning of a grammatical category; rather, it is a secondary or tertiary meaning of some grammatical marker, where the primary meaning is either evidentiality or perfect (Olbertz 2012: 86). Mirativity is distinguished as a functional concept in a number of languages (see, e.g., DeLancey 1997; Olbertz 2012; but see also Lazard 1999).

The evidence available suggests that one way in which mirative functions arise is via context-induced reinterpretation of perfect aspect, but also from past tense markers. We hypothesize that this represents an incipient pathway of grammaticalization.

In the Tajik language of Tajikistan, the perfect, which also expresses modal and evidential meanings, is also used as a mirative (Perry 2000: 235; Olbertz 2012: 83). Mirativity and hearsay (REPORTED) are additional functions of the perfect aspect in most Quechua dialects. Thus, in rural Ecuadorian Quechua, the perfect marker *-shka* serves as a mirative. Note that the development from perfect to mirative appears to have been replicated in Andean Spanish. Ex.

Ecuadorian Highland Spanish (Olbertz 2012: 84)

Rico ha.sido.
good-AFF be:PERF:3:SG
‘It is good (indeed).’

In the Permian language Komi, the ‘Past 2’ marker has a resultative and inferential function but is also used for mirativity, as in the following example (Olbertz 2012: 83):

Komi (Olbertz 2012: 83)

<i>Mis’a,</i>	<i>gaškō,</i>	<i>te</i>	<i>munin</i>	<i>n’in.</i>
I.think	perhaps	you	go:PAST2:2:SG	already
<i>a</i>	<i>tani</i>	<i>na</i>	<i>völömyd.</i>	
but	here	still	be:PAST2:2:SG	

‘I thought you had already gone. But here you are still.’

⁶² Whether ‘mirative’ represents a distinct grammatical category is a matter of debate. It would seem, however, that mirativity is distinguished as a functional concept in a number of languages, even if not commonly expressed by a dedicated grammatical marker (see, e.g., DeLancey 1997; Lazard 1999; Olbertz 2012).

The directionality of change hypothesized here is based on the observation that a perfect aspect function can be reconstructed back to earlier states of the languages concerned, while perfect markers cannot be reconstructed back to earlier mirative functions or markers.

See also PERFECT > EVIDENTIAL, INFERRED.

PERFECT > (3) PAST

This grammaticalization has been discussed by several authors; see Fleischman (1983), Dik (1987), Bybee et al. (1994). The last-named authors describe this process in the following way (note that their “anterior” corresponds to our “perfect”):

The change of an anterior to a past or perfective is typical of grammaticization changes. On the semantic level, the change is clearly a generalization of meaning, or the loss of a specific component of meaning: the anterior signals a past action that is relevant to the current moment, while the past and perfective signal only a past action. The specification of current relevance is lost. The meaning generalizes in the sense that the past or perfective gram expresses a more general meaning that is compatible with more contexts. (Bybee et al. 1994: 86)

The periphrastic resultative/perfect construction (‘have’ or ‘be’ + past participle) of Germanic and Romance languages, for example, has occasionally extended its use to marking past tense: in Modern Colloquial German, it is taking over the functions of the older past tense (Bybee et al. 1994: 85; Thieroff 2000). Similarly, what Westermann (1907: 139) calls the “Dahome” dialect of Ewe appears to have experienced a shift from perfect to past marker, and in Atchin, the auxiliary *ma* ‘come’ merges with pronominal forms to make a past tense auxiliary (Bybee et al. 1994: 86). Furthermore, the resultative/perfective aspect marker *-tari* of Japanese developed into the past marker *-ta*, and the *-t*-perfective into the past marker *-t-* (Narrog and Ohori 2011: 777).

This is part of a more general process whereby verbal aspect markers may be further grammaticalized to tense markers (see Comrie 1976: 99–101; Bybee 1985a: 196; Bybee and Dahl 1989: 56–7); *see also* FINISH > PAST; PROGRESSIVE > PRESENT.

PERFECT > (4) PERFECTIVE

Early Modern Chinese *-liao*, perfect auxiliary > *-le*, perfective particle (Long et al. 2012). Perfect markers may develop into either perfective or past tense markers, a process that has been described especially by Bybee et al. (1994),⁶³ see under PERFECT > PAST. For example, the periphrastic resultative/perfect construction (‘have’ or ‘be’ + past participle) of Germanic and Romance languages has given rise to perfective uses in some European languages. Thus, in Modern Spoken French, this construction has been generalized to a perfective,

⁶³ Our term “perfect” corresponds to what Bybee et al. (1994) call the “anterior”.

replacing the older inflectional perfective (see Bybee et al. 1994: 85–7 for more details).

PERHAPS ('perhaps', 'maybe') > (1) OR

This pathway is adopted from Giacalone Ramat and Mauri (2011: 657), who argue that dubitative particles meaning 'perhaps' may grammaticalize into alternative (disjunctive) conjunctions 'or'. Kuuk Thaayorre = *okun* dubitative marker > 'or'. Russian, Bulgarian, Serbian, and Croatian *i* 'and' + *li*, dubitative particle > *ili* 'or' Giacalone Ramat and Mauri (2011: 657).

The evidence for this pathway is not really strong; nevertheless, this seems to be a conceptually plausible process leading from adverbial expressions to conjunctions. That the source and target meanings are semantically related is suggested, among others, by the fact that both PERHAPS and OR can serve as sources for polar question markers (see PERHAPS > S-QUESTION).

PERHAPS ('perhaps', 'maybe') > (2) S-QUESTION

The present pathway constitutes one of the four main processes that have been identified as leading to the emergence of polar question markers (Metslang et al. 2017: 494; see also Bencini 2003).⁶⁴ In this pathway, the source of grammaticalization is provided by dubitative markers of epistemic modality meaning 'perhaps' or 'maybe' which, depending on the epistemic state of the speaker and/or the hearer, may imply either an assertion or a question. Metslang et al. (2017: 511) found an interpretation of epistemic markers for 'maybe' as assuming an interrogative function in languages such as English (*perhaps*), Dutch (*misschien*), Norwegian (*kanskje*), Danish (*mon*), Swedish (*måne*), Central-Southern Sami (*dagke*), Lithuanian (*gal*, *galbūt*, and *mažu*), Latvian (*varbūt*), and Latgalian (*mozh/moš*, *može* and *varbuyt*). Ex.

Latgalian (Metslang et al. 2017: 511)

Mozh tai nav?
maybe so is
'Is it so?'

See also PERHAPS > OR; VP-AND, NEGATION, OR > S-QUESTION.

PERLATIVE > AGENT

This pathway, whereby perlative adpositions ('across', 'through') are grammaticalized into peripheral participant markers for agents (oblique agents), is so

⁶⁴ The four sources are (a) markers of coordination ('or', 'and', 'also', 'but'), typically on the left periphery of an utterance, (b) markers of subordination (insubordination of complementizers 'if', 'whether'), typically on the left periphery, (c) markers of alternation ('or not', 'or', 'not'), typically on the right periphery, and (d) markers of epistemic modality ('perhaps', 'maybe'). Underlying most of the processes concerned there seems to be a presupposition to the effect that the speaker is seeking confirmation from the hearer on the truth value of an utterance (Metslang et al. 2017: 494, 514).

far attested only in Indo-European languages, almost all of which are spoken in Europe. The pathway thus appears to be both genetically and areally restricted. Examples of such markers that have been mentioned include Old English *Þurh*, Dutch *door*, German *durch*, Polish *przez*, Ancient Greek *διὰ*, and Kashmiri *zəriyi* (Palancar 2002: 187, 206, table 8; Luraghi 2003; Wiemer 2011a: 541).

This grammaticalization is probably part of a more general process whereby agent participants, especially in passive constructions, are expressed in terms of spatial concepts. *See also* ABLATIVE > AGENT; LOCATIVE > AGENT.

‘Permission’, *see* D-POSSIBILITY

PERS-PRON, PLURAL > SINGULAR (Honorific)

Early Modern Chinese *nin*, second person plural pronoun > Modern Chinese *nin*, honorific second person singular pronoun (Long et al. 2012). In the Shantou dialect of Min, the third person pronoun *naŋ*⁵⁵ ‘they’ is also used as a third person singular pronoun (*naŋ*⁵⁵ ‘he’) but in this use signals distance or contempt (Long et al. 2012). Furthermore, in the Shangshui dialect of Zhongyuan Mandarin the second person plural pronoun *nin* ‘you’ can also refer to singular referents in specific constructions (Long et al. 2012).

French *vous* ‘you’, second person plural pronoun > ‘you’, singular addressee (polite form). German *sie* ‘they’, third person plural pronoun > *Sie* ‘you’, singular addressee (polite form; Simon 1997; Helmbrecht 2005).

This grammaticalization, where a second or third person plural pronoun serves to refer to a singular referent, appears to be quite widespread. It has been described in some detail by Simon (1997), Helmbrecht (2005), as well as Heine and Song (2010; 2011), where more descriptive details and examples are provided.

PERS-PRON, THIRD > (1) AGREEMENT

Third person (singular) subject pronouns may cliticize on the verb and become a largely or entirely obligatory part of the finite verbal word, no longer expressing distinctions of number or gender. Of the French personal pronouns *il* ‘he’ and *elle* ‘she’ (themselves derived from a Latin distal demonstrative; *see* DEMONSTRATIVE > PERS-PRON, THIRD), *il* has become an agreement marker in non-Standard French, bound to the verb and no longer distinguishing number or gender (Lambrecht 1981: 40; Hopper and Traugott 1993: 17). Ex.

Standard French

- (a) *La jeune fille est venue hier soir elle est danseuse*
 the young girl is come yesterday evening she is dancer
 ‘The girl came yesterday evening. She is a dancer.’

*Non-Standard French (Lambrecht 1981: 40; Hopper and Traugott 1993: 17)*⁶⁵

- (b) *Ma femme il est venu.*
 my:F wife AGR is come
 'My wife has come.'

English *he* has turned in Tok Pisin PE into a kind of redundant marker *i*, referred to as a predicate marker: "The particle *i*, now normally analyzed in Tok Pisin grammar as a 'predicate marker', had its origin in the cliticization of the old subject pronoun *i* (< Engl. *he*), later on replaced as a subject pronoun by *em* (< Engl. *him* or *them*)" (Sankoff 1979: 28).⁶⁶ Ex.

Tok Pisin PE (Sankoff 1979: 28)

Man i-mekim singsing long Mbabmu, meri em i-go long em, em i-pekpek blut ...
 'Men utter a spell over Mbabmu; if a woman goes near them, she will have dysentery ...'

The evidence available suggests in fact that third person singular pronouns are the most common source for verbal subject agreement markers. This grammaticalization appears to be a classical instance of desemanticization, whereby the main semantic content is bleached out, turning the pronoun into a marker of syntactic agreement (van Gelderen 2004; Fuß 2005) and resulting in a general relational marker (see Lehmann 1982: 42f.).

Evidence for this pathway comes also from sign languages, where the signing space, in combination with pointing signs (or eye gaze), is recruited as the primary means for defining distinctions of personal deixis and agreement. Pfau and Steinbach (2006; 2011: 688) propose the following grammaticalization chain for agreement markers in signed languages: Pointing gesture > locative > demonstrative pronoun > personal pronoun > agreement marker.

See also DEMONSTRATIVE > PERS-PRON, THIRD.

PERS-PRON, THIRD > (2) COPULA

Concerning this grammaticalization, according to which third person pronouns develop into copulas, see Li and Thompson (1977), who provide examples from Hebrew and Palestinian Arabic; see also Diessel (1999b: 143ff.). The following example from Modern Hebrew illustrates the initial stage of this process, where the item *hu* 'he/is' can be interpreted alternatively as a third person pronoun or a copula.

Modern Hebrew (Glinert 1989: 188f.; quoted from Diessel 1999b: 144)

ha- sha'on hu matana.
 the- clock:M:SG is/he:M:SG present:F:SG
 'The clock is a present.'

⁶⁵ Claire Moyse-Faurie (p.c.) informs us, however, that she has never heard a sentence like (b) even though she is a resident of Paris and a native speaker of French.

⁶⁶ Sankoff (1979: 28) adds that the *i* particle, having become redundant, is now subject to phonological deletion, so that its presence is no longer obligatory.

As the analysis by Rubin (2005: 41–2) suggests, a grammaticalization of personal pronouns to copulas appears to have happened quite commonly in Semitic languages: “In many languages, a redundant, or appositional, personal pronoun can act as a pseudo-copula.” He observes, for example, that at the initial stage, there was an appositional construction in Gəʿəz before the third person pronoun was generalized and decategorized as a copula, no longer being sensitive to distinctions of gender, number, and person.

A different source for copulas can be seen in demonstratives (see DEMONSTRATIVE > COPULA). Now, since demonstratives may give rise to third person pronouns, it is not always easy to determine which of the two developments was involved in a given case. However, Diessel (1999b: 145ff.) emphasizes that the development from identificational demonstrative to copula differs from the one leading from personal pronoun to copula, as shown, for example, in a contrasting agreement structure.

PERS-PRON, THIRD > (3) DEFINITE

The present pathway, which appears to be restricted to third person possessive modifiers, has been documented by Rubin (2010b; see also Rubin 2005). Rubin shows that in a number of Ethiopian Semitic languages, such as Amharic, Argobba, Chaha, Harari, Mäsqän, or the extinct Gafat language, third person possessive suffixes are also used as markers of definiteness. Examples include Amharic *bet-u* ‘the house’ or ‘his house’, Chaha *mädär-äta* ‘the/his place’, Gafat *täkul-s* ‘the/his garden’ (Rubin 2010b: 104).

Since the possessive modifiers, but not article uses, can be reconstructed back to earlier states of the languages concerned, we follow Rubin in hypothesizing that the latter are derived from the former. That this is a weakly grammaticalized pattern is suggested by the fact that definiteness marking is for the most part not obligatory. For example, in Harari, definiteness is often left unexpressed, but can be made explicit with the addition of the third person masculine singular possessive suffix *-zo*, e.g. *gar-zo* ‘the/his house’ (Rubin 2010b: 104).

Similar processes appear to have occurred in some Malayo-Polynesian languages. In Indonesian, for example, expression of definite reference is also not obligatory but can be expressed by the third person singular possessive suffix *-nya* if the referent has not previously been mentioned. Ex.

Indonesian (Rubin 2010b: 106)

Kamarnya sudah terkunci.
 room:3:POSS already locked
 ‘The room is already locked.’

Other Malayo-Polynesian languages showing this pathway include Sundanese (*-na*), Madurese (*-na*), Balinese (*-ne*), Malagasy (*ny*), and Biak (various forms; Rubin 2010b: 108).

As the analysis by Rubin (2010b) suggests, the present pathway arises in contexts where definiteness of known but discourse-new referents is concerned. In the course of the process, however, the use of the third person possessive forms may be generalized to also include the marking of definite anaphoric reference.

Compare DEMONSTRATIVE > DEFINITE.

PERS-PRON, THIRD PLURAL > (1) IMPERSONAL

Ewe *wó-* ‘they’, personal pronoun > impersonal marker (“agent suppression”). Modern Greek *-an* third person plural pronominal suffix > impersonal marker Ex.

Modern Greek (Haspelmath 1990: 49)

Su *tilefoni-s-an*.
you:DAT phone-AOR-3:PL
‘Someone called you.’

German *sie* (third person plural pronoun) in some of its uses serves as an impersonal pronoun. Ex.

German

Sie *haben* *ihn* *gestern* *mit* *dem* *Auto* *angefahren*.
They have him yesterday with the car hit
‘Someone hit him yesterday with a car.’

Similarly English *they* in certain uses; for example, *A haberdashery is a place where they sell sewing equipment* (anonymous reader).

Basque (anonymous reader)

Hil *z-u-te-n*.
kill[PFV] PAST-AUX-3:PL:ERG-PAST
‘They killed him.’ (= ‘He was killed.’)

In a number of creole languages, this seems to be a common grammaticalization process. Ex.

Haitian CF (Muysken and Veenstra 1995)

Se *sou* *chen* *mèg* *yo* *wè* *pis*.
FOC LOC dog thin 3:PL see flee
‘It’s on a thin dog that the fleas can be seen.’

This process can be observed, at least as an incipient grammaticalization, in quite a number of languages, even if grammarians do not always take notice of it. In some languages, the process has gone further and has given rise to a passive construction; see PERS-PRON, THIRD PLURAL > PASSIVE.

PERS-PRON, THIRD PLURAL > (2) PASSIVE

Maasai, dialect of Maa **ki* ‘they’, third person plural pronoun > passive suffix -*ki* (Greenberg 1959; Heine and Claudi 1986: 79–84). Kimbundu *a-* ‘they’, verbal prefix > passive marker. Ex.

Kimbundu (Givón 1979a: 188, 211)

- (a) *Nzua a-mu-mono.*
 (Nzua 3:PL-3:SG:OBJ-see)
 John they-him-saw
 ‘John, they saw him.’
- (b) *Nzua a-mu-mono (kwa meme).*
 (Nzua PASS-3:SG:SUBJ-see (by me))
 John they-him-saw
 ‘John was seen (by me).’

Luba *ba-* ‘they’, third person plural pronoun > passive marker. Ex.

Luba (Heine and Reh 1984: 99)

bà-sù-m-ine mu- àna kù-dì nyòka.
 they-bite- PERF C1- child there:where-is snake
 ‘The child has been bitten by a snake.’

Ewe *wó-* ‘they’, third person plural pronoun > passive marker in specific uses.⁶⁷ Ex.

Ewe (Heine and Reh 1984:99)

wó- dzi Kofi ...
 they-give:birth Kofi
 ‘Kofi was born ...’

Nuer *-kè* ‘they’, personal suffix > passive marker. Ex.

Nuer (Heine and Reh 1984:100)

càm(-kè) náádh è nyiidh.
 eat(-they) people by gnats
 ‘People are bitten (eaten) by gnats.’

Hungarian *-ik* third person plural, definite object > third person singular passive marker.⁶⁸ For more detailed treatments of this grammaticalization path, see Greenberg (1959); Givón (1979a); Wiemer (2011a: 542).

Note that this process is not restricted to third person markers. In the Southern Nilotic Akie language of north-central Tanzania, it is the first person plural subject pronoun *kii/kee* that was grammaticalized to a passive marker, with the patient (undergoer) being encoded as an object participant (König et al. 2015: 56–8).

⁶⁷ No explicit agent may be mentioned in this Ewe construction.

⁶⁸ This example was suggested by an anonymous reader of the first edition of this book.

This process involves a complex constructional change whereby a marker for personal deixis is reinterpreted as a voice marker, losing its meaning as a third person plural pronoun (desemanticization) and morphological category status (decategorialization). Unambiguous examples of conventionalized passives of this type have been found so far only in African languages (see also Wiemer 2011a: 542).

PERS-PRON, THIRD PLURAL > (3) PLURAL

Lugbara *èi* ‘they’, personal pronoun > *-i* nominal plural suffix (Crazzolara 1960: 19). Susu *-e* ‘person’; ‘they’ > plural suffix (Friedländer 1974: 19, 25). Bambara *-u*, Malinke *-ru*, *-lu*, Dioula *-lu* ‘they’ > plural marker (Brauner 1974: 26). Ewe *wó-* ‘they’, personal pronoun > *-wó* nominal plural suffix. Baka *wó* ‘they’, third person plural subject pronoun > *-o* (*-ó* after vowels having high tone), nominal plural suffix. Ex.

Baka (Christa Kilian-Hatz, p.c.)

- (a) *Wósè wó a gɔ.*
 woman 3:PL ASP go
 ‘The women are going.’
 (b) *wósè- o (wó) á gɔ.*
 woman-PL 3:PL ASP go
 ‘The women are going.’

Mupun *mo*, third person plural subject or object pronoun > *mo*, nominal plural marker (enclitic). Ex.

Mupun (Frajzyngier 1993: 160–2)

saar mo jirap de wuraj mo
 hand PL girl REL tall PL
 ‘hands’ ‘tall girls’

See Frajzyngier (1997a) for more examples from Chadic languages.

Evidence for this pathway can also be found in creole languages. Negerhollands CD *sini* ‘they’, personal pronoun > nominal plural marker (mostly on definite noun phrases). Ex.

Negerhollands CD (Stolz 1986:122,131)

- (a) *Di kabai a sle:p sini de: bus.*
 (DET horse PERF pull 3:PL through bush)
 ‘The horses pulled them through the forest.’
 (b) *Frufru werá ham a jak ši kabrita sini a sabán.*
 (morning again 3:SG PERF hunt) (POSS goat PL PREP savannah)
 ‘In the morning he drove his goats again into the savannah.’

Krio CE *dem* ‘they’, personal pronoun > nominal plural enclitic. Ex.

Krio CE (Todd 1979: 288)

- (a) *dɛm bin futam.*
 (they TNS shot)
 'He/she/it was shot (by them).'
- (b) *mi padi dɛm buk mi padi dɛm buk dɛm*
 (my friend they book) (my friend they book they)
 'my friends' book' 'my friends' books'

See Thiele (1991) for more examples from Portuguese-based and other creoles; see also Romaine (1988: 137).

This grammaticalization appears to be a classical instance of desemanticization, whereby the main semantic content is desemanticized, resulting in a number marker.

PERSON (human being) > (1) INDEFINITE PRONOUN

Archaic Chinese *ren* 'human being' > Modern Chinese *ren* 'someone' in specific contexts (Long et al. 2012). Albanian *njeri* 'person', noun > *njeri*, 'somebody', indefinite pronoun. Ex.

Albanian (Stolz 1991a: 12)

- S' pa-shë njeri.*
 NEG see-AOR:1:SG someone:ACC
 'I haven't seen anybody.'

Portuguese *pessoa* 'person', noun > '(some) one', indefinite pronoun. Ex.

Portuguese (Stolz 1991a: 13)

- A pessoa não dev- e preocup-ar- se.*
 DET:F person:F NEG must-3:SG:PRES worry- INF-REFL
 'One should not worry.'

Swahili *mtu* 'person', noun > indefinite pronominal in existential expressions. Ex.

Swahili

- pa-na m- tu. si-on- i m- tu.*
 C16-have C1-person 1:SG:NEG-SEE-NEG C1-person
 'There is somebody.' 'I don't see anybody.'

Nzakara **nj* 'person', noun > indefinite pronoun (Heine and Reh 1984: 224). Baka *bo* 'person', 'man', 'being', noun > 'somebody', indefinite pronoun. Ex.

Baka (Christa Kilian-Hatz, p.c.)

- (a) *nga bo, nga so ode.*
 1:PL:EXCL person 1:PL:EXCL animal NEG
 'We are people; we are not animals.'

- (b) *bo* *ʔá* *koʔə*
 person 3:SG come:PAST
 ‘Somebody has come.’
ma *à* *sià* *bo* *kè* *ʔé* *bà* *də* *nè*.
 1:SG ASP see person DEM 3:SG ASP come REL
 ‘I see someone come.’

Bulu *môt* ‘person’, noun > ‘somebody’, indefinite pronoun (Hagen 1914: 265, 353).

Probably related to this evolution is the grammaticalization of ‘person’-nouns to impersonal markers; for example, Baka *wó* ‘person’, noun > impersonal pronoun (‘one’). Ex.

Baka (Christa Kilian-Hatz, p.c.)

Wó *ndé* *a* *ye* *pòkì* *à* *mo-nda*.
 man without INF love honey LOC door-house
 ‘One does not like the kind of honey that sticks on the house door.’

Turkish *insan* ‘human being’, noun > ‘one’, indefinite pronoun in impersonal passive constructions (Lewis [1967] 1985: 77).

See also Lehmann (1982: 51–2), Heine and Reh (1984), Haspelmath (1997a: 182), and Giacalone Ramat and Sansò (2007). Nouns for ‘person’ and ‘man’ are expressed by the same lexeme in a number of languages, and it is frequently unclear which of the two meanings provided the source of grammaticalization; hence, *see also* MAN > INDEFINITE PRONOUN. Haspelmath (1997a: 182) describes the process thus: the generic noun is “first used in a noun phrase without modifiers to render meanings like ‘somebody’, ‘something’, and ... gradually acquires phonological, morphological and syntactic features that set it off from other nouns” (Haspelmath 1997a: 182).

Semantically, Giacalone Ramat and Sansò (2007) refer to the process as an agent-defocusing strategy employed when the speaker wants to background the agent of an action because it is generic/non-identifiable. The grammaticalization of nouns for ‘person’ or ‘man’ into a non-referential indefinite form and, in some European languages, into an indefinite pronoun is discussed in detail in Giacalone Ramat and Sansò (2007); see also Lehmann (1982: 51–2).

This grammaticalization appears to be an instance of a more general process whereby generic nouns give rise to pronominal categories; compare MAN; PEOPLE; PERSON; THING.

A process from noun to indefinite pronoun has also been observed in sign languages such as German Sign Language (DGS) and Sign Language of the Netherlands (NGT), which both appear to have undergone a

development from noun for ‘person’ to indefinite pronoun (Pfau and Steinbach 2006).

Compare PERS-PRON, THIRD PLURAL > IMPERSONAL.

PERSON (human being) > (2) PERS-PRON, FIRST PLURAL

This pathway involves almost invariably plural forms of nouns for ‘person’, that is, ‘people’; *see* PEOPLE > PERS-PRON, FIRST PLURAL. But there are also languages where the source noun has either singular or both singular and plural reference. !Xun, N1 dialect *dju* ‘person’, ‘people’ > first person plural exclusive pronoun. Ex.

!Xun, N1 dialect (Heine and König 2015)

dju-tca *Dúmbà gè.*
 1:PL:EXCL-DU Dumba stay
 ‘I am staying with Dumba.’ (lit.: ‘We [two] and Dumba stay.’)

Kono *mòò* ‘man’, ‘person’, ‘people’, noun > *mò’* ‘we (INCL)’, first person plural inclusive pronoun. Ex.

Kono (Donald A. Lessau, p.c.)

- (a) *mòò* *kúndú-nù*
 person short- PL
 ‘short people’
- (b) *mó’* *dè* *án* *nè*
 1:PL:INCL mother EMPH here
 ‘This is our mother.’

Susu *mikhi* ‘man’, ‘person’; *mikhi mundue?* ‘which people?’ > *mukhu* ‘we’, ‘us’, ‘our’, first person plural exclusive pronoun (Friedländer 1974: 25); note that there is a common free variation in Central Mande between the high vowels *i* and *u*. Ex.

Susu (Friedländer 1974: 28)

mukhu khunyi
 ‘our heads’

In the Central Sudanic language Ngiti of the Nilo-Saharan family, the noun *ale* ‘person, people’ appears to have given rise to a first person plural inclusive pronoun *àlè* ‘we’ (Kutsch Lojenga 1994: 195). Another example is provided by languages of the West Atlantic Cangin group of Senegal: three languages of this group, namely Laala, Palor (of Khodoba), and Saafi-Saafi, have experienced a similar grammaticalization whereby a noun for ‘person’ or ‘people’ appears to have given rise to a first person plural pronoun (Ursula Droic, p.c.; Heine and Song 2011: 613, table 3). The impersonal pronoun *on* of French, ultimately derived from Latin *homo* ‘person’, ‘man’, was grammaticalized to an informal first person plural pronoun ‘we’ of the spoken language (Coveney 2000: 459; Heine and Song 2011: 616).

The result of this process is for the most part *inclusive* first person plural pronoun, but this not always the case, as the examples above demonstrate: in some dialects of the !Xun language of northern Namibia and southern Angola, it was an exclusive rather than an inclusive first person plural pronoun (Heine and König 2015: 315). This pathway tends to involve an intermediate stage of an indefinite or impersonal pronoun, hence: ‘people’ > indefinite or impersonal pronoun > first person plural pronoun.

For more detailed discussion of this pathway, see Heine and Song (2010; 2011); see also Giacalone Ramat and Sansò (2007).

This appears to be an instance of a more general process whereby generic nouns give rise to pronominal categories. See PEOPLE > PERS-PRON, FIRST PLURAL; compare INDEFINITE PRONOUN; MAN; PEOPLE; THING.

PERSON (human being) > (3) PERS-PRON, THIRD

In the Khmer language of Cambodia, the form *kee* serves not only as a noun for ‘person’ but also as a third person pronoun of neutral social status and as an indefinite pronoun (John Haiman, p.c.; Heine and Song 2011: 598).

In the Afro-Brazilian Calunga language, which arose in the course of the last centuries among African slaves in the state of Minas Gerais, the noun *camano* ‘person’ has given rise to the third person masculine pronoun *camano* ‘he’ (the feminine pronoun *ocai* ‘she’ being derived from the noun *ocai* ‘woman’) (Byrd 2006: 114; Heine and Song 2010: 140–2).

In a number of languages, nouns for ‘person, human being’ also mean ‘man’ and it remains frequently unclear which of the two was responsible for the grammaticalization concerned; see also MAN > PERS-PRON, THIRD.

This process, so far poorly documented, appears to be another instance of a process whereby generic nouns like ‘person’ and ‘thing’ are grammaticalized to pronouns; compare MAN; THING.

PERSON (human being) > (4) W-QUESTION

In this pathway it is usually a noun for ‘person’ together with the interrogative modifier ‘which?’ that was grammaticalized to a question marker ‘who?’, referring to human referents. In some languages such as Kukama-Kukamiria of Peru, however, it is the simple noun for ‘person’ that appears to have given rise to the question marker. Kukama-Kukamiria *awa* ‘person’, noun > *awa* ‘who?’, interrogative word (Vallejos 2016: 175). Ex.

Kukama-Kukamiria (Vallejos 2016: 176)

awa *n=umi=ui*
 who 2:SG=see=PAST
 ‘Whom did you see?’

Ewe *ame ka* (person which?) ‘which person?’, noun phrase > *ameka* ‘who?’, interrogative particle (Westermann 1905).

Examples of this pathway can be found in a number of pidgin and creole languages (see Muysken and Veenstra 1995: 125–7; Heine and Kuteva 2007: 183–4), e.g. Kenya Pidgin Swahili *mtu gani* ‘which person?’ > *mtu gani?* ‘who?’ (instead of Standard Swahili *nani* ‘who?’; Heine and Kuteva 2007: 184).

See also MAN; THING > W-QUESTION.

PIECE > CLASSIFIER

Chinese *kuài* ‘piece’, ‘lump’, ‘chunk’, noun > classifier for three-dimensional objects (Bisang 1999: 133). Hani *bja*³¹ ‘board’, noun > *bja*³¹ ‘piece’, classifier for specific purposes (Long et al. 2012). Jingpho *kin*³¹ *poŋ*³³ ‘ridge of a field’ > *kin*³¹ *poŋ*³³ ‘ball-shape, piece’, classifier; *kai*³¹ *lep*³¹ ‘ginger piece’ > *kai*³¹ *lep*³¹ ‘piece’, classifier for special purposes (Long et al. 2012). Vietnamese *cái* ‘piece’, ‘jump’, ‘blow’ > classifier for nonliving things (Löbel 1996: 129, 172). More research is needed on the exact nature and the genetic and areal distribution of this process. Concerning the rise and development of classifiers in Chinese, see Peyraube (1998).

This grammaticalization is part of a more general process whereby certain nouns, on account of some specific semantic characteristic, are recruited as structural templates for a folk taxonomic classification of nominal concepts; *see also* BRANCH; CHILD; MAN; SONG; TREE; WOMAN. More research is needed on the genetic and areal distribution of this process.

PLACE > (1) CAUSE

Kono *kènà* ‘place (of)’, noun > *kènà mín mbè* (‘place’ + relative clause marker; lit.: ‘the place where’) > ‘because’, conjunction. Ex.

Kono (Donald A. Lessau, p.c.)

- (a) à éé cé ciá cè yén-daă kènà mín
 3:SG NEG can ring DEM find-? place REL
 ‘(a place) where he cannot find the ring’
- (b) àn a a iyá kènà mín mbè mànsá cè ...
 3:PL TAM 3:SG welcome because chief DEM
 ‘They welcomed him because the chief ...’

Bambara *yòrò* ‘place’, relational noun, *oyòròkama* ‘for this place’ > *oyòròkama* ‘therefore’, conjunction. Ex.

Bambara (Ebermann 1986: 55, 177)

- (a) à yòrò ká jàn.
 (3:SG place COP far)
 ‘His place is far away.’
- (b) a yé n neni, o yòrò kama ...
 (3:SG TAM 1:SG insult therefore)
 ‘He has insulted me therefore ...’

Korean *tey* ‘place’ noun developed into the connective *-ntey* ‘since, because’ (Ha 2003).

Note that these examples all involve one language family and, hence, are not suggestive of a crosslinguistically relevant process. The reason for nonetheless presenting this case is that nouns meaning ‘place’ commonly acquire some locative significance (*see* PLACE > LOCATIVE; Heine 2011c), and locative markers appear to be a fairly common source for causal markers (*see* LOCATIVE > CAUSE).

PLACE > (2) LOCATIVE

Kpelle *pō* ‘place’, noun > ‘at’, ‘toward’, ‘to’, postposition (Westermann 1924: 12). Vai *tina* ‘place’, relational noun > locative postposition. Ex.

Vai (Koelle [1854] 1968: 38,221)

- (a) *mú tā dātina dʒé!*
 (1:PL:go festivity place see)
 ‘Let us go and see the place of festivity!’
- (b) *mu tāwa soē tina!*
 (1:PL go:EMPH hole:DEF place)
 ‘Let us go to the hole!’

Vai *bārā* ‘place’, ‘large open place’, ‘yard’, noun > locative postposition. Ex.

Vai (Koelle [1854] 1968: 38, 145)

- I ná mbara!*
 (2:SG come 1:SG:place)
 ‘Come to me!’

Gurenne *zia* ‘place’, ‘side’, noun > ‘at’, ‘with’, ‘to’, adposition (Rapp 1966). Lingala *esíká* ‘place’, noun > *esíkáya* (place GEN) ‘at’, preposition (van Everbroeck 1958: 136). Finnish *kohta* ‘place’, *kohdalla* ‘at the place’ > *kohdalla* ‘at’, locative postposition governing genitive case. Ex.

Finnish (Blake 1994: 167)

- talo-n kohdalla*
 house-GEN place:ADE
 ‘at the house’

Japanese *tokoro* ‘place’, noun > *dokoro* ‘far from’, case particle of extent (Narrog and Rhee 2013: 290). Middle Korean *tA* ‘place’ noun > *-hanthey* ‘to’ dative postposition (Han 2003; Rhee 2010; Narrog and Rhee 2013).

We are dealing with another instance of a more general process whereby relational nouns (including nouns for body parts) give rise to relational (typically spatial or temporal) grammatical markers (Heine 2011c); compare BOTTOM; SIDE; TOP.

PLACE > (3) NOMINALIZER

In Northern Mansi, the noun *mā* ‘earth, world, land, place’ has grammaticalized into a nominalizer. One of the most frequent structures including *mā* as a nominalizer is present/past participle + *mā* + possessive suffix + locative, whereby it mostly expresses simultaneous action/event and the base verb of the participle is usually a motion verb, e.g. ‘go’, ‘walk’, ‘travel’ (Bíró 2017: 5–6). This grammaticalization has – supposedly – proceeded as follows (Bíró 2017: 16): the (concrete) place of the action (noun) > the time of the action (action nominal) > the name of the action (action nominal)/other abstract noun. Ex.

Northern Mansi (Bíró 2017: 5)

Nay jal- nə mā-n-t matər ti vār-s-ən!
 You travel- PTCPL.PRES NOMIN-PX2SG-LOC something PART do-PST-2SG
 ‘During your travelling you did something wrong!’

In the Eastern Khanty dialects the word *tahi* ‘place’ combined with participles can express abstract meaning; thus it can create nouns expressing the place, time, result, and name of the action (action nominals)/other abstract nouns; see Csepregi (2008: 129–30), cited in Bíró (2017: 16).

In Japanese, *tokoro* ‘place’ has grammaticalized into a nominalizer; likewise, Tibetan *sa* ‘place’ has come to function as a nominalizer (Yap et al. 2011: 29, cited in Bíró 2017: 11).

In Archaic Chinese (about 1100 BC), there was a widely used nominalizer *suo* which grammaticalized from the word ‘place’, e.g. *suo shi* (*suo* ‘eat’) ‘food’ (Yuzhi Shi, p.c.).

PLACE > (4) REPLACIVE

In English, this process took place prior to the eighteenth century, whereby a construction consisting of the preposition *in* plus the noun *sted* ‘place’ and a nominal (or pronominal) possessive modifier developed into a composite preposition *in stede of* ‘instead of’ (Schwenter and Traugott 1995; Lewis 2011). Example (a) illustrates the lexical source and (b) the grammaticalized output of the process. Up to the late sixteenth century, the vast majority of occurrences of *sted* still refer to physical place (Lewis 2011: 427).

English (Lewis 2011: 425–7)

- (a) ... *stirre noyot fro that stede, but stande still thare.* (c.1440, The York Plays; Lewis 2011: 425)
 (b) *In stede of drynk thay gaf me gall.* (c.1460, Towneley Plays; Lewis 2011: 427)

French *au lieu de* ‘in place of’ > ‘instead of’. German *anstelle von* ‘in place of’ > ‘instead of’, preposition. Turkish *yer* ‘place’, noun > *yerine* (place + LOC)

‘instead of’, postposition (Lewis [1967] 1985: 94). Western Modern Armenian *tet-* ‘place’, noun > ‘instead of’, postposition, when it takes no article (Hagège 1993: 206). Bulgarian *mjasto/mesto* ‘place’, noun > *vmesto* (v ‘in’ + *mesto* ‘place’) ‘instead of’, preposition. Ex.

Bulgarian

Iskam jabālki vmesto portokali.
 want:1:SG:PRES apples in:place oranges
 ‘I want apples instead of oranges.’

Hungarian *hely* ‘place’, noun > *hely-ett* ‘instead’ (anonymous reader). Seychelles CF *dâplas* ‘in place’ > *dâplas* ‘instead’, conjunction.⁶⁹ Ex.

Seychelles CF (Corne 1977: 144)

dâ plas u al leköl, u n al bazar.
 (instead 2:SG go school 2:SG CPL go market)
 ‘Instead of going to school, you went to the market.’

We seem to be dealing with another instance of a more general process whereby relational nouns (including nouns for body parts) give rise to conjunctions and other relational grammatical markers; compare BOTTOM; SIDE; TOP.

A-POSSESSIVE > (1) AGENT

According to this pathway, which entails a shift from nominal to clausal syntax in specific contexts, possessive (“genitive”) modifiers in constructions of nominal possession are reinterpreted as agents, typically functioning as clausal subjects (cf. Palancar 2002: 204). The pathway may have the effect that a genitive case marker is reanalysed as a new agent marker. All evidence available suggests that the trigger for this process is provided by a context where, instead of nouns, there are nominalized verbs functioning as the head of a nominal possessive construction. Wiemer (2011a: 541–2) provides the following account of this pathway:

The Lithuanian *genetivus auctoris*, for example, results from a reanalysis of dependency relations by which a possessive pronoun or a noun in the genitive gets used outside its NP, whereby it starts modifying the predicate (Wiemer 2004: 310–13). A similar case is known from classical Armenian . . . The genitival actor in Malagasy is slightly different: it is cliticized on the verb as a possessor . . . This peculiar marking technique correlates with the nominal origin of verbal morphology (Keenan 1985: 259). In any case, what is crucially involved with genitival Actor-phrases is not grammaticalization proper, but syntactic reanalysis combined with semantic extension. (Wiemer 2011a: 541–2)

⁶⁹ In addition, Seychelles CF has a second replacive marker *olie* ‘instead’, which appears to have been inherited from French (< *aulieu*; see Corne 1977: 144).

The Rukai language of Taiwan appears to illustrate this situation, where the agent is encoded by a possessor noun phrase introduced by the genitive marker *ki* while the possessee is provided by a nominalized verb:

Rukai (Chen 2005: 37; Sansò 2016: 933)

wa-del-aku ku [ta-kane-ane ki cumay].

IMPFV-see-1:NOM ACC PFV-eat-NOMIN GEN bear

‘I saw that a bear ate.’ (lit.: ‘I saw a bear’s eating.’)

Whether this is a case of grammaticalization must in fact remain controversial. While there is context extension, there is neither clear desemanticization nor decategorialization: rather than loss of meaning there is change from nominal to clausal case function, and instead of loss of morphosyntactic features there is replacement of nominal case features by clausal case features. Nevertheless, this case appears to be one of the manifestations of a more general conceptual process whereby the use of grammatical markers is extended from the noun phrase to the clause; compare, e.g., DEMONSTRATIVE > RELATIVE; A-POSSESSIVE > AGENT.

A-POSSESSIVE > (2) PARTITIVE⁷⁰

Harris and Campbell (1995: 339–41) observe that the “development of a partitive out of the expression of a partial through agentive or through a locative (in roughly the meaning ‘from’) . . . is a good candidate for a unidirectional change, to which we know no counter examples”. See also Harris and Campbell (1995: 362–3) for examples from Finno-Ugric. That partitives may be historically derived from A-POSSESSIVE (genitive) markers is substantiated by these authors with the following examples: (a) In Lithuanian, a partitive use has developed out of the inherited Indo-European genitive. (b) The “partitive” article of French can be traced back to a combination of the definite article plus the genitive. Luraghi and Kittilä (2014: 51–2) conclude that the extension of genitive cases to partitive meanings is typical of the Indo-European languages. Classical Latin had a genitive case which expressed both genitive and partitive meanings.

Since A-POSSESSIVE markers may go back to ABLATIVE markers (see, e.g., Luraghi and Kittilä 2014: 51), we seem to be dealing with a more general grammaticalization chain ABLATIVE > A-POSSESSIVE > PARTITIVE, even if there need not be an intermediate stage of A-POSSESSIVE. Still, more examples would be desirable to determine the significance of this pathway. It would seem

⁷⁰ Dedicated partitive markers such as case suffixes, expressing the notion ‘a part of’ or ‘partly affected’, seem to be crosslinguistically rare (see Luraghi and Kittilä 2014). The present treatment is not restricted to dedicated partitive markers but also discusses constructions containing some morphological exponent that has or includes a partitive function.

that there is not necessarily an intermediate A-POSSESSIVE; as appears to be the case in some other grammaticalization processes, the evolution may proceed straight from the initial to the final meaning.⁷¹

Evidence that the present pathway can arise in situations of language contact is provided by Luraghi, De Smit, and Igartua (in prep.) with data from Indo-European, Finnic, and other languages. *See also* ABLATIVE, CHILD > PARTITIVE.

A-POSSESSIVE > (2) RECIPIENT

The present pathway is based on a type of grammatical change whereby the syntax of a noun phrase is extended to clausal syntax in that a nominal possessive modifier (A-POSSESSIVE) is reinterpreted as a recipient argument of the verb, typically assuming the function of an indirect object of the clause (cf. the “possessive adnominal strategy” of Margetts and Austin 2007, or the “possessive strategy” of König and Heine 2010: 90). Most cases recorded so far stem from Oceanic languages, where “an extension from possessive to benefactive markers is well attested” (Margetts 2004: 446). Languages where this pathway has been recorded include the following (in alphabetical order): Balawaia of Papua New Guinea, South Efate language of Vanuatu, Gayo of Sumatra, Modern Greek (Kordoni 2004), Hixkaryana of Brazil, Kobon of Papua New Guinea, Tamambo of Vanuatu, Tzotzil of Mexico, and !Xun of Northern Namibia (see Song 1997b; 2005; Lichtenberk 2002; Margetts 2004; Margetts and Austin 2007: 426–8; König and Heine 2010: 90; Heine and König 2010a: 93; Moyse-Faurie 2018).

Perhaps most commonly, the structural change involved is that the object complement of a transitive verb takes a possessive modifier (A-POSSESSIVE) and the latter is reinterpreted as a recipient argument of the verb rather than of the object complement. In Oceanic languages, this recipient appears to have the features of a benefactive whereas in some other languages, a malefactive function is more common. The main stages involved can be described thus (see also Margetts 2004: 446):

- I The object complement of a transitive verb takes a possessive modifier typically denoting the possessor of the object complement.
- II In addition to denoting the possessor, the modifier can be interpreted as a recipient of the referent of the object complement (cf. the bridging stage of Heine 2002). This is the case in particular when the possessor can be understood to be affected by the action expressed by the verb.

⁷¹ The latter is suggested by observations made by Harris and Campbell (1995: 363), who note with reference to the evolution in Mordvin, for example, “The Mordvin ablative can be used as a ‘restricting’ object case, for example where ‘to eat of/from bread’ develops the meaning ‘eat some (of the) bread’, from which the grammatical function of the partitive case developed.”

III Only a recipient interpretation is possible, and the possessive modifier turns morphosyntactically into a recipient ('indirect object') complement of the verb (conventionalization stage).

Not all of the languages listed above have gone through all of these stages. The following examples from the Oceanic language Saliba illustrate the stages (where (a) = Stage I, (b) = Stage II, and (c) = Stage III).

Saliba (Western Oceanic, Papuan Tip Cluster; Margetts 2004:458; Moyse-Faurie 2018: 302)

- (a) *Yo-na heliam ye-lao-ma.* (Possessive only)
 CLASS-3:SG.POSS friend 3:SG-come-hither
 'Her friend came.'
- (b) *Yo-na tobwa ya-halusi.* (Possessive/recipient)
 CLASS-3:SG.POSS bag 1:SG-weave
 'I wove her bag.' Or 'I wove a bag for her.'
- (c) *Yo-na ya-tolo.* (Recipient only)
 CLASS-3:SG.POSS SG-stand:up
 'I stood up for her (because they falsely accused her).'

The following example from the Khoisan language !Xun illustrates a negatively affected (malefactive) recipient:

!Xun (W2 dialect; Heine and König 2010a: 92)

!äxä-kx'äò má kē cōān dāhmà n/üǀ.
 doctor TOP PAST refuse woman medicine
 'The doctor refused the woman the medicine.' (lit.: 'The doctor refused the woman's medicine.')

For other examples where the syntax of a noun phrase is extended to clausal syntax, see DEMONSTRATIVE > RELATIVE; A-POSSESSIVE > AGENT.

This pathway differs from most other grammaticalization processes in that it is *bi-directional* rather than unidirectional; compare RECIPIENT > A-POSSESSIVE.

H-POSSESSIVE⁷² > (I)EXIST

French *avoir* 'to have', verb, auxiliary > 'exist'. Ex.

French (Heine 1997a: 95)

- (a) *Il a deux enfant-s.*
 he has two child-PL
 'He has two children.'
- (b) *Il y a deux enfant-s.*
 it there has two child-PL
 'There are two children.'

Colloquial (southern) German *haben* 'have', verb, auxiliary > 'exist'. Ex.

⁷² This term stands for predicative possession of the HAVE-type (e.g. *I have a dog*); see Heine (1997a).

Da hat es zwei Kind-er.
 there has it two child-PL
 ‘There are two children.’

Modern Chinese *you* ‘have’ > *you* ‘exist’ (Long et al. 2012). Swahili-*na* ‘be with’, ‘have’, verb, auxiliary > ‘exist’ (with locative subject referents). Ex.

Swahili

- (a) *ni-na chakula.*
 I-be:with food
 ‘I have food.’
- (b) *ku-na chakula.*
 LOC:C17-be:with food
 ‘There is food.’

This is a fairly widespread grammaticalization in creole languages. Guyanese CF *gê* ‘have’, verb > ‘exist’. Ex.

Guyanese CF (Corne 1971: 91,95)

- (a) *i fini gê trua.*
 (3:SG come:from have three)
 ‘He just had three of them.’
- (b) *i pa gê pies.*
 (3:SG NEG have piece)
 ‘There is none.’

According to Bickerton (1981: 66), the usual creole equivalent of existential ‘there is’ is ‘(they/it) have’. Examples are Guyanese CE *get*, Haitian CF *gê*, Papiamentu CS *tin*, São Tomense CP (São Tomé) *te*, Bahamian CE *have*, Negerhollands CD *diehab*, and Ndjuka CE *aabi* (Holm 1988: 178). Ex.

Guyanese CE (Bickerton 1981: 66–7)

Dem get wan uman we get gyal-pikni
 (there is a woman who has daughter)
 ‘There is a woman who has a daughter.’

Papiamentu CS (Bickerton 1981: 66–7)

Tin un muhe cu tin un
 have a woman who have a
yiù-muhe.
 child-woman
 ‘There is a woman who has a daughter.’

Note that in Chinese, the same form, *you* is used for ‘have’ and ‘there exists’, but the chronology between the two is unclear (Alain Peyraube, p.c.). See Heine (1997a: 202ff.) for a discussion of this process. What appears to trigger the process is that instead of a typically human possessor there is an inanimate/impersonal or a locative participant.

The impression might arise that this process contradicts the unidirectionality principle since there is also a process showing the reverse directionality: EXIST > H-POSSESSIVE. However, we are not dealing with a violation of this principle since the present process concerns “nuclear” (one-participant) existence, rather than “extended” (two-participant) existence. For details, see Heine (1997a: 94–6); *see also* EXIST.

H-POSSESSIVE⁷³ > (2) FUTURE

Latin infinitive verb + *habēre* ‘to have’ > Spanish *-ré* future (Pinkster 1987); Latin (*ego*) *cantare habeo* ‘I have to sing’ > French *je chanter -ai* ‘I’ll sing’, Portuguese *cantarei* ‘I will sing’ (Fleischman 1982a: 115). Nyabo *kś* ‘have’ > future tense marker. Ex.

Nyabo (Marchese 1986: 139)

ɔ̃ kś b-ɔ̃ mū plībō.
he has that-he go Pleebo
‘He will go to Pleebo.’

Neyo *ka* ‘have’ > future tense marker (Marchese 1986: 76). Lakota Dida *kā* ‘have’ > *ká*, future tense marker (Marchese 1986: 76). Vata *ka* ‘have’ > *ká*, future tense marker (Marchese 1986: 76). Bété *kà* > *ká*, future tense marker (Marchese 1986: 76). Godié *kɔ̃* ‘have’ > *kɔ̃́*, future tense marker. Ex.

Godié (Marchese 1986: 76)

- (a) ɔ kɔ̃ monii.
he have money
‘He has money.’
(b) ɔ kɔ̃ sɔ̃ pl.
he AUX down lie
‘He is going to lie down.’

Bulgarian *ima* ‘have’ (3:SG:PRES) + *da* (particle) + main verb > future (colloquial). Ex.

Bulgarian

- (a) *Toj ima kniga.*
he have:3:SG:PRES book
‘He has a book.’
(b) *Ima da xodja.*
have:3:SG:PRES PART go:IMPV:1:SG:PRES
‘I will go.’

Bulgarian *njamam* ‘have not’ + *da* (particle) > *njama da*, negative future marker. Ex.

⁷³ This term stands for predicative possession of the HAVE-type (e.g. *I have a dog*); see Heine (1997a).

Bulgarian (Kuteva 1995: 209)

Njama da dadeš.

have:not PART give:PFV:2:SG:PRES

‘You will not give.’

Compare Fleischman (1982a, 1982b) and Pinkster (1987). For more details on Romance languages, see Klausenburger (2000). While this grammaticalization is common in Romance languages, for example, it does not appear to be a salient pathway for the development of future tense markers crosslinguistically.

There is some evidence to suggest that ‘have’-futures have also arisen via language contact. Breu (1996: 30; see also Heine and Kuteva 2005: 131), for example, shows that in the Slavic minority language Molisean (or Molise Slavic) of southeastern Italy, such a future tense, expressing necessity and future, emerged built on the auxiliary *imat* ‘have’ and that this grammaticalization was induced by language contact with Italian.

H-POSSESSIVE > (3) D-NECESSITY (Obligation)

German *haben* ‘have, own’ + *zu* ‘to’ > auxiliary of obligation. Ex.

German

(a) *Er hat ein Auto.*

he has one car

‘He has a car.’

(b) *Er hat zu gehorchen.*

he has to obey

‘He has to obey.’

English *have* + *to*, obligation marker, as, for example, in *You have to wash your hair*. Latin *habēre* ‘have’ + infinitive, obligation marker. Ex.

Latin

Venire habes.

come:INF have:2:SG

‘You have to come.’

Czech *mít* ‘have’ + infinitive > ‘should, be to’. Lithuanian *ture* ‘have’ + infinitive > ‘must’ (Vykpěl 2010: 132).

Nyabo *ble* ‘have’ > *ble*, obligation marker. Ex.

Nyabo (Marchese 1986:140)

ɔ̃ blɛ̃ yɛ̃ b-ɔ̃ tɔ̃ːʃ̃ nĩ.

he have ? that-he buy fish

‘He must/is supposed to buy fish.’

Koyo *ha* ‘have’ > obligation marker. Ex.

Koyo (Marchese 1986:141)

Abi ha o ka bogu ciya.

Abi has he AUX book learn

‘Abi must learn to read and write.’

Kagbo *kà* ‘have’ > obligation marker. Ex.

Kagbo (Godié dialect; Marchese 1986:140–1)

- ɔ *kà sáká ɓli-l*.
 he has rice pound-NOMIN
 ‘He has to pound rice.’

Yoruba *ní* ‘have’ > obligation marker. Ex.

Yoruba (Marchese 1986: 138)

- (a) *mo ní bàtà*.
 I:SG have shoes
 ‘I have shoes.’
 (b) *mo ní l’átī lọ*.
 I:SG have to:go
 ‘I have to go.’

Spanish *tener* ‘hold’, ‘have’, verb, auxiliary > obligation auxiliary *tener que* + INF ‘have to’, ‘must’ (Halm 1971: 117). Negerhollands CD *ha* ‘have’ + *fó*, conjunction > ‘must’, obligation marker.⁷⁴ Ex.

Negerhollands CD (Stolz 1987b:175)

- Mi sa ha fó loo*.
 I FUT have PART go
 ‘I will have to go.’

For more details on Romance languages, see Klausenburger (2000). This grammaticalization does not appear to be confined to H-POSSESSION; rather, other kinds of possession may also give rise to OBLIGATION or other kinds of deontic modality. The following example involves B-POSSESSION (belong-possession): German *gehören* ‘belong to’ > auxiliary marking deontic modality in certain cases when involving participial main verbs. Ex.

German

- (a) *Das Buch gehört mir*.
 the book belongs to:me
 ‘The book belongs to me.’
 (b) *Er gehört eingesperrt*.
 he belongs locked:up
 ‘He should be/ought to be locked up.’

H-POSSESSIVE⁷⁵ > (4) PERFECT

This is a much-discussed pathway of grammaticalization, mostly found in European languages, whereby a periphrastic construction [‘have’ + main verb in the past participle] gives rise to a resultative/perfect construction,

⁷⁴ In the present tense, *ha* is optionally deleted, so that *fó* is the only exponent of modality (Stolz 1987b: 175).

⁷⁵ This term stands for predicative possession of the *have*-type (e.g. *I have a dog*); see Heine (1997a).

typically involving a ‘have’-verb assuming features of a resultative and/or perfect marker (see, e.g., Vincent 1982; Heine 1997a; Klausenburger 2000; Heine and Kuteva 2006: 140–82; Hengeveld 2011: 584). Ex.

French

- (a) *Il a deux enfants.*
he has two children
‘He has two children.’
(b) *Il a travaillé beaucoup.*
he has worked much
‘He has worked a lot.’

The pathway, which has been described in terms of a four-stage model (Heine and Kuteva 2006: 145), appears to be an instance of contact-induced grammaticalization affecting most languages of western and central Europe (Heine and Kuteva 2006: 140–82). Note that the pathway is also found to some extent in eastern Europe, occasionally involving possessive constructions not based on ‘have’-verbs. Ex.

North Russian (Kuteva and Heine 2004; Heine and Kuteva 2006: 142)

- (a) *U menja mašina.*
PREP me:GEN car:NOM
‘I have a car.’
(b) *U menja postroen dom.*
PREP me:GEN built house:NOM
‘I have built a house.’

Further examples, presumably not affected by language contact, have been reported from Indo-European languages such as Old Indian, Old Iranian, and Old Armenian, as well as from Old Egyptian, and from Chukchi (Heine and Kuteva 2006: 141). Another instance of it is reported from Cantonese, where the item *yau* ‘to have’ has given rise to an aspectual marker of perfectivity (Alain Peyraube, p.c.). Notice that in English, the verb phrase with *have* in sentences like *John had a swim in the river* has been shown to acquire the aspectual function of perfectivity, whereby the referent of the noun – *a swim* – maps its boundedness onto the referent of *had*, making it bounded, i.e. perfective (Kabakčiev 2000: 212). PERFECT may further develop into either PERFECTIVE or PAST (see Bybee et al. 1994).

C-POSSIBILITY (Root possibility) > (1) D-POSSIBILITY (Permission)

Bybee et al. (1994: 191, 193–4) find evidence for this pathway in nine languages, noting that root possibility may entail a use of permission.

More research is needed on this process (see also Narrog 2012a).

C-POSSIBILITY (Root possibility) > (2) E-POSSIBILITY (Possibility)

Bybee et al. (1994: 195, 204–5) provide evidence for this pathway from four languages, namely Lao (*aat*), Basque (subjunctive form of the auxiliaries *edin* or *ezan* and the infix *-ke*), Cantonese (*hó nàng*), and Kui *duhpa*.

For a discussion of the pathway, involving English *can*, see Bybee et al. (1994: 197–9). In Middle English there were examples where *can* had only root possibility meaning, even if frequently an epistemic possibility reading was also possible. Subsequently, there was a gradual shift towards the latter. This reconstruction has been confirmed by Narrog’s (2012a: 122–4) findings on the American Spanish adjective *capaz* ‘capable’, suggesting an increasing shift towards more speech act orientation and involving the following chain of grammaticalization: PI-POSSIBILITY > C-POSSIBILITY > E-POSSIBILITY.

The present is a change from less to more speaker-oriented non-volitive modality (Narrog 2012a: 122).

More data are needed to establish this pathway.

C-POSSIBILITY (Root possibility) > (3) PI-POSSIBILITY (Ability)

Evidence for this pathway comes in particular from Thai and Japanese. The Thai verb *dây* had ‘emerge’ or ‘come into being’ as its earlier meanings, but around the fifteenth century it came to acquire the function of negative possibility (‘impossibility’) and around the beginning of the twentieth century that of positive possibility. The function of an ability marker arose only recently, and it still constitutes a context-dependent reading of *dây*. There is a second form in Thai, *càʔ*, which also illustrates this pathway: participant-internal modality of *càʔ* is documented between the fifteenth and eighteenth centuries, while ability readings have been recorded no earlier than the twentieth century (Narrog 2012a: 205–7).

The Old Japanese verb *idek-* signified spontaneous emergence (‘appear’). In its later form *deki-* it came to express ‘impossibility’ in negative contexts of non-happening or non-change, first documented in the early eighteenth century. As from the early nineteenth century, *deki-* can be understood to also have encoded ability (see Narrog 2012a: 207–8 for more details).

This pathway contradicts the grammaticalization PI-POSSIBILITY > C-POSSIBILITY and, hence, is suggestive of a bi-directional, rather than a unidirectional process.

D-POSSIBILITY (Permission) > (1) D-NECESSITY (Obligation)

According to Van der Auwera and Plungian (1998: 99), the shift from deontic possibility to deontic necessity is documented for English *must*, German *müssen*, Dutch *moeten* and other West Germanic languages; see Narrog (2012a: 185–90) for detailed evidence. Nevertheless, further evidence from non-Germanic languages would be welcome.

Note that there is also a process in the opposite direction, *see* D-NECESSITY > D-POSSIBILITY – hence, this seems to be a bi-directional type of change (see also Narrog 2012a: 185–6).

PI-POSSIBILITY (Ability) > (1) C-POSSIBILITY (Root possibility)

Based on observations on the history of English *can*, Bybee et al. (1994: 199) conclude that “a change from ability to root possibility is a necessary

precondition to the development of epistemic possibility” (see PI-POSSIBILITY > E-POSSIBILITY); see Bybee (2003b) for a detailed account of English *can*. Using this account as well as the analysis of the American Spanish adjective *capaz* ‘capable’ over the last six centuries, Narrog (2012a: 118–24) reconstructs the following chain of grammaticalization: PI-POSSIBILITY > C-POSSIBILITY > E-POSSIBILITY.

The chain is suggestive of an increasing shift towards more speech act orientation. The change from ability to circumstantial possibility involves a broadening from only participant-internal to participant-external enabling conditions (Narrog 2012a: 122).

This pathway, which is in need of more data from non-European languages, contradicts the grammaticalization C-POSSIBILITY > PI-POSSIBILITY and, hence, is suggestive of a bi-directional, rather than a unidirectional process.

PI-POSSIBILITY (Ability) > (2) D-POSSIBILITY (Permission)

This is a well-researched instance of grammaticalization (see, e.g., Traugott 1972: 198–9; Kytö 1987; Bybee et al. 1991: 25; Bybee et al. 1994: 187–94, table 6.3).

Old Chinese (*de* ‘obtain’, verb >) *de*, ability marker > permission marker. Ex.

Middle Chinese (tenth century AD; Zutangji 5/98/7; quoted from Sun 1996: 121)

- (a) *hai jie pan de xu-kong bu?*
 still explain judge possible empty NEG
 ‘Can (you) still tell what emptiness is?’

Middle Chinese (tenth century AD; Zutangji 1/153/3; quoted from Sun 1996: 124)

- (b) *ni de ru men ye.*
 you possible enter door PART
 ‘You may enter the door (to join).’

Archaic Chinese *neng* ‘be able to’, ‘be capable’, auxiliary > *neng*, permissive auxiliary (Alain Peyraube, p.c.). Early Modern Chinese *hui* ‘be able to’, auxiliary > *hui*, permissive auxiliary (Haiping Long, own data).

German *können* ‘to be able’, auxiliary > ‘to be allowed to’. Ex.

German

- (a) *Ich kann Auto fahr-en.*
 I can car drive-INF
 ‘I know how to drive.’
 (b) *Kann ich geh-en?*
 can I go- INF
 ‘Can I/Am I allowed to go?’

This process appears to require an intermediate stage of root possibility (C-POSSIBILITY), hence there is the following chain: PI-POSSIBILITY > C-POSSIBILITY > D-POSSIBILITY (see Bybee et al. 1994: 194).

Accordingly, Bybee et al. (1994) observe: “Both *may* and *can* have come to be used to report permission – that an agent is permitted to do something. In

both cases, the permission use developed after the root possibility use was firmly established” (Bybee et al. 1994: 193).

Concerning a treatment of modality as a semantic map, see van der Auwera and Plungian (1998). *See also* GET; PI-POSSIBILITY > E-POSSIBILITY.

PI-POSSIBILITY (Ability) > (3) E-POSSIBILITY (Possibility)

This is a process that has been well described (see Bybee et al. 1994: 187–94, table 6.3). Archaic Chinese *neng* ‘be able’, ‘be capable’ > marker of possibility and permission (Alain Peyraube, p.c.).

Seychelles CF *kapab* ‘be able to do’, ability > ‘may be’, marker of possibility. Ex.

Seychelles CF (Corne 1977: 136)

- (a) *i pu kapab fer sa.*
(3:SG FUT be:able do that)
‘He will be able to do it.’
- (b) *i n kapab ariv kek aksidā.*
(3:SG CPL be:able happen some accident)
‘There may have been an accident.’

Bybee et al. (1994: 194, 199, 240) reconstruct the following path of grammaticalization for English (our terminology): PI-POSSIBILITY > C-POSSIBILITY > E-POSSIBILITY. Thus, the present development seems to require an intermediate stage of root possibility (C-POSSIBILITY) to materialize.

There are various hypotheses on how this process is to be explained. According to the one perhaps most frequently voiced, the development from deontic to epistemic meanings is suggestive of metaphorical transfer (see, e.g., Sweetser 1982; Bybee and Pagliuca 1985: 73; Heine et al. 1991a: 175–8). Sweetser (1990: 52) argues that this development can be accounted for in terms of “sociophysical concepts of forces and barriers”, and Traugott (1989) suggests that we are dealing with an instance of subjectification in semantic change (see also Hopper and Traugott 1993: 86). For a treatment of modality as a semantic map, see van der Auwera and Plungian (1998).

See Narrog (2012a: 201–21) for a discussion of the change from participant-internal to participant-external possibility, but also for a process in the opposite direction in a range of languages, thereby providing evidence for a bi-directional process. Compare D-POSSIBILITY > D-NECESSITY. *See also* PI-POSSIBILITY > D-POSSIBILITY; GET.

Predicator, *see* OSTENSIVE PREDICATOR

PROGRESSIVE > (1) HABITUAL

Bybee et al. (1994: 158) note that progressive markers may develop into presents and imperfectives, and in this development the progressive

may extend to cover habitual functions, resulting in a gram of very general meaning.

Conceivably, PROGRESSIVE markers may constitute an intermediate stage on the way from verb to habitual marker; *see* GO; LIVE; SIT for examples. Khwe //qè ‘lie, be lying’, verb > -//oè, (a) present tense (expressing an action performed while lying), (b) progressive marker, (c) habitual marker (Köhler 1981a: 530). In Kui, the past tense forms of an auxiliary that can be traced back to the verb *manba* ‘live’, ‘exist’ are used for both progressive and habitual meaning in the past (Bybee et al. 1994: 158). The Margi progressive particle *ávàr* may signal habitual if used in a past context⁷⁶ (Hoffmann 1963: 176; Bybee et al. 1994: 158). More research is needed to establish the significance of this pathway.

Kortmann and Schneider (2011: 271) observe that the extension of the English progressive to habitual contexts seems largely restricted to English varieties characterized by language contact, that is, to L2 and high-contact L1 varieties, including a few pidgins and creoles.

PROGRESSIVE > (2) IMPERFECTIVE

One of the ways in which imperfectives develop is via the grammaticalization of progressive markers (Bybee et al. (1994: 141–4). The authors observe that “it is plausible to suppose that the more specific progressive grams may undergo development into either a present (in cases where the progressive was restricted to the present) or an imperfective (in cases where no temporal restrictions were in effect)” (Bybee et al. (1994: 141), and they describe the present pathway as one of meaning generalization.

The older Punjabi and Hindi-Urdu progressives have extended to general imperfective usage (Dahl 1985: 93), and the nature of the Tahitian imperfective is suggestive of a progressive origin (Bybee et al. (1994: 143).

More evidence in support of this pathway is needed. *See also* PROGRESSIVE > HABITUAL; PROGRESSIVE > PRESENT.

PROGRESSIVE > (3) PRESENT

As has been established in a number of different studies, progressive aspect markers may assume the function of a present tense. Bybee et al. (1994) propose the following interpretation of this process:

Since both present and imperfective meaning include the possibility of describing a situation as progressive, it is plausible to suppose that the more specific progressive grams may undergo development into either a present (in cases where the progressive

⁷⁶ Bybee et al. (1994: 158) volunteer the following account for this observation: “The development of a habitual reading for a progressive in the past before the present is again due to the difference between default readings of present versus the past. The default reading of present continues to include habitual, but since the default reading of past does not include habitual, the progressive comes to be used in that capacity.”

was restricted to the present) or an imperfective (in cases where no temporal restrictions were in effect). (Bybee et al. 1994: 141)

Rubin (2005: 151–2) describes a number of processes that have led to the development present tense markers in Semitic languages. He distinguishes the following two main sources of grammaticalization: (1) Locative constructions grammaticalizing typically via auxiliation of items such as ‘stand’, ‘sit’, and ‘be (located)’; for example, Aramaic *qā’ēm* ‘stand’ > *qā, k(V)*, present tense. (2) Subordinate particles marking temporal clauses; for example, Yemeni Arabic *baynā* ‘while’ > *b-*, present tense. Source (2) is crosslinguistically not well documented and is therefore not discussed in this book. Source (1), by contrast, is highly common across the world, and it frequently involves the following chain of grammaticalization: STANCE VERB > PROGRESSIVE > PRESENT.

The pathway looked at above is likely to form the second part of the chain. This part again can be part of a more extended chain whereby verbal aspect markers develop further into tense markers (see Comrie 1976: 99–101; Bybee 1985a: 196; Bybee and Dahl 1989: 56–7);⁷⁷ cf. PERFECT > PAST.

See also PROGRESSIVE > IMPERFECTIVE.

PROMISE > PROXIMATIVE

Spanish *prometer* ‘to promise’, French *promettre* ‘to promise’, English *promise*, Dutch *beloven* ‘to promise’, German *versprechen* ‘to promise’, verb > ‘be about to, be likely to’, ‘be on the verge of’, proximative and modal auxiliary with positive connotations. Ex.

German (Askedal 1997: 18)

- (a) *Er verspricht, ein guter Vorgesetzter zu werden.*
 he promises a good boss to become
 ‘He promises to be a good boss.’
- (b) *Die Ernte verspricht gut zu werden.*
 the harvest promises good to become
 ‘The harvest promises to be good.’

This pathway can be observed in some form or other in many languages of western and central Europe, including Romance, Germanic, and some Slavic languages. The functions of the resulting grammatical categories are complex. While expressing proximative aspectuality appears to be the predominant function, the category also includes temporal, modal, and evidential features. The pathway is suggestive of a grammaticalization process that was induced by

⁷⁷ There is a synchronic regularity of morpheme ordering that might support the present reconstruction: “aspect occurs closest to the verb stem, followed by tense, and then by mood” (Bybee 1985a: 196).

language contact in the course of the last 600 years. Note that so far no clear instances of this process have been found outside Europe (Traugott 1993; 1997; Askedal 1997; Cornillie 2004; 2008; Heine and Miyashita 2004; 2008a; Levin-Steinmann 2010: 125–33; Cornillie and de Toledo y Huerta 2017).

This is another instance of a more general grammaticalization process whereby verbs are grammaticalized to auxiliaries denoting tense or aspect functions. The process is presumably triggered by the extension from typically human subjects to inanimate subjects. *See also* THREATEN > PROXIMATIVE.

PROPERTY ('property', 'possession') > A-POSSESSIVE

Yemeni Arabic *ḥaggat* (F *ḥaggat*, M:PL *ḥaggūn*, F:PL *ḥaggāt*) 'property, possession' > *ḥagg*, genitive marker (Rubin 2005: 53). Egyptian Arabic *matā^c* 'property', noun > *bitā^c*, marker of attributive possession. Maltese *ta'* 'possession', 'property', noun > marker of a new pattern of attributive possession (Koptjevskaja-Tamm 1996). Ex.

Maltese (Haspelmath 1994: 21–2)

il-ktieb ta' (< *mataaṣ*)- *t-tabib*
the-book of (< possession)- the-doctor
'the doctor's book'

Pipil *-pal* 'possession', relational noun > *pal*, preposition marking attributive possession. Ex.

Pipil (Harris and Campbell 1995: 126–7)

- (a) *nu-pal*
(my-possession)
(b) *tik nu-ma:taw ohombrón plastas pal turuh wi:ts.*
in my-net big cowpies of cow come
'What came in my bag were big plasters of cow.'⁷⁸

Khwe *di* 'property', noun > marker of attributive possession (Köhler 1981a).

(French *part* 'part' >) Haitian CF *pa* 'part', 'portion', 'property' > genitive particle, denoting permanent possession. Ex.

Haitian CF (Sylvain 1936: 69)

- (a) *Pa papa-m*
(property father-my)
'property of my father'
(b) *Lažā pa-u?*
(money of-you)
'Your money?'

In the Cèmuhì language of New Caledonia, the bound noun *nde-* 'property' first became a possessive marker (+ animate possessor) *te-*, and then was further grammaticalized into a comitative marker (Rivierre 1980; Moyse-Faurie 2018:

⁷⁸ The intended translation is presumably: 'What came into my net were big cowpies.'

300). Arabic *bita:f* ‘property’ > Nubi CA *ta*, genitive marker linking possessee and possessor (Boretzky 1988: 55). Ex.

Nubi CA (Heine 1982b:31)

Kurá ta kalamóyo
leg of goat
‘the goat’s leg’

Instead of a noun, the source of the possessive marker is occasionally a pronoun. Thus, in some Manding languages of western Africa, such as *Jula*, it is the ‘proprietary pronoun’ *tá* ‘that of X’ that was grammaticalized into the A-POSSESSIVE marker *tá*. This process is based on the reinterpretation of an appositive construction [that of Y, X] as a possessive construction [Y’s X] (Creissels in prep.b). Ex.

Jula (Creissels in prep.b)

- (a) *mùsò tá*
woman.D PROPR
‘that of the woman’
(b) *mùsò tá wári*
woman.D GEN money.D
‘the money of the woman’

We are dealing with another instance of a more general process whereby relational nouns (including nouns for body parts and some pronominals), on account of some salient semantic property, give rise to relational grammatical markers; compare BOTTOM; PLACE; SIDE; TOP.

PURPOSE > (1) CAUSE

The Archaic Chinese preposition *wei* could serve as either a purpose marker or a cause marker (Long et al. 2012). In early Old English (e.g. *Beowulf*), the preposition *for* had a spatial/locational meaning, occasionally also a temporal one. But already at that time, it also had a purpose meaning. In later Old English, e.g. the *Peterborough Chronicle*, *for* was also used as a preposition of causation (van Gelderen 2010: 137–8). Historical evidence for this process also comes from Japanese, involving the functional noun *tame* (Narrog 2010b: 249).

Toqabaqita *uri*, allative, purpose preposition > reason complementizer (Lichtenberk 1991b: 44, 67). Twi *se*, purpose clause marker > cause clause marker (Lord 1989: 270ff.). Ex.

Twi (Lord 1989: 271, 284)

- (a) *mema no sika se mfa nkɔtɔ bi.*
1:SG:gave him money PURP he:IMP:take IMPERF:go:buy some
‘I gave him money to go and buy some.’

- (b) *oguanee se osuro.*
 he:ran:away CAU he:was:afraid
 'He ran away because he was afraid.'

Purpose and cause are not infrequently part of one and the same polysemy set. On the basis of the available data (see Heine et al. 1991), we argue that the former precedes the latter in time. However, as argued by Luraghi (2003: 174, 184, 187; 2005) on the basis of the Greek preposition *diá*, this pathway is possibly a bi-directional one (see also Narrog 2014: 85–6); see Luraghi (2016: 356–8) for a critical discussion of the present pathway.⁷⁹

PURPOSE > (2) INFINITIVE

German *zu*, (allative >) purpose preposition > *zu*, infinitive marker. English *to* (allative >) purpose preposition > infinitive marker (Haspelmath 1989); see Fischer (2000: 154–5) for details on the development of English *to* from purpose preposition to infinitive marker. Baka *na* (benefactive preposition >) purpose preposition > infinitive marker. Ex.

Baka (Christa Kilian-Hatz, p.c.)

Ma à ye na sià gba ké.
 1:SG ASP want INF see village DEM
 'I want to see this village.'

Rapanui (Easter Island) *mo*, purpose preposition > infinitive marker. Ex.

Rapanui (Chapin 1978: 162–3)

- (a) *He patu mai i te puaka mo*
 PAST corral here ACC the cattle INF
ma'u kiruga ki te miro.
 carry into to the boat
 '(They) corralled the cattle in order to carry (them) onto the boat.'
- (b) *Hoki e haga ro mo oho ki*
 Q NONPAST want RO INF go to
te aga o te tenito iuta?
 the work of the Chinese inland
 'Do (you) want to go to work for the Chinese man inland?'

Seychelles CF *pur* 'for', 'in order to', 'so that', purpose marker > marker having infinitive-like functions, for example, to present subject complements. Ex.

Seychelles CF (Corne 1977: 141–2)

- (a) *mó ti pe sâte pur (mua) fer u plezir.*
 (1:SG PAST PROG sing PURP 1:SG make 2:SG pleasure)
 'I was singing in order to please you.'

⁷⁹ For lack of further evidence, there is no reversed process CAUSE > PURPOSE in this work.

- (b) *sa i fer li boku plezir pur*
 (that it make 3:SG much pleasure PURP
sâte.
 sing)
 ‘It pleases him a lot to sing.’

Perhaps related to this grammaticalization is the following: purpose markers have given rise to complementizers in Atlantic English creoles (*fə, fi, fu*) and Romance creoles (*pu, pa*). Ex.

Jamaican CE (Mufwene 1996)

Jan trai fi kraas di riba.
 ‘John tried to cross the river.’

Haitian CF (Mufwene 1996)

li difisil pu m fè sa.
 it difficult COMP I do this
 ‘It’s difficult for me to do this.’

For a detailed discussion of this process, see Haspelmath (1989).

PUT > COMPLETIVE⁸⁰

Uygur *qoj* ‘put’ > *qoj*, completive marker (Long et al. 2012). Imonda *pada* ‘put’, verb > ‘finished’, periphrastic terminative aspect marker. Ex.

Imonda (Seiler 1985: 104)

- (a) *kē- l tad- pada- hape.*
 bone- NOM CLASS- put- come:back
 ‘He put the bones there and came back.’
 (b) *ainam uai- fuhō- pada- u!*
 quickly ACC-go up-finish-IMP
 ‘Be quickly finished with your climb!’

Yagaria *to-* and *bolo-* ‘put’, verb > *-to-/-te-* and *bolo*, completive marker. Ex.

Yagaria (Renck 1975: 94)

iyalamu’ hu-bolo-d-i-e.
 shelf make-put-PAST-3:SG-IND
 ‘He built a shelf completely.’

Lhasa Tibetan *bzhag* ‘to put, be put, be placed’ > marker of perfect and of inferential evidentiality (Tibet Student Corpus; Eric Mélac, p.c.; Mélac 2014: 433). Ex.

⁸⁰ The notion completive is a complex one, and a number of the examples discussed here are perhaps more appropriately treated as iimitive categories (Östen Dahl, p.c.). When consulting entries having COMPLETIVE as their target, the reader is therefore advised to also check under IAMITIVE.

Lhasa Tibetan (Tibet Student Corpus; Eric M  lac, p.c.)

dpe.mi.srid.pa'i yag.po drag- bzhag.
 really well recover- PERF:INFER

'She has recovered really well.' (= 'Looking at her, I can say she's recovered really well.')

Compare also Burmese *th  * 'put' > resultative/stative auxiliary (Park 1992: 16; 1994: 78). In some dialects of Japanese, the combination *-te + oku* 'put' has given rise to a resultative marker (Motoyasu Nojima, p.c.). Korean *twu-* 'put, store' verb developed into the completive/perfective aspect marker *-etwu-* from verb serialization (Rhee 1996; Heo 2000).

This grammaticalization appears to be an instance of a more general process whereby process verbs are grammaticalized to auxiliaries denoting tense or aspect functions; compare BEGIN; COME FROM; COME TO; DO; FINISH; GO TO; KEEP; LEAVE; REMAIN.

Q**S-QUESTION > (1) CONDITIONAL**

Shanghainese *tE³⁴ va*, tag question marker > *tE³⁴ va*, topic/conditional marker (Long et al. 2012). Hopper and Traugott (1993: 179) observe that one of the sources of conditional connectives consists of interrogatives. Hua *-ve* interrogative, topic status 'if' (Hopper and Traugott 1993: 179). Russian *est'li* 'is it?' > *esli* 'if' (Martin Haspelmath, p.c.). The relevance of this path of grammaticalization is suggested, for example, by the situation in German, where the verb-initial syntax of polar questions (see (a)) appears to have been extended to conditional protasis clauses (see (b)) – a situation that has existed since Old High German times (Harris and Campbell 1995: 296). Ex.

German

- (a) *Glaubt er, er versteht mich?*
 believes he he understands me
 'Does he think he understands me?'

- (b) *Glaubt er, er versteht mich, dann irrt er.*
 believes he he understands me then errs he
 'If he thinks he understands me then he is wrong.'

Subject–verb inversion also marks conditional clauses occasionally in English. Ex.

English (Harris and Campbell 1995: 296)

Were I the organizer, I would have done things differently.

Note also that in American Sign Language, the non-manual marker of yes-no questions (raised eyebrows) also accompanies conditional clauses (Roland Pfau, p.c., see also Janzen 1999; Harris and Campbell 1995: 297f).

For more details, see Haiman (1978, 1985b) and Traugott (1985b). Questions provide a not uncommon structural template to develop noninterrogative grammatical markers; *see*, for example, W-QUESTION. *See also* COPULA > CONDITIONAL.

S-QUESTION > (2) TOPIC

The interrogative markers *a*, *me*, *ne*, and *ba* of Modern Chinese have given rise to the topic markers *a*, *me*, *ne*, and *ba*, respectively. Shanghainese and other Northern Wu dialects *məʔ*, question marker > *məʔ*, topic marker. Early Wu dialect *tɕia*, question marker > *tɕia*, topic marker.

There is so far only evidence from Chinese dialects and languages. The reason for tentatively proposing this pathway is that in a number of languages polar questions can be used in specific contexts to introduce topical constituents, cf. English *John? He is no longer my friend*. More research is needed to substantiate the pathway.

Compare SAY > TOPIC.

W-QUESTION > (1) COMPLEMENTIZER

Harris and Campbell (1995: 298) note that question words or forms derived from them mark some kinds of adverbial clauses and verb complements. They give Georgian *ray-ta-mca* ‘that’ as an example, which is derived from a question word, *ray* ‘what?’.

Georgian (Harris and Campbell 1995: 298)

Da ara unda, raytamca icna vin.
and not he:want that he:know someone
‘And he didn’t want that anyone know.’

In fact, in a number of languages, question words like ‘who?’, ‘what?’ and so on are used to introduce complement clauses. In Mandarin Chinese, question words appear to have grammaticalized to pronouns introducing complement clauses (see Haspelmath 1997a: 170).

For example, in (a), *shénme* ‘what?’ is an interrogative pronoun while in (b) it is a pronoun introducing object complements. Ex.

Mandarin Chinese (Li and Thompson 1981: 522, 554)

- (a) *Nǐmen zuò shénme?*
you:PL do what
‘What are you doing?’
(b) *nǐ kàn tā xiě shénme.*
you see 3:SG write what
‘You see what s/he writes.’

Romani appears to have gone through a whole range of grammaticalizations where the question words *kon* ‘who?’, *so* ‘what?’, *kaj* ‘where?’, *kana* ‘when?’, and *sar* ‘how?’ have been grammaticalized to markers of complement clauses,

adverbial clauses, and relative clauses (Matras 1996; Heine and Kuteva 2006: 212–13). See also Vykypěl (2010: 141) for examples from Slavic languages.

Instances of this pathway have also been reported in situations of language contact (see Heine and Kuteva 2006 for a discussion). For example, Aikhenvald (2002: 165) observes that in the Vaupés region of Amazonia there is a pattern in East Tucanoan languages whereby interrogative pronouns, such as Tucano *no'ó* 'where?', are used in relative clauses with an indefinite meaning. Speakers of the Arawak language Tariana have replicated this grammaticalization by using their own interrogative pronoun *kani* 'where?'. Accordingly, the sentence 'He follows me wherever I go' is rendered in both East Tucanoan languages and Tariana as 'Where my going [is] he follows me'.

See Heine and Kuteva (2007: 242–4) for discussion of this pathway, which is presumably related to the pathway W-QUESTION > RELATIVE. Questions provide a not uncommon structural template to develop noninterrogative grammatical markers; *see also* W-QUESTION > RELATIVE; S-QUESTION.

W-QUESTION > (2) INDEFINITE PRONOUN

Early Modern Chinese *ji* 'how many', W-QUESTION > *ji*, indefinite pronoun expressing a small quantity, or *ji* 'someone, something', indefinite pronoun (Long et al. 2012).

Early Modern Chinese *shui* 'who' > *shui* 'someone', indefinite pronoun (Long et al. 2012).

Kavalan *qunian* 'how' > *qunian*, indefinite pronoun (Long et al. 2012). Tsou *homna* 'what time' > *homna* 'sometime', indefinite pronoun (Long et al. 2012). Yindjibarndi *ngana* 'who?', interrogative pronoun > 'someone', 'anyone', indefinite pronoun (Wordick 1982:76). Slave *meni* 'who?' > indefinite pronoun. Ex.

Slave (Rice 1989: 1326)

<i>meni</i>	<i>duyile</i>	<i>ʔeghálayeda</i>	<i>yi</i>	<i>ke</i>	<i>rágots'eyee</i>
who	can	3:work	COMP	PL	UNSPECIFIED:play
<i>dahk'é</i>	<i>gotsé</i>	<i>gokeduhwi</i> .			
place	area:to	3:PL:OPT:go			

'Anyone who wants to work should go to the playground.'

Kiowa *hôn -dé* 'what?' > *hôn -dé* 'something' (indefinite). Kiowa *há.-cò* 'how?' > 'in some manner' (indefinite) (Watkins 1984: 183–4). Acoma Keresan *háu* 'who?' > 'some' (indefinite). Acoma *cíí* 'what?' > 'some' (indefinite). Acoma *háca* 'how much?' > 'some' (indefinite) (Maring 1967: 48). Plains Cree *kíkway* 'what' > 'something', 'a thing', 'an entity', indefinite pronoun (Wolfart 1973: 35–6). Classical Greek *tis* 'who?' > *tis* 'someone' (Haspelmath 1997a: 170). Newari *su* 'who?' > *su* 'nobody' (with verbal negation); *chu* 'what?' > *chu* 'nothing' (with verbal negation) (Haspelmath 1997a: 170). Khmer *qwəy* 'what?' > *qwəy* 'something'; *naa* 'where?' > *naa* 'somewhere' (Haspelmath 1997a: 170).

For details about the formal identity between interrogatives and indefinite pronouns, see Haspelmath (1997a: 170–9). A problem associated with some of the above examples is that they involve more complex source forms, and it does not always become entirely clear what exactly the contribution of the question marker is in the grammaticalization to an indefinite pronoun. Nevertheless, question markers provide a not uncommon structural template to develop non-interrogative grammatical markers; *see also* S-QUESTION.

W-QUESTION > (3) RELATIVE

Uyghur (Old Turkic) *kim* ‘who’/ *nä* ‘what’ > *kim/nä*, relative pronouns (Long et al. 2012). Baka *là* ‘who?’, ‘which?’, interrogative pronoun > ‘s/he who’, relative pronoun. Ex.

Baka (Christa Kilian-Hatz, p.c.)

- (a) *ʔé fà dɔ là? gba a mò là?*
 3:SG ASP come who village POSS 2:SG:POSS which
 ‘Who is coming?’ ‘Which is your village?’
- (b) *là- o wó fà lu a kà?*
 s/he:who 3:PL 3:PL ASP fight LOC where
 ‘Where are those who fight/quarrel with each other?’

Gidar *án* ‘what?’, interrogative pronoun > *án* relative clause marker (Frajzyngier 1996b: 450; Heine and Kuteva 2007: 229).

Pirahã *go* ‘what’ > relative marker. Ex.

Pirahã (Everett 1986: 276)

<i>Ti</i>	<i>baósaápisi</i>	<i>og-</i>	<i>abagai</i>	
1	hammock	want-	FRUSTRATED:INITIATIVE	
<i>gíxai</i>	<i>go-</i>	<i>ó</i>	<i>baósaápisi</i>	<i>big-</i>
2	INTER-	OBL	hammock	show
<i>áo-</i>	<i>b-</i>	<i>í-</i>	<i>I</i>	<i>xai</i>
TELIC-	PERF-	PROXIMATE-	COMPLETE:CERTAINTY	be(?)
<i>sigíai.</i>				
same				
‘I want the same hammock that you just showed me.’				

English *who?*, *which?*, interrogative words > relative clause markers. French *qui?* ‘who?’, *que?* ‘what?’, interrogative pronouns > relative clause markers. German *welch-* ‘which?’, *was?* ‘what?’, and so on, interrogative words > markers introducing relative clauses. Albanian *kush?* ‘who?’ > ‘who’, relative clause marker (Buchholz et al. 1993: 265). The interrogative pronoun *mii?* ‘what?’ of Skolt Saami in northern Norway and Finland can also function as a relative pronoun, typically only for inanimate head noun referents (Feist 2015: 198).

Harris and Campbell (1995: 298) observe that “Q-words or forms derived from Q-words function as relative pronouns in many languages.” See also

Downing (1978) and Traugott (1980: 48). The majority of examples of this pathway stem from European languages. In fact, the pathway is found in all Romance languages, already attested in Latin (Silvia Luraghi, p.c.), in all Slavic languages, in some Germanic languages, in Modern Greek, Hungarian and Georgian. Haspelmath (1998: 281–2) therefore considers it to be a property of Standard Average European (SAE), and there is reason to argue that its distribution in Europe is largely due to contact-induced grammaticalization (Heine and Kuteva 2006: 205–43), where written Latin may have served as a model, or one of the models of transfer:

The diffusion of the new relative pronouns [in Romance languages, German, Scandinavian languages, and English; a.n.] is also due to the influence of written Latin texts on the written vernaculars because of concerns for clarity, as Romance speaking people began to elaborate a new writing system to represent their speech. (Giacalone Ramat 2008: 161)

Furthermore, there are a number of other languages that seem to have replicated this pathway via contact with European languages. One of these languages is Romani, which has gone through a whole range of grammaticalizations where the question words *kon* ‘who?’, *so* ‘what?’, *kaj* ‘where?’, *kana* ‘when?’, and *sar* ‘how?’ were grammaticalized to markers of complement clauses, adverbial clauses, and relative clauses (Matras 1996; Heine and Kuteva 2006: 212–13). Another language that has replicated the grammaticalization pathway from question word to relative clause marker is Basque, where the model language was Spanish (Hurch 1989: 21; Trask 1998: 320; Heine and Kuteva 2005: 130).

Other languages that appear to have undergone this pathway as a result of language contact are found in South and Central America, where the model languages were Portuguese in Brazil and Spanish elsewhere. Such languages are Tariana in Brazil (Aikhenvald 2002: 183), Pipil in El Salvador (Campbell 1985: 114–16; 1987: 258–60), and Nahuatl in Mexico (Karttunen 1976: 151; see Heine and Kuteva 2006: 214–16). Nevertheless, it is also found in some languages where language contact does not seem to have played any role.

Note that question markers provide a not uncommon structural template to develop noninterrogative grammatical markers; compare W-QUESTION > COMPLEMENTIZER; S-QUESTION. *See also* LOCATIVE > RELATIVE.

QUOTATIVE > COMPLEMENTIZER

There is a crosslinguistically widespread process leading from constructions having a verb for ‘say’ as their nucleus to markers of complement clauses (*see* SAY > COMPLEMENTIZER). All evidence available suggests that this pathway frequently involves an intermediate stage where the verb is or is part of a quotative marker (*see* SAY > QUOTATIVE). Accordingly, we propose the present pathway as being part of the overall grammaticalization chain SAY > QUOTATIVE > COMPLEMENTIZER.

For example, Creissels (in prep.a) observes that the Bantu language Tswana of southern Africa uses various inflected forms of the quotative verb *re* [rɪ] ‘say’ in complementizer function, most commonly the infinitival form *gore* [χɔ̌-rɪ] (INF-say). Similarly, the quotative form *cêwā* of the verb *cê* ‘say’ in the Hausa language of northern Nigeria is also used as a clause subordinator (Lord 1989: 339).

The Lezgian language of Dagestan has a quotation marker, *luhu-z* (imperfective converb of *luhun* ‘say’), which has given rise to a complementizer (‘that’; Haspelmath 1993: 367). In the *Tukang Besi* language of Indonesia, the form *kua* also functions both as a quotative marker and a complementizer (Klamer 2000: 85).

Evidence comes also from creole languages. For example, Saramaccan CE of Suriname uses the marker *taá* (< English *talk*) not only as a quotative but also as a clause subordinator ‘that’ after verbs of saying and mental action and perception (Lord 1989: 335–6). And in Sranan CE, the marker *taki* is also used both as a quotative and as a complementizer (‘that’; Lord 1989: 335).

Compare SAY > QUOTATIVE; SAY > COMPLEMENTIZER.

R

‘Reach, to’, see ARRIVE

‘Reason’, see CAUSE

‘Receive’, see GET

RECIPIENT > (1) AGENT

In Japanese, the passive agent of the *-(r)are* passive, which developed in the period from Old to Late Old Japanese, is marked with a dative (RECIPIENT marker) (Narrog 2014: 83). Languages having a dative-based passive agent include also Ancient Greek (Luraghi 2005a).

Based on internal reconstruction, Palancar (2002: 192, 201–3, table 6) lists the following languages where a dative marker has presumably undergone an extension to passive agent (the relevant markers are added in parentheses): Hausa (*gà*), Nigerian Arabic (*le-*), Kayardild (*inja*), Mansi (*-n*), Alaskan Yupik (*-nun*), Siberian Yupik (*-nun*), Labrador (Inuttitut; *-nun*), and West Greenlandic (*-nut*), Inuktitut (*-mut*), Cantonese (*bèi*), Mandarin Chinese (*-gěi*), Mongolian (*-ed*), Korean (*ey*), Japanese (*ni*), Evenki (*-du*), and Chontal (*k’a*). As observed by Palancar (2002: 202), the fact that this list includes five languages of the Eskimo-Aleut family suggests that in this case the process was possibly genetically induced.

According to Narrog (2014: 83) it is not the specific semantics of recipient markers that can be held responsible for this process but rather their structural

function as general markers of peripheral participants (see also Palancar 2002: 191–2). Agent markers in passive constructions can be historically derived from a wide range of case functions; *see* ABLATIVE; COMITATIVE; INSTRUMENT; LOCATIVE; PATH; PERLATIVE.

RECIPIENT > (2) COMPARATIVE

Rapanui (Easter Island) *ki*, dative preposition > marker of standard of comparison. Ex.

Rapanui (Chapin 1978: 147)

Poki nei, poki (ata) iti ki te poki ena.
 boy this boy more small DAT the boy that
 ‘This boy is smaller than that one.’

Susu *be*, benefactive/dative postposition > comparative postposition. Ex.

Susu (Friedländer 1974: 62)

Afriki fura foretaa bè.
 (Africa be:hot Europe for)
 ‘Africa is hotter than Europe.’

See Stassen (1985) for more examples. This pathway is probably related to a process whereby spatial case markers give rise to markers of standard of comparative constructions; compare ABLATIVE; LOCATIVE; UP.

RECIPIENT > (3) PATIENT

This pathway typically involves contexts where definite human referents in patient (direct object) function are marked as recipients (datives or indirect objects). Accordingly, in the earlier stages of grammaticalization, the process is restricted to such referents. Subsequently, the recipient marker may spread to other contexts, eventually being generalized as the default patient marker. For example, in Maltese, human definite direct objects are generally marked with the indirect object marker *lil*, indefinite human objects rarely so, while neither definite nor indefinite inanimate direct objects take *lil* (Heine and Kuteva 2005: 151; Rubin 2005: 107). Ex.

Maltese (Rubin 2005: 105)

Il-tifel ra lil Maria.
 the-boy saw DAT Maria
 ‘The boy saw Maria.’

Lebanese Arabic *la-* ‘to, for’, dative preposition > *la-*, direct object marker, e.g. *šufto la-najīb* (I:saw:him to-Najib) ‘I saw Najib’ (Rubin 2005: 107). The Hindi postposition *ko* ‘to’ is also used to mark animate direct objects (Rubin 2005: 111). Dolakha-Newari *-ta* (dative case marker) > patient marker. Ex.

Dolakha-Newari (Genetti 1994: 51)

turi-e dani -n sã- ta khoŋ-an . . .
 millet-GEN owner-ERG cow-DAT see-PARTCP
 'The millet owner saw the cow. . .'

Old English *him*, third person dative masculine pronoun > Modern English *him*, third person masculine accusative/dative pronoun (García 1985: 281–4); Old English *hire*, third person dative feminine pronoun > Modern English *her*, third person accusative/dative pronoun (García 1985: 281–4). Spanish *a*, a preposition marking dative objects > preposition marking accusative objects with animate nouns, e.g. *Vi a Juan* (saw:I to Juan) 'I saw Juan' (Rubin 2005: 110; Bossong 1985: 310); see also Lehmann (1982: 82, 109), especially with individuated human nouns, proper nouns, and personal pronouns (see Company Company 2002 for a description of this pathway in terms of prototype theory).

According to Robbeets (2013: 153), the development from dative/locative to human patient argument markers constitutes an instance of genealogically motivated grammaticalization within Tibeto-Burman languages. She provides examples of this process from the following languages: Balti *la* > *-la*, Dhimal *e:ng* > *-e:ng*, Gurung *lai* > *-lai*, and Tamang *ta* > *-ta*.

On the other hand, the development from recipient (dative, indirect object) to patient (direct object) marker can also be induced by language contact. For example, in the variety of the Dravidian language Kannada spoken in the Indian village Kupwar, the dative postposition was extended to also mark human direct objects. And Gumperz and Wilson (1971: 158) argue that this grammaticalization was induced by contact with the Indo-European languages Urdu and Marathi (see Heine and Kuteva 2005: 211–12).

Another area where this process has conceivably been influenced by language contact is found in southern Europe, involving Portuguese, Spanish, popular French, southern Italian, Spanish Arabic, and Maltese (Heine and Kuteva 2002: 151–2).

See Rubin (2005: 191–220) for more examples and a discussion of this pathway, which appears to be part of a more general path of grammaticalization.

Compare ALLATIVE > PATIENT.

RECIPIENT > (4) A-POSSESSIVE

This grammaticalization has been described as one of the properties of the Balkan Sprachbund but it is in no way confined to this region; rather, it constitutes a grammaticalization of worldwide distribution. The Semitic dative preposition *li-* has A-POSSESSIVE uses in the sense of 'belonging to' in many Semitic languages (Rubin 2005: 59). Lebanese Arabic *la-* 'to, for', dative preposition > *la-*, genitive marker (Rubin 2005: 107).

Armenian (Koptjevskaja-Tamm 1996)

- (a) *Yes girk'-ə tvec'i Petros-i-n.*
 I book-DEF gave Peter-DAT:SG-DEF
 'I gave the book to Peter.'
- (b) *Petros-i girk'-ə*
 Peter- GEN:SG/DAT:SG book-DEF
 'Peter's book'

Northern Swedish (dialect of Västerbotten; Koptjevskaja-Tamm 1996)

- (a) *vis hara-num kort-e*
 show hare-DEF:M:SG:DAT card-DEF:NEUT:SG
 'to show the card to the hare'
- (b) *bo:k-a prest-um*
 book-DEF:F:SG:NONMARKED priest-DEF:M:SG:DAT
 'the priest's book'

Standard Norwegian (Koptjevskaja-Tamm 1996)

hatt-en till mann-en
 hat- DEF to man- DEF
 'the man's hat'

Diyari -ya (and other suffixes), dative marker > marker of alienable possession.

Diyari (Austin 1981: 137)

nulu kud.u paku-yi wiḷa-ya wana-li.
 he:ABS hole:ABS dig- PRES woman-DAT digging:stick-ERG
 'He is digging a hole with a woman's digging stick.'

Aranda (Wilkins 1989: 135, 179)

Toby-ke alere
 Toby-DAT child
 'Toby's child'

Baka *pe*, recipient, benefactive particle > marker of A-POSSESSIVE. Ex.

Baka (Christa Kilian-Hatz, p.c.)

- (a) *ʔé à yɔ pe- è jo.*
 3:SG ASP refuse DAT-1:SG:OBJ food
 'He refuses (to give) me food.'
- (b) *ma à geè pe-è mɔ̀ni.*
 1:SG ASP search POSS-1:SG:OBJ money
 'I am searching for my money.'

Noonan and Mihás (2007: 23) found examples of dative–genitive syncretism mostly in Indo-European languages, namely in Danish (*for, til*), Swedish (*för*), Romanian, Breton (*da*), Armenian, the Indo-Iranian languages Bhojpuri (*-ke*), Magahi (*ke*), and Ossetic (*-ən*), but also in the Sino-Tibetan language Kinnauri (*-u*). Already Old Persian had such a syncretism (Silvia Luraghi, p.c.).

This process has occurred frequently in creole languages (see, e.g., Goodman 1964: 53 for French-based creoles). The process, which has been

described in Heine (1997a) as involving a “Goal Schema”, can be said to be exceptional in that it is bi-directional rather than unidirectional because there is also a grammaticalization process in the opposite direction, *see* A-POSSESSIVE > RECIPIENT. This fact is in need of more research.

Compare BENEFACTIVE > A-POSSESSIVE.

RECIPIENT > (5) B-POSSESSIVE

As the source of B-POSSESSIVE constructions (‘belong’-possession), recipients, typically encoded as datives or indirect objects, appear to be fairly seldom made use of. French *à* ‘to’, allative/dative preposition > marker of ‘belong’-possession.⁸¹ Ex.

French

- (a) *Donne le livre à Paul!*
give the book to Paul
‘Give Paul the book!’
(b) *Le livre est à moi.*
the book is to me
‘The book belongs to me.’

German

- (a) *Er hilft mir.*
he help:3:SG:PRES 1:SG:DAT
‘He helps me.’

Colloquial German

- (b) *Das Buch ist mir.*
the book is 1:SG:DAT
‘The book is mine.’

For more details on this process, which is in need of more evidence, see Heine (1997a).

RECIPIENT > (6) H-POSSESSIVE

Lezgian -z, (direction marker >) dative marker > possessive marker. Ex.

Lezgian (Haspelmath 1993: 88f)

- Ada- z xtul-ar awa.*
she- DAT grandchild-PL be:in
‘She has grandchildren.’

Breton (Orr 1992: 252–3)

- Ur velo c’hlas am eus.*
a bike blue to:me is
‘I have a blue bike.’

⁸¹ Silvia Luraghi (p.c.) suspects that French *à* in example (a) may be the locative rather than a recipient preposition.

Ik (Heine 1983: 157)

lá hoá nci-ke.
 be:at:3:SG house 1:SG-DAT
 'I have a house.'

Latin (Lyons 1967: 392)

Est Johanni liber.
 (is John:DAT book:NOM)
 'John has a book.'

This process has also given rise to other kinds of possession; *see* RECIPIENT > A-POSSESSIVE; RECIPIENT > B-POSSESSIVE (see Heine 1997a).

REFLEXIVE > (1) ANTICAUSATIVE

Archaic Chinese reflexive *zi* 'self' had also anticausative uses (Long et al. 2012).

Dulong *-eu*³¹, reflexive/middle suffix > *-eu*³¹, intransitive suffix (Long et al. 2012). Rongpo *-s*, reflexive suffix > *-s*, intransitive suffix (Long et al. 2012). French *se*, third person reflexive marker > anticausative marker. Ex.

French (Haspelmath 2003)

- (a) *Judas s' est tué.*
 Judas REFL is killed
 'Judas killed himself.'
- (b) *La porte s' est ouverte.*
 the:F door REFL is opened:F
 'The door opened.'

German *sich*, third person reflexive marker > anticausative marker; for example, *öffnen* 'open (TR)'; *sich öffnen* 'open (INTR)' (Haspelmath 1990: 45). Spanish *se*, reflexive marker, for example, *fundir* 'melt' (TR), *fundirse* 'melt' (INTR) (anonymous reader). Mordvin *prä* ('head' >) reflexive noun > anticausative marker. Ex.

Mordvin (Geniušiene 1987: 303ff.; quoted from Haspelmath 1990: 44)

- (a) *läcems prä*
 (shoot head)
 'shoot oneself'
- (b) *kepsems prä*
 (raise head)
 'rise'

Aranda *-lhe*, reflexive marker, suffix > *-lhe*, intransitivizer, suffix (Wilkins 1989: 256–7). See Faltz ([1977] 1985); Lehmann (1982); Haspelmath (1990); Kemmer (1993) for more details. Under ANTICAUSATIVE we are tentatively summarizing a number of different functions that reflexive markers may assume (see Geniušiene 1987 for a more detailed typology). *See also* REFLEXIVE > MIDDLE; REFLEXIVE > ANTICAUSATIVE.

REFLEXIVE > (2) ANTIPASSIVE

One of the most common sources of antipassive constructions is provided by reflexive, reciprocal, or middle markers. This applies most of all to case marking languages with accusative alignment (Jacques 2017; see also Creissels and Nougulier-Voisin 2008; Janic 2016; Sansò 2017).

The reflexive/reciprocal markers in Slavic languages such as Russian and Polish have the function of antipassive markers in specific contexts (Janic 2016; Sansò 2017). Thus, in the following example, the Polish reflexive marker *się* is used as an antipassive marker:

<i>Wasz</i>	<i>syn</i>	<i>bije</i>	<i>się</i>
your:NOM:SG:M	son	hit:PRES:3:SG	REFL

‘Your son fights/has the habit of beating (people)’

There is also evidence for this pathway from the Turkic languages Bashkir, Chuvash, Tatar, and Tuvan; for example, the suffix *-n* of the Tuvan language of south-central Siberia is not only used for reflexivity but also to mark generic objects (Sansò 2017).

The affix *-i-* of the Laz language of Turkey and Georgia marks reflexive and reciprocal situations but also has an antipassive function with some verbs (Sansò 2017). In the Khaling language of the Kiranti group in Nepal and northern India, the derivational suffix *-si* has not only reflexive, reciprocal, autobenefactive, and generic subject functions but is also used in antipassive function with transitive verbs expressing feelings (Jacques 2017). In Limbu, another language of the Kiranti group, the reflexive suffix *-siŋ* also shows uses as an antipassive marker (Jacques 2017). The Rawang language of northern India and Burma uses the reflexive/middle suffix also as an antipassive marker with transitive experiencer verbs (Jacques 2017).

The prefix *dzi-* of the Tlingit language in western Canada and southeastern Alaska is a reflexive and reciprocal marker, on the one hand, but also has an antipassive function by demoting generic objects, on the other. Similarly, in the Oksapmin language of Papua New Guinea, the prefix *t-* marks not only reflexive and middle but also antipassive situations (see Sansò 2017, who also provides more exemplification of this pathway).

See also REFLEXIVE > MIDDLE, PASSIVE; REFLEXIVE > ANTICAUSATIVE.

REFLEXIVE > (3) MIDDLE

Oneida *-atat-*, reflexive marker > *-at/-an/-al-/atA/-a-*, middle marker (Lounsberry 1953: 72–4). !Xun, E2 dialect /’ee, reflexive particle > middle marker. Ex.

!Xun, E2 dialect (Köhler 1981b)

<i>Mi</i>	<i>n!àrò</i>	<i>mi</i>	/’ee.
1:SG	teach	1:SG	REFL

‘I am learning.’ (lit.: ‘I am teaching myself.’)

Latin *sē*, reflexive marker > Surselvan *se-*, middle voice marker, verbal prefix (Kemmer 1993: 11).

This is a well-documented grammaticalization process (see Kemmer 1993 for a comprehensive treatment of it); still, it is not without problems, especially since “middle” does not appear to be a clearly delineated grammatical function. Conceivably, many functions of what has been described as “middles” can more profitably be described as instances of ANTICAUSATIVE ANTIPASSIVE functions.

REFLEXIVE > (4) PASSIVE

!Xun, N1 dialect /'é, reflexive particle > passive marker. Ex.

North !Xun (Heine and König 2015: 126)

Màli /'óá ke tc'á yà /'é.
 money NEG PAST steal its REFL
 ‘The money was not stolen.’

Russian *-sja* (*-s'* after vowels), reflexive suffix > passive marker in the imperfective aspect (Haspelmath 1990: 43). Danish *-s*, reflexive suffix > passive marker. Ex.

Danish (Haspelmath 1990: 43)

- (a) *jeg elsker.*
 (1:SG love- PRES)
 ‘I love.’
- (b) *jeg elses.*
 (1:SG love- PASS)
 ‘I am loved.’

Teso *-o/-a*, reflexive marker, singular, and first person plural, and *-os/-as*, second and third person plural > passive marker. Ex.

Teso (Hilders and Lawrance 1956: 52f.)

- (a) *e-lemar-os.*
 (3:PL-take:out-REFL:3:PL)
 ‘They take themselves out.’
- (b) *a-jaar-os a-konye-kec.*
 (3:PL-open-PASS:3:PL F-eyes- POSS:3:PL)
 ‘The eyes were opened.’

In Uyghur of northwestern China, the suffixes *-n/-in/-un/-yn/-il/-ul/-yl* are both reflexive and passive markers, and the same applies to the suffixes *-n/-ən/-in* or *-l/-əl/-il* of Tatar, another Turkic language (Long et al. 2012).

See Haspelmath (1990: 42–6) for a discussion of this process. Passive markers may further develop into impersonal passives; see Geniušienė (1987); Haspelmath (1990: 42ff.); Heine (2000b); Schladt (2000); König and Siemund (2000: 58) for more details. There is reason to assume that the

evolution from reflexive to passive markers obligatorily involves an intermediate anticausative stage; hence, we may be dealing with a more general pathway: REFLEXIVE > ANTICAUSATIVE > PASSIVE; *see also* ANTICAUSATIVE > PASSIVE.

REFLEXIVE > (5) RECIPROCAL

Mizo *in-*, reflexive marker > *in-*, reciprocal marker (Long et al. 2012). French *se*, third person reflexive marker > marker of naturally reciprocal activities. Ex.

French (Haspelmath 2003)

- (a) *Judas s' est tué.*

Judas REFL is killed
'Judas killed himself.'

- (b) *Elisabeth et Marie se sont rencontrées.*

Elizabeth and Mary REFL are met:F:PL
'Elizabeth and Mary met.'

Russian *-sja/s'*, reflexive marker > marker of natural reciprocity. Ex.

Russian (Haspelmath 2003)

Elizaveta i Marija vstretili- s'.

(Elizabeth and Mary met- REFL)
'Elizabeth and Mary met.'

Reciprocal meanings may arise when the use of reflexive markers is extended to plural referents acting one upon another. Reciprocity is an optional reading of reflexive markers in many languages. Ex.

Yoruba (Awoyale 1986: 11; Heine 2000b: 13)

Won rí ara won

they saw body their

'They saw themselves.' / 'They saw each other.'

In the Oceanic languages Tiri and Hamea, the markers *mwâgi* and *mwâi*, respectively, are used for both reflexive and reciprocal situations (Moyse-Faurie 2008: 144). Maori uses the reflexive forms *anō* and *anake* as reciprocals with dual and plural pronouns. "Whether a dual or plural pronoun is interpreted as reflexive or reciprocal is a matter of what makes more sense" (Bauer 1997: 641), but reflexive interpretations are normally preferred to reciprocal ones, and reciprocity is treated as a special case of reflexivity (Bauer 1997: 635, 641; Moyse-Faurie 2008: 144).

In other languages again, reflexive markers appear to have developed into fully conventionalized reciprocal markers; see Heine (2000b: 12ff.).

Diachronic evidence for the directionality hypothesized here is not entirely satisfactory. But the observations made so far suggest that, as a rule, the starting point of the pathway is reached when a reflexive marker is used with plural subject referents and then is reinterpreted as taking on a reciprocal function.

The result is that the marker has exclusively a reflexive function with singular referents but is ambiguous between a reflexive and a reciprocal interpretation in the plural.

Reflexive markers are commonly derived from other sources. It therefore comes as no surprise that reciprocal markers may share these sources with reflexives (see Heine and Miyashita 2008b). For example, amongst the most common sources for reflexive markers are constructions involving nouns for either 'body' or 'head'. Accordingly, there are some languages that exhibit not only reflexive but also reciprocal forms transparently derived from nouns meaning 'body' or 'head'.

For example, Rubin (2005: 21) lists the following Ethiopian Semitic languages that appear to have derived their reflexive markers from the noun *gäg* 'body': Selṭi (*gäg*), Wolane (*gäg-*), Zay (Zway, *gäg-*). However, this noun figures also in expressions for reciprocal markers: Selṭi, Wolane, and Zay *gäg bā-gäg* 'each other' (Rubin 2005: 25).

Compare BODY > REFLEXIVE; HEAD > REFLEXIVE.

RELATIVE > COMPLEMENTIZER

Chalcatongo Mixtec *xa=*, relative pronoun > complementizer (Macaulay 1996: 153, 160). Thai *thîi*, relative marker > complementizer (Bisang 1998a: 780). Early Biblical Hebrew *she/asher*, relative pronoun > complementizer. Ex.⁸²

Early Biblical Hebrew (Cristofaro 1998: 64–5; Silvia Luraghi, p.c.)

ʔal tirʔu- ni she- ʔani shaxoret.

NEG see:IMPV:3:SG:M- me REL- I dark:SG:F

'Do not stare at me because I am dark (because I am darkened by the sun).'

For a discussion of how relative clauses can be reinterpreted as complement clauses in a number of genetically unrelated languages, see Lehmann (1995b: 1213–14). More research is needed on the structure and the genetic and areal distribution of this pathway.

REMAIN ('to remain', 'to stay') > (1) DURATIVE

Vietnamese *còn* 'remain', 'still exist', 'be still alive', verb > 'still', continuative adverbial marker (Bisang 1998b: 652). German *bleiben* 'remain', verb > auxiliary used to express, for example, continued activity. Ex.

German

Er ist beim Reiten geblieben.

he is at riding remain:PARTCP

'He stuck to horseback riding.'

Portuguese *ficar* 'remain', verb > *ficar (a fazer)*, durative auxiliary. Ex.

⁸² Aaron Rubin (p.c. of 8 June 2017), however, observes: "The reduced form *še-* (not *she-*) is actually found only in Late Biblical Hebrew. Normally in the Bible the form is *ʾašer* (not *asher*). And the example cited from Cristofaro (Songs 1:6) is definitely Late Biblical Hebrew. *ʾašer* used as a complementizer is found in all periods of Hebrew."

Portuguese (Schemann and Schemann-Dias 1983: 27–8)

Fico toda a noite a pensar que não durmo.
 remain:1:SG whole the night to think that not sleep:1:SG
 'The whole night I keep thinking so that I can't sleep.'

Turkish *dur-* 'stand', 'wait', 'remain', 'endure' forms a durative when attached to the gerund of a verb; for example, *bak-* 'look', *bakadur-* 'keep on looking' (anonymous reader; Hony 1957: 90; Lewis [1967] 1985: 191).

In Bambara and other Manding varieties, the verb *tó* 'remain' is used as a continuative or habitual auxiliary (Creissels in prep.b). Khwe *éi* 'remain', verb > *-éi* durative/intensive derivative suffix (Köhler 1981a: 503).

Note also that in North Indian languages such as Hindi, Urdu, and Punjabi, the progressive aspect is expressed with the perfect participle of the verb 'stay', 'remain' (Comrie 1976: 102; Lord 1993: 216–17).

This grammaticalization appears to be an instance of a more general process whereby process verbs are grammaticalized to auxiliaries denoting tense or aspect functions; compare BEGIN; COME FROM; COME TO; DO; FINISH; GO TO; KEEP; LEAVE; PUT.

REMAIN ('to remain', 'to stay') > (2) HABITUAL

Ewe *nɔ* 'remain', 'stay', action verb > *-na* (*-a* after transitive verbs), verbal habitual suffix, "Dahome" dialect of Ewe *-nɔ-*, verbal habitual prefix (Westermann 1907: 139–40). Ex.

Ewe

- (a) *me-nɔ aɸi.*
 1:SG-remain here
 'I remained here.'
- (b) *me-yi-na.* (Heine and Reh 1984: 19)
 1:SG-go-HAB
 'I (habitually) go.'

Sango *ngbâ* 'remain', verb > continuous marker (Thornell 1997: 122).

This grammaticalization, which has been documented so far only in African languages, appears to be an instance of a more general process whereby process verbs are grammaticalized to auxiliaries, clitics and affixes denoting tense or aspect functions; compare BEGIN; COME FROM; COME TO; DO; FINISH; GO TO; KEEP; LEAVE; PUT.

RESEMBLE ('to resemble', 'to be like') > (1) COMPARATIVE

Archaic Chinese *ru* 'resemble', verb > *ru*, standard marker in comparative sentences (Long et al. 2012). Archaic Chinese *si* 'resemble', verb > *si*, standard marker in comparative sentences (Long et al. 2012). Late Archaic and Han Chinese *bi* 'compare with', 'be like', 'imitate', verb > Late Medieval Chinese (eighth–ninth centuries AD) *bi* 'more than', comparative marker when serving

as the first verb (V1) followed by a predicative adjective as V2 (Li and Thompson 1980; Peyraube 1988: 627–32). Ex.

Old Chinese (Mengzi: Gongsun Chou shang; quoted from Sun 1996: 39)⁸³

- (a) *er he ceng bi yu yu shi?*
 2:SG how STRESS compare 1:SG *yu* 3:SG
 'How (dare) you compare me with him?'

Modern Mandarin Chinese (Sun 1996: 38)

- (b) *ta bi meimei piaoling.*
 3:SG COMPAR sister pretty
 'She is prettier than (her) sister.'

The data available suggest that the development of Chinese *bi* may have proceeded in three main stages. First, in Old Chinese, its primary meaning appears to have been that of a verb, 'compare'. Second, it later acquired features of a similitive verb, 'to be like' and in Middle Chinese of a similitive preposition, 'like'. Third, it eventually assumed functions of a comparative marker (cf. Sun 1996: 38f.). Early Mandarin *ru* 'to resemble' > *ru*, comparative marker. Ex.

Early Mandarin Chinese (Yuan kan zaju sanshi zhong: Yu shang wang; quoted from Sun 1996: 40)

- (a) *xiong-jiujiu de gongren ru hu lang*
 gallantly PART policemen resemble tiger wolf
 'Arrogant policemen are like tigers and wolves.'

Early Mandarin Chinese (Yuan kan zaju sanshi zhong: Yu shang wang, Mo he luo; quoted from Sun 1996: 40)

- (b) *chi le xie popei chunnuo sheng*
 eat ASP some fermented spirit better
ru yu xie qiongjiang.
 COMPAR jade liquid wine
 '(I) took some fermented wine, better than the best of wine.'

Chinese *xiang* 'to resemble', 'to be like' > *xiang*, comparative marker (Alain Peyraube, p.c.). German *wie* 'like' > Colloquial German *wie* 'like', '(more) than', comparative marker. Ex.

German

- (a) *Inge schwimmt wie ein Fisch.*
 Inge swims like a fish
 'Inge swims like a fish.'

⁸³ Since with the grammaticalization of A to B, A does not necessarily disappear, it comes as no surprise that *bi* has retained uses as a lexical verb ('to compete') in Modern Mandarin Chinese (a), side by side with its use as a comparative marker (b) (Sun 1996: 41–2).

Colloquial German

- (b) *Inge schwimmt schneller wie ich.*
 Inge swims faster like I
 'Inge swims faster than I.'

More examples are needed to substantiate this grammaticalization. It would seem, however, that this is an instance of a process whereby a verb, on account of some salient semantic property, gives rise to a grammatical marker highlighting that property; *see also* COME FROM; COME TO; CROSS; EXCEED; PASS. For more pathways of grammaticalization having RESEMBLE-verbs as a source, see Lord (1993).

RESEMBLE ('to resemble', 'to be like') > (2) COMPLEMENTIZER

Twi *se* 'resemble', 'be like', 'be equal', verb > *se* 'that', complementizer. Ex.

Twi (Lord 1993: 160)

- (a) *kofi se amma.*
 Kofi be:like Amma
 'Kofi resembles Amma.'
- (b) *na Ama nim se kofi yɛɛ adwuma no.*
 past Ama know that Kofi did work the
 'Ama knew that Kofi had done the work.'

The situation in Twi has given rise to some confusion in that there are two phonologically similar verbs, *se* 'say' and *se* 'be like', that have developed into complementizers (see Lord 1993: 151ff.; *see also* SAY > COMPLEMENTIZER). Kode (Baule dialect) *ke* 'like', 'that', complementizer after verbs of speaking and mental action. Ex.

Kode (Lord 1993: 201)

- N se ke a wã ti wonĩ.*
 I say that you husband COP python
 'I say that your husband is a python.'

Idoma *bē* 'resemble', verb > complementizer after verbs of thinking, seeing, knowing, and hearing. Ex.

Idoma (Lord 1989: 330, 1993: 200)

- N je b-o ge wa.*
 1:SG know resemble-he FUT come
 'I know that he'll come.'

Buang (*na*)*be* 'thus', 'in this manner', 'approximately', 'like', adverb > complementizer (Sankoff 1979: 37). Tok Pisin PE *olsem* 'thus', 'like' > 'that', complementizer. Ex.

Tok Pisin PE (Woolford 1979: 116, 118)

- (a) *Em i kamap yangpela boi olsem James.*
 he i grow young boy like James
 'He grew up to be a young boy like James (i.e. James' size).'
- (b) *Na yupela I no save olsem em I matmat?*
 and you:PL I NEG know that it I cemetery
 'And you did not know that it was a cemetery?'

This is an instance of a pathway whereby process verbs, on account of some salient semantic property, give rise to grammatical markers used for clause combining; compare SAY. For more pathways of grammaticalization having RESEMBLE-verbs as a source, see Lord (1993).

RESEMBLE ('to resemble', 'to be like') > (3) SIMILATIVE

Archaic Chinese *si* 'resemble', verb > Early Modern Chinese *-ye si* (*de*), similative particle (Long et al. 2012). Twi *se* 'resemble', 'be like', 'be alike', 'be equal', verb > *se* 'like', 'as' (Lord 1989: 256ff.). Ex.

Twi (Lord 1989: 257–9)

- (a) *Kofi se Amma.*
 Kofi be:like Amma
 'Kofi resembles Amma.'
- (b) *Ebere se mogya.*
 it:be:red like blood
 'It is as red as blood.'

Tamil *poola* 'be similar with', stative verb > 'like', 'as', postposition. Ex.

Tamil (T. Lehmann 1989: 131)

kumaar panri.y-ai.p poola katt-in-aan.
 Kumar pig-ACC like cry-PAST-3:M:SG
 'Kumar cried like a pig.'

This appears to be an instance of a process whereby a verb, on account of some salient semantic property, gives rise to a grammatical marker highlighting that property; *see also* COME FROM; COME TO; CROSS; EXCEED; FALL; PASS. For more pathways of grammaticalization having RESEMBLE-verbs as a source, see Lord (1993).

RETURN ('to return', 'to go back (to)') > (1) AGAIN

Archaic Chinese *fu* 'return', motion verb > *fu*, 'and, again', iterative adverb (Long et al. 2012). Archaic Chinese *huan* 'return', motion verb > Medieval Chinese *hai*, 'and, again', iterative adverb (Long et al. 2012).

Moyse-Faurie (2008, 2012) reports that in a number of Oceanic languages there is a polysemy set involving the verbal meaning 'return' and the adverbial meaning 'again'. This set includes Saliba *uyo* 'go back, again' and the Xaracuu verb/adverb *mûgé* 'return/again' (Moyse-Faurie 2008: 143–4).

While genetically and areally restricted, we hypothesize that this case of polysemy is the result of a grammaticalization process from the former to the latter, even if so far no diachronic evidence is available in support of this hypothesis. The hypothesis is based on the general observation that action verbs commonly give rise to adverbial expressions highlighting a semantic feature inherent in or implied by the meaning of the verb; *see* DESCEND > DOWN; FALL > DOWN; FOLLOW > BEHIND; RETURN > ITERATIVE; SURROUND > AROUND.

Note that this polysemy set has in some languages developed into markers for reflexive and/or reciprocal markers, and Moyse-Faurie (2008: 143, 2012) refers to this pathway as the 'again/return' strategy. *See also* RETURN > ITERATIVE; AGAIN > REFLEXIVE.

RETURN ('to return', 'to go back (to)') > (2) ITERATIVE

Archaic Chinese *fu* 'return', motion verb > *fu*, 'and, again', iterative adverb (Long et al. 2012). Archaic Chinese *huan* 'return', motion verb > Medieval Chinese *hai*, 'and, again', iterative adverb (Long et al. 2012). Sanuma *kō* 'return', verb > repetitive marker. Ex.

Sanuma (Borgman 1990: 180–1)

Ī hamō sa pili- a- mō ku- a akō- ki pia salo.
REL LOC 1:SG live- DUR- PURP be- DUR return- FOC intend RESULT
'I intend to live in that place again.'

Sotho -*bōèla* 'return (applicative form)', verb > repetitive auxiliary. Ex.

Sotho (Doke and Mofokeng [1957] 1985: 247)

- (a) *Nka-bōèla mōtsē ng.*
(1:SG:POT-return village LOC)
'I can return to the village.'
- (b) *Nka-bōèla ka-bua.*
(1:SG:POT-return 1:SG:SUB-speak)
'I can speak again.'

Zulu -*buya* 'return (= movement from point A to point B and back to point A)', verb > -*buye* 'do again', repetitive auxiliary. Ex.

Zulu (Mkhathswa 1991: 91–2)

- (a) *U-zo-buya kusasa.*
(2:SG-FUT-return tomorrow)
'You will return tomorrow.'
- (b) *U-buye u- si- fund-e lesi si-fundo.*
(2:SG-return-SUBJUNCT 2:SG- c7- learn-SUBJUNCT c7:DEM c7-lesson)
'Study this lesson again.'

Kikuyu *-coka* 'return (to)', 'come', 'go back', transitive and intransitive verb > *-coka* 'again', 'then', 'after that', iterative auxiliary. Ex.

Kikuyu (Benson 1964: 66)

- (a) *Nĩ-tũ-ra- coka mũ- cĩĩ*
 PART-1:PL-PRES- return c3- home
 'We are going home.'
- (b) *I-ti-na-coka kũ-rĩa*
 c10-NEG-PAST-return INF-eat
 'They (the cattle) did not feed again.'

Manding *sègín* 'return', verb > *sègín* 'return', repetitive auxiliary, *Á sèginná kà kùlò* ('he returned to scream') 'He screamed again' (Creissels in prep.b). Dagaare *leb* 'return', verb > *leb*, *le*, *laa* 'do/happen again', auxiliary (Mwinlaaru 2017: 79). Moré *lébé* 'return', intransitive verb > *lé* 'again', repetitive auxiliary, 'no longer' (when negated) (Alexandre 1953b: 222). Sango *kiri* 'return', verb > 'repeat', iterative marker. Ex.

Sango (Thornell 1997: 123)

- Ála kiri ála mã kpěngbä tēñě.*
 3:PL return 3:PL hear hard word
 'They listen to the severe message again.'

Burmese *pran* 'return' > repetitive auxiliary (Park 1992: 16). Portuguese *tornar/voltar* 'return', verb > *tornar/voltar a* + INF 'to do again', repetitive auxiliary (Stolz 1985: 144). Sardinian *torrare* (< Latin *tornare*) 'return', 'give back', verb > *tòrra* 'again', 'afresh'. Ex.

Sardinian (Wagner 1962: 498–9)

- (a) *Torrate ... ad domos uostras!*
 (return:IMP:PL ... to houses your:PL)
 'Return (ye) ... home!'
- (b) *E il presentat torra cuddu signore.*
 (and he introduce again DEM man)
 'And he introduces that gentleman again.'

Fa d'Ambu CP *vilame* 'return', motion verb > (a) *vilame*, repetitive auxiliary; (b) *-vla*, verbal iterative suffix. Ex.

Fa d'Ambu CP (Post 1992: 160)

- Andyi se e lantá-vla...*
 one:day that 3:SG get:up-turn
 'One day he got up again....'

Nubi CA *áarija* (*fógo*) 'return (be there)', verb > iterative marker (simple repetition) (Boretzky 1988: 64).

This is an instance of a pathway whereby process verbs, on account of some salient semantic property, give rise to grammatical markers for tense or aspect functions; *see*, for example, ARRIVE; CROSS; DESCEND; EXCEED; FOLLOW; PASS; RESEMBLE.

Compare RETURN > AGAIN.

RIGHT ('true, correct', adverb) > DISCOURSE MARKER

English *right*, adverb > *right*, discourse marker, functioning as an attention-getter, response form indicating agreement, and as a sort of tag question (Méndez-Naya 2007: 145–6). German *richtig* 'right, correct', adjective and adverb > *richtig*, discourse marker. Ex.

German (constructed example)

- (a) *Die Antwort ist richtig.* 'The answer is correct.'
 (b) ***Richtig**, die Antwort ist richtig.* 'Right, the answer is correct.'

Hebrew *naxon* 'right', discourse marker expressing agreement (Maschler 1994). Turkish *doğru* 'right', discourse marker. The Turkish marker *doğru* is also commonly switched by Turkish immigrants into Dutch discourse (Backus 1996: 316).

The present pathway cannot be described exhaustively in terms of grammaticalization. As argued in Heine et al. (2013; 2017), it also involves cooptation, a discourse strategy whereby a unit of sentence grammar is deployed for specific discourse purposes such as expressing functions of text organization, attitudes of the speaker, and/or speaker–hearer interaction. Whereas grammaticalization typically leads to semantic and morphosyntactic integration, cooptation has the opposite effect, that is, the unit is semantically and morphosyntactically unattached, frequently also being prosodically marked off. Thus, unlike most of the other data discussed in this book, the evolution of discourse markers is more complex, being the result of cooptation followed by grammaticalization (Heine 2013).

See also GOD > INTERJECTION; MAN > INTERJECTION; NOW > DISCOURSE MARKER; THEN > DISCOURSE MARKER; WELL > DISCOURSE MARKER; WHAT > DISCOURSE MARKER.

S

SAME > INTENSIFIER

German *selb-* 'same', adjective > *selbst*, intensifier (emphatic reflexive). Ex.

German

Der König selbst hat es getan.
 the king himself has it done
 'The king himself did it'.

French *même* ‘same’, adjective > *même*, intensifier, Spanish *mismo* ‘same’ > intensifier. Moravcsik (1972: 273) mentions Syrian Arabic *nafs-* and *zāt-*, Ancient Greek *autos*, and Lithuanian *pàts* as further examples where the intensifier is “homonymous” in part or in its totality with the word for ‘same’ (cf. König and Siemund 2000).

SAY > (1) CAUSE

Shantou Min dialect of Chinese *ta*³⁵, verb of speech > *ta*³⁵, cause marker (Long et al. 2012). Baka *pe* ‘say’, verb > (purpose clause subordinator >) cause clause subordinator. Ex.

Baka (Christa Kilian-Hatz, p.c.)

<i>Mo</i>	<i>à</i>	<i>mèè</i>	<i>ʔèè</i>	<i>kɛ</i>	<i>pe</i>	<i>nye?</i>
2:SG	ASP	make	matter	DEM	CAU	what

‘Why do you do this?’ (lit. ‘You do this because of what?’)

Kupsapiny *kùle*, participial form of the verb *le* ‘say’ > *kùle*, marker of a clause expressing the cause of a feeling (Kawachi 2012: 118–19).

Lezgian *luhuz*, imperfective converb of *luhun* ‘say’ (> complementizer) > *luhuz*, ‘because’, causal conjunction. Ex.

Lezgian (Haspelmath 1993: 390)

<i>Pul</i>	<i>kwadar-na</i>	<i>luhuz</i>	<i>buba</i>	<i>k’wal-</i>	<i>er-</i>
money	lose-AOR	saying	father	house-	PL-
<i>aj</i>	<i>aqud-</i>	<i>iz</i>	<i>že-da-ni?</i>		
INE	take:out-	INF	can-FUT-Q		

‘Can we kick father out of the house because he has lost the money?’

In the Lezgian language Tabassaran, the verb *k’uri* (imperfective converb) is used as a reason clause marker (Maisak 2015).

See also Saxena (1988a; 1988b), Heine et al. (1991: 158–9), Lord (1993). This appears to be an instance of a process whereby process verbs, on account of some salient semantic property, give rise to grammatical markers used for clause combining; compare RESEMBLE. *See also* SAY > COMPLEMENTIZER; SAY > SUBORDINATOR.

SAY > (2) COMPLEMENTIZER

Medieval Chinese *dao* ‘say’, speech verb > Early Modern Chinese *dao*, serving as a complementizer in a V(P) *dao* construction (Long et al. 2012). Beijing dialect of Chinese *shuo*, speech verb > *shuo*, second verb of a V1-V2 construction > *shuo*, complementizer (Long et al. 2012). Guangzhou Cantonese *wa*²¹, speech verb > *wa*²¹, complementizer (Long et al. 2012). Lianjiang dialect of Cantonese *kɔŋ*²⁵, speech verb > *kɔŋ*²⁵, complementizer (Long et al. 2012). Shantou Min dialect of Chinese *ta*³⁵, speech verb > *ta*³⁵, complementizer

(Long et al. 2012). Thai *wāa* ‘say’, speech verb > *wāa*, complementizer (Long et al. 2012).

Ancient Egyptian *rdd* ‘(in order) to say’ > ‘that’, general complementizer (Deutscher 2000: 90; Gardiner 1957: 173f.). According to Deutscher (2000: 66–90), a similar process happened in the Semitic language Old Akkadian (c. 2500 – 2000 BC) of ancient Mesopotamia, where the expression *enma*, hypothesized to be derived from a verb of saying, provided the source for the complementizer *umma* of Neo-Babylonian (c. 1000 – 500 BC).

Kwami *gó* ‘say’, verb > ‘that’, complementizer (Leger 1991: 26). Kupto *ngó* ‘say’, verb > ‘that’, complementizer (Leger 1992: 21). Kupsapiny *kùle*, participial form of the verb *le* ‘say’ > *kùle* marker introducing complement clauses (Kawachi 2012: 116–18). Maa *-jó* ‘say’, verb > *ajó*, object clause subordinator (Heine and Claudi 1986: 99). Koranko *kó* ‘say’, verb > complementizer after mental process verbs. Ex.

Koranko (Kastenholtz 1987: 265, 336)

- (a) *ànu kó ñ yé: 'sùì yíri!'*
 3:PL say 1:SG to sit IDEO
 ‘They said to me: “Sit down quietly!”’
- (b) *ñ yá à fɔ́ í yé, kó í kána tó yà.*
 1:SG TAM 3:SG say 2:SG to that 2:SG TAM:NEG stay here
 ‘I told you that you cannot stay here.’

Vai *ro* ‘say’, ‘suppose’, ‘think’, verb > *-ro*, complement clause subordinator, defective verb. Ex.

Vai (Koelle [1854] 1968:123)

- móà so mú-ro: yá mu dí'ake.*
 1:PL:TAM know 1:PL-say 2:SG:TAM 1:PL love:do
 ‘We know that thou lovest us.’

Baka *pe* ‘say’, verb > object clause complementizer. Ex.

Baka (Christa Kilian-Hatz, p.c.)

- (a) *ma pe meê bèlà kê!*
 1:SG say make:IMP work DEM
 ‘I say: do this work!’
- (b) *ma à nyì pe ?é dɔ.*
 1:SG ASP know that 3:SG come
 ‘I know that he comes.’

Gakèè ‘say’, verb > *ákè*, object clause subordinator (Lord 1989: 338). Gokana *kɔ* ‘say’, verb > marker of complements after verbs of saying, mental action, and perception (‘know’, ‘want’, ‘show’, ‘fear’, ‘see’, ‘hear’; Lord 1989: 326).

Idoma *ka* ‘say’, ‘speak’, verb > clause subordinator after verbs of thinking, knowing, and hearing (Lord 1989: 329). Zande *yá* ‘say’, ‘think’, verb > *ya* ‘that’, complement clause subordinator (Canon and Gore [1931] 1952:156). Swahili **ku-amba* (INF-say) ‘say’, verb > *kwamba*, complement clause subordinator. Nyanjakú-*tí* (INF-say) ‘say’, verb > *kùtì*, complementizer (Lord 1989: 338). Lingala *te* ‘say’, verb > object clause subordinator (van Everbroeck 1958: 82). Bemba *-ti* ‘say’, verb > object clause subordinator. Ex.

Bemba (Givón 1980: 365–6)

- (a) *a- a- ebele a- a- ti umanaa- ndi a- a- ishile.*
 he- PAST- say he- PAST- say friend- my he- PAST- come
 ‘He said: My friend has arrived.’
- (b) *a- a- ebele uku- ti umanaa- ndi a- a- ishile.*
 he- PAST- say INF- say friend- my he- PAST- come
 ‘He said that my friend had arrived.’

Ewe *bé* ‘say’, verb > *bé*, object clause complementizer. Ex.

Ewe (Lord 1989: 307–8)

- (a) *me- bé me- wɔ̃ e.*
 1:SG- say 1:SG- do it
 ‘I said: I did it.’ / ‘I said that I did it.’
- (b) *me- dí bé máfle awua ɖe- wó.*
 1:sg- want (say) 1:SG:SUBJUNCT:buy dress some- PL
 ‘I want to buy some dresses.’

Efik *ke* ‘say’, verb > complementizer (Lord 1989: 338). Yoruba **kpé* ‘say’ > complementizer; *wí* ‘say’ > *wí-kpé*, complementizer (Lord 1989: 338). Dschang ‘say’, verb > complementizer (Lord 1989: 338). Igbo *ká* ‘say’, verb > complementizer (Lord 1989: 339). Hausa *cê* ‘say’, verb > *cêwā*, quotative, clause subordinator (Lord 1989: 339). Nepali *bhan-* ‘say’, verb > *bhanne*, complementizer (Lord 1989: 339). Chamling *rungma* ‘say’, verb > *rungma* ‘that’, subordinator. Ex.

Chamling (Ebert 1991: 79–80)

Khu garib hing-e rungma kanga chaid ñi.
 he poor be-? say 1:SG know ?
 ‘I know: he is poor.’ / ‘I know that he is poor.’

Korean *ha-* ‘say, do’, light verb > *-ta-ha-ko* > *-tako*, complementizer (Rhee 2016c). Tamil *enru* ‘say’, verb > *ennru*, complementizer (Lord 1989: 339). Telugu *anu* ‘say’, verb > *ani*, complementizer (Lord 1989: 339). Sinhala *kijə la* ‘say’, verb > complementizer (Lord 1989: 339). Bengali *bole* ‘say’, verb >

complementizer (Ebert 1991: 78). Marathi *mhan. ūn* ‘say’, verb > complementizer (Ebert 1991: 78). Santali, Mundari *mente* ‘say’, verb > complementizer (Ebert 1991: 78). Sora *gamle* ‘say’, verb > complementizer (Ebert 1991: 78). Burmese *hsou* ‘say’, verb > complementizer (Lord 1989: 339). Thai *wāa* ‘say’, verb > complementizer (Lord 1989: 339). Hmong (*hais*) *tias* ‘say’, verb > complementizer (Ebert 1991: 78). Khmer *thaa* ‘say’, verb > complementizer (Ebert 1991: 78). Buru *fen(e)* ‘think, say, affirm’, verb > complementizer (with verbs expressing physical perception and mental perception). Ex.

Buru (Klamer 2000: 78)

Ya tewa fen ringe iko haik.

1:SG know *fen* 3:SG go PFV

‘I know that he has already left.’

In Tukang Besi, a Malayo-Polynesian language of Indonesia closely related to Buru, the form *kua* functions as a quotative marker and complementizer but not as a verb ‘say’. That *kua* nevertheless must have been a speech act verb for ‘say’ can be reconstructed on the basis of comparative evidence (Klamer 2000: 85).

Avar *abun* ‘say’, verb > complementizer (Ebert 1991: 78). Turkish *diye* ‘say’, verb > complementizer (Ebert 1991: 78). Mongolian *kemen* ‘say’, verb > complementizer (Ebert 1991: 78). Lezgian *luhu-z*, quotation marker (imperfective converb of *luhun* ‘say’) > complementizer ‘that’. Ex.

Lezgian (Haspelmath 1993: 367)

gada- di wič k'wal- e amuq'- da luhu- z haraj- zawa.

boy- ERG self house- INE stay- FUT say- IMC shout- IMPFV

The boy is shouting that (lit.: ‘saying’) he would stay at home.’

In the Lezgian language Tabassaran, the verb *k'uri* (imperfective converb) is used as a clause-final complementizer, mostly with speech verbs (Maisak 2015).

English *say*, verb > Tok Pisin PE *se*, complementizer (Ebert 1991: 77). English *say*, verb > Nigerian PE *say*, complementizer; for example, *I tink say beggar no get choice* (Ebert 1991: 77). Netherhollands CD *se(e)* (< Dutch *zeggen*) ‘say’ > object clause complementizer ‘that’. Ex.

Netherhollands CD (Stolz 1986: 229)

- (a) *Ham a se, wa di be:?*

(3:SG PERF say what DEM be)

‘He said: What was that?’

- (b) *Am no we:t se fo ko:k jamus ...*

(3:SG NEG know that DEB cook yam)

‘He didn’t know that he had to cook yam ...’

West African PE *sey* (< English *say*) > complementizer. Ex.

West African PE (Lord 1989: 333)

Ól pípu sabi sey, míting gow déy.
all people know (say) meeting FUT LOC
'All the people know that there will be a meeting.'

See especially Lord (1973; 1993: 206–8), Saxena (1988a; 1988b), Ebert (1991), Klammer (2000). For more examples from pidgins and creoles, see Holm (1988: 185–8) and Muysken and Veenstra (1995: 290ff.).

Based on observations on the history of Sinitic languages, Peyraube (2015: 76) proposes the following chain of semantic changes: SAY > CONSIDER > THINK > COMPLEMENTIZER.

This is an instance of a process whereby in appropriate constructions process verbs, on account of some salient semantic property, give rise to grammatical markers used for clause combining; compare RESEMBLE.

SAY > (3) CONDITIONAL

Archaic Chinese *yun*, speech verb > *yun*, conditional marker.

Beijing dialect of Chinese *shuo*, speech verb > *shuo*, conditional marker.

Lianjiang dialect of Cantonese *kɔŋ*²⁵, speech verb > *kɔŋ*²⁵, conditional marker.

Lahu *qô?* 'say', verb > *qo* 'if', conditional marker. Ex.

Lahu (Matisoff 1991: 400)

nó ô-ve cá qo, nà tù ve yò.
2:SG DEM eat if sick PART PART PART
'If you eat that, you'll get sick.'

Tamang *pi sam* ('say' + 'if') 'if one says' > conditional marker (Matisoff 1991: 400; Lord 1993: 207). Idoma *ka* 'say', verb > marker introducing conditional clauses (Lord 1989: 317f.). Ga *kêé* 'say', verb > *ké*, conditional clause subordinator (Lord 1989: 317f.). Ex.

Ga (Lord 1989: 318)

Máha o níyenii ké oba.
give:1:SG:FUT you food (say) you:come
'I'll give you some food if/when you come.'

Baka *pe* 'say', verb > conditional marker. Ex.

Baka (Christa Kilian-Hatz, p.c.)

Pe mo ô síá lé mò jukó è!
if 2:SG NAR see 3:SG:OBJ 2:SG greet 3:SG:OBJ
'Give him my greetings if you see him!'

See Lord (1993) for more details. This is an instance of a pathway whereby process verbs, on account of some salient semantic property, give rise to grammatical markers used for clause combining; compare RESEMBLE.

SAY > (4) DISCOURSE MARKER

In a number of Sinitic languages, verbs for ‘say’ placed at the right periphery of an utterance have given rise to discourse markers expressing a range of different functions, such as signalling warnings, reported evidentiality, prompts, mirativity, or requests for repeating information (Chappell 2017).

In Cantonese, the verb *wa*⁶ ‘say’ serves as a discourse marker (*wa*⁵) in clause-final position in turntaking use, e.g. to ask the interlocutor to repeat information presented earlier (Chappell 2017: 143). Similarly, in Meixian Hakka, the utterance-final discourse marker *và*, also derived from the verb for ‘say’, may be used in repetition of an utterance (Chappell 2017: 144). Furthermore, the discourse marker *kong*¹ of Taiwanese, Southern Min, derived from the verb *kong*² ‘say’, is found at the end of an intonation group in clause-final position, associated with four different constructions coding, respectively, (a) assertions in which the speaker challenges a presupposition from the surrounding context, (b) suggestions, (c) warnings, and (d) rebuttals. In more general terms, the functions involve the correction of a presupposition attributed to the other interlocutor (Chappell 2017: 146ff.). In the following example of construction (b), the speaker shows agreement with a prior suggestion to leave. Ex.

Taiwanese, Southern Min (Chappell 2017: 151)

(*Lai*⁵) *khi*³ *kong*¹!
(come:PURP go DM_{SAY})
‘Let’s go then!’

On the basis of the evidence that there is, this seems to be largely a genetically and/or areally induced process, even if there are also examples from other languages, e.g. Swahili **a-ti* ‘s/he-says’ > *ati* (also: *eti*), discourse marker with a range of functions, especially to call attention or express surprise.⁸⁴ Ex.

Swahili (own data)

u- *si-* *ni-* *sumbu-* *e* *ati*!
2:SG- NEG- 1:SG:OBJ- discomfort- SUBJUNCT DM
‘Don’t disturb me!’

⁸⁴ The Proto-Bantu verb **-ti* ‘say’ has been retained in many modern Bantu languages but appears to have survived in Swahili only in the discourse marker.

In accordance with what has been observed in other languages, the grammaticalization of these discourse markers is likely to have involved prior cooptation (Heine 2013; Heine et al. 2017), whereby utterance verbs were deployed for functions of discourse organization, such as the functions mentioned above.

See also NOW > DISCOURSE MARKER; RIGHT > DISCOURSE MARKER; THEN > DISCOURSE MARKER; WELL > DISCOURSE MARKER.

SAY > (5) EVIDENTIAL, QUOTATIVE

Archaic Chinese *yun*, speech verb > *yun*, sentence-final quotative marker > *yun*, evidential marker (Long et al. 2012). Old Czech *praviti* ‘say, talk’, verb > *praj*, *prej*, *pry*’, evidential and quotative meaning > modern Czech *pry*’ ‘allegedly’, evidential adverb, also used as a quotative (Vykypl 2010: 139). Slovak *vraviet* ‘say, talk’ > *vraj*, evidential, quotative (Vykypl 2010: 139). The quotative particle *h^oa* in Abkhaz is an archaic past absolutive of the verb ‘say’ (Chirikba 2003: 258–9); see also examples from Georgian in Harris and Campbell (1995: 168–72). The quotative particle *dip* in Tatar comes from the converb *di-p* with lexical meaning ‘saying’ (Greed 2014: 86; Alexandra Aikhenvald, p.c.).

Based on Aikhenvald (2004; 2011; 2012) and Aikhenvald (p.c.), we have included this pathway although there is presumably some overlap with the pathway SAY > EVIDENTIAL, REPORTED. *See also* HEAR; KNOW; SEE.

SAY > (6) EVIDENTIAL, REPORTED

Aikhenvald (2011: 604) notes that verbs of speech are a frequent source for markers of REPORTED (or hearsay) evidentials. Xining dialect of Chinese (used among Muslims) *su*⁴⁴, speech verb > *su*⁴⁴ ‘hearsay’, evidential marker (Long et al. 2012). Taiwanese, Southern Min *kong* ‘say’, verb > *kong*, evidential marker of hearsay information (Chappell 2001c). Bo Hong (own data) found the following verbs for ‘say’ in varieties of Chinese to be also used as evidential markers: Ningbo dialect of Wu *ho*²² ‘say’, Haimen dialect of Wu *to*³⁴*vo*²¹³⁻⁵³ ‘actually say’, Suzhou dialect of Wu *teia*⁵²*sa*²³ ‘say what’, Shanghai dialect of Wu *hi*²²*kā*⁴⁴ ‘he says’, Taiwanese Mandarin *koj*²² ‘say’. Certain constructions in Korean involving the verb *ha-* ‘say’, i.e. *-tanta* (<*tako-ha-n-ta* [COMP-say-PRES-DEC]), *-tay* (<*tako-ha-e* [COMP-say-END]), *-tani* (<*tako-ha-ni* [COMP-say-CAUS]), etc., developed into reported and hearsay evidential markers (Ahn and Yap 2015; Rhee 2016; Ahn 2016).

Qiang [*jə* . . . *ji*] ‘say’, speech verb > *-i* ‘hearsay’, evidential marker (LaPolla and Huang 2003; Long et al. 2012). Lhasa Tibetan *zer* ‘say’, verb > *-za* (/saʔ/) or *-ze* (/s/, reduced form), REPORTED (hearsay) evidential enclitics (Tibet Student Corpus; Eric Mélac, p.c.). Ex.

Lhasa Tibetan (Tibet Student Corpus; Eric Méléac, p.c.)

nga chung.chung skabs.dus 'tshub.po zhe.drags yod.red- za
 I little when unruly very be:IMPF:FACTU- REPORT
 'When I was a kid, I was very unruly.' (= 'I was told that when I was a kid, I was very unruly.')

Lezgian *luhuda* 'one says' (cf. *luhun* 'say') > *-lda*, hearsay evidential marker (Haspelmath 1993: 148). Agul *awaja* 'says, is saying' or habitual *awaje* 'usually says', finite verb forms > *kaj* reportative evidential, invariable clitic (Arkadiev and Maisak 2018: 138). Archi *war*, present tense of the verb 'say' > *-er* reportative evidential, verbal suffix (Arkadiev and Maisak 2018: 139).

In the Tsafiki language of Ecuador, the reported evidential marker *-ti-* is transparently related to the verb *ti-* 'say', and the reported evidential *di* of the Tibetan language Kham is also connected to a verb of speech (Aikhenvald 2004; 2011: 604). Cf. English *they say* > REPORTED evidential marker; for example, *They say she's coming* (Givón 1991a: 83), and English *be said to* (Méléac 2014).

Aikhenvald (2011: 609) says that "[i]n numerous varieties of Latin American Spanish, expressions involving *diz que*, literally, 'says-that', are on their way towards becoming a reported evidential with overtones of doubt and inference." In Mexican Spanish, *dizque* is a weakly grammaticalized particle for reported speech and unreliable, non-first information (Aikhenvald 2004: 610), and such weakly grammaticalized constructions also appear to exist in a number of other languages (Eric Méléac, p.c.).

More research is needed on the general process leading to the rise of REPORTED evidentials (see Willett 1988; Aikhenvald 2004; 2011). This is an instance of a process whereby speech act and mental process verbs, on account of some salient semantic property, give rise to grammatical markers for evidentiality. Compare SAY > EVIDENTIAL, QUOTATIVE; see also HEAR; KNOW; SEE.

SAY > (7) PURPOSE

Ewe *bé* 'say', verb (> object clause subordinator) > purpose clause subordinator (Lord 1989: 306ff.) Ex.

Ewe (Lord 1989: 313)

é-dògo bé ye-á-ɖ u nú.
 he-go:out (say) LOG-SUBJUNCT-eat thing
 'He went out in order to eat.'

Gokana *kɔ* 'say' *nú*, verb (> object clause subordinator) > purpose clause subordinator (Lord 1989: 325–6). Ex.

Gokana (Lord 1989: 326)

lébàrèè du kɔ baá mən-èè ɛ.
 Lebare came (say) they see-LOG him
 ‘Lebare came for them to see him.’

Baka *pe* ‘say’, verb (> object clause subordinator) > purpose clause subordinator. Ex.

Baka (Christa Kilian-Hatz, p.c.)

- (a) *Ma pe mɛ̀è bèl̀à kɛ̀!*
 I:SG say make:IMP work DEM
 ‘I say: do this work!’
- (b) *tɔ pe-è ngo pe ma njo!*
 give:IMP DAT-1:SG water that 1:SG drink
 ‘Give me water so that I may drink!’

Koranko *kó* ‘say’, defective intransitive verb > purpose clause subordinator. Ex.

Koranko (Kastenholz 1987: 265, 336)

Á d̥y-da túyɛ kónɔ kó à sí kólɔmɔgboenu jínj
 3:SG enter-TAM forest POST PURP 3:SG TAM fruit search
 ‘He went into the forest in order to look for fruit.’

Lingala *te* ‘say’, verb > purpose clause marker. Ex.

Lingala (van Everbroeck 1958: 82)

kangá mbwá nsinga te áboma nsósó té!
 ‘Tie the dog up so that it doesn’t kill the chicken!’

In the Lezgif language Tabassaran, the verb *k’uri* (imperfective converb) is used as a clause-final purpose marker (Maisak 2015). Kupsapiny *kúle*, participial form of the verb *le* ‘say’ > *kúle* purpose marker (Kawachi 2012: 118).

Sranan CE *taki* ‘say’, verb (> clause subordinator ‘that’) > purpose clause subordinator. Ex.

Sranan CE (Ebert 1991: 86)

A seni sa Akuba go, taki mek datra luk ey.
 (he sent sa Akuba off that make doctor look her)
 ‘He sent Sa Akuba so that the doctor should examine her.’

Negerhollands CD *se(e)* (< Dutch *zeggen*) ‘say’, verb > object clause complementizer (*see* SAY > COMPLEMENTIZER), purpose clause subordinator. Ex.

Negerhollands CD (Stolz 1986: 229)

Fo ma se pásé: di wurum ...
 (CONJ make that go DET worm)
 ‘In order to get rid of the worms ...’

For more examples from pidgins and creoles, see Muysken and Veenstra (1995: 290ff.). This is an instance of a process whereby process verbs, on account of some salient semantic property, give rise to grammatical markers used for clause combining; compare RESEMBLE. *See also* SAY > SUBORDINATOR.

SAY > (8) QUOTATIVE

This pathway appears to generally result from the grammaticalization of a speech-introducing clause construction containing a verb for ‘say’ (Deutscher 2011). Archaic Chinese *yun*, speech verb > *yun*, sentence-final quotative marker > *yun*, evidential marker (Long et al. 2012). Xining dialect of Chinese (used among Muslims) *su*⁴⁴, speech verb > *su*⁴⁴, quotative marker (Long et al. 2012).

Deutscher (2011) shows that up until 2000 BC, the Akkadian speech-introducing clause construction [*enma* X (*ana* Y)] ‘this is what X said/says/should say (to Y)’ was used. After 2000 BC, the emphatic particle *-ma* was added and the construction changed to [*umma* X-*ma*]. The ability to append Y was lost, that is, there was decategorialization. From the eighteenth century BC, the construction could occur regularly after the general speech verb *qabûm* ‘say’, eventually turning into a quotative marker, undergoing erosion in the Assyrian dialect, where it was reduced to *ma* (Deutscher 2011: 650–1).

The Georgian quotative marker *metki* is the result of the grammaticalization of the construct *me v-tkv-i* (I 1.SG-say-AOR.IND) ‘I say’ (Harris and Campbell 1995: 169; Deutscher 2011: 647). Old Czech *praviti* ‘say, talk’, verb > *praj*, *prej*, *pry*’, evidential and quotative meaning > modern Czech *pry*’ ‘allegedly’, evidential adverb, also used as a quotative (Vykypl 2010: 139). Slovak *vrviet* ‘say, talk’, verb > *vraj* evidential, quotative (Vykypl 2010: 139). Russian *molvil* ‘he spoke, said’, or *molvit* ‘he speaks, says’ > colloquial Russian *mol* quotative signalling direct speech (Vykypl 2010: 140). Lithuanian *pasakyti* ‘say’, verb, perfective > *pasak* ‘according to’, evidential preposition (Vykypl 2010: 140).

In the Drehu language of the Loyalty Islands, *hape* ‘say’ is now seldom used as a main verb but introduces direct or indirect speech combined with the stative marker *ka* (Moyses-Faurie 2018: 297).

The Korean quotative marker *-ko* (also present in the complementizers *-tako*, *-lako*, *-nyako*, and *-cako*) is an eroded form of *ha-* ‘say’ and the connective *-ko* ‘and’ (Sohn 1998, 2011; Ahn 2003; Lee 2005; Rhee 2016a).

Kupsapiny *kûle*, participial form of the verb *le* ‘say’ > *kûle* quotative marker (Kawachi 2012: 116). Nama *mĩ* ‘say’, ‘speak’, *ti mĩ* (lit.: ‘thus speak’) > *ti (mi)*, direct quotation marker. Ex.

Nama (Krönlein 1889: 231, 309; Hagman 1977: 137)

- (a) *Mī re matī khūm ñ dī !kei- ě.*
 say IMP how 1:M:DU FUT make matter-3:C:SG
 ‘Tell [us] how we should do it.’
- (b) *siike tì ñâe-ñú’ao-p pita- p*
 (1:PL:M POSS leader-3:SG:M Peter-3:M:SG)
tí (mī) ra ñai-hè- p
 (QUOT PROG call-PASS-3:M:SG)
 ‘our leader who is called Peter’

Two *se* ‘say’, verb > quotative marker (Lord 1989: 292ff.). Ex.

Two (Lord 1989: 297)

Onipa reba, wo-n-se n-se: bera!
 Man PROG:COME:COND you-NEG-say NEG-say come
 ‘When a man is coming, you do not say: come!’

Concerning the Kusasi (Kusal) quotative marker *ye*, see Lord (1993: 198–9). Cahuilla *-yax-* ‘to be so’, ‘to say’ + *-qal*, durative marker, *yáx-qal* ‘he says’ > *-yax-qal-*, quotative marker (Seiler 1977: 187). Thai *wâa* ‘say’, verb > quotative complementizer, at the end of nonfinal clauses containing a verb of utterance or of cognition (Matisoff 1991: 398). Khmer *thaa* ‘say’, verb > quotative complementizer (Matisoff 1991: 399). Vai *ro* ‘say’, ‘suppose’, ‘think’, *áro* ‘he says’ > marker introducing quoted speech. Ex.

Vai (Koelle [1854] 1968: 122, 134)

- (a) *Áro, wú ñko...*
 3:SG:say 2:PL 1:SG:give
 ‘She said, give me ...’
- (b) *Á fô áye áro: ...*
 3:SG:TAM say 3:SG:to that
 ‘He said to him: ...’

Lezgian *luhun* ‘say’, verb > *luhu-z*, quotation marker, imperfective converb of *luhun* ‘say’ (Haspelmath 1993: 367). Duri *kua* ‘say’, verb > *kua* quotative marker (Klamer 2000: 85). Buru *fēn(e)* ‘think’, ‘say’, ‘affirm’, verb > quotative marker. Ex.

Buru (Klamer 2000: 76)

Da prepa fēn, “Sira rua kaduk.”
 3:SG say QUOT 3:PL two arrive
 ‘She said, “The two of them came”.’

English *talk*, verb > Saramaccan CE *taá*, quotative and clause subordinator ‘that’ after verbs of saying and mental action/perception (Lord 1989: 335–6). English *talk*, verb > Sranan CE *taki*, quotative/complementizer (‘that’; Lord 1989: 335). Ex.

Sranan CE (Ebert 1991: 86; Lord 1989: 335)

Ma wan dei Anansi taigi hem weifi a taki: ...
 but one day Anansi talk his wife ? talk
 ‘But one day, Anansi said to his wife: ...’

West African PE *sey* ‘say’, verb > *sey*, quotative marker. Ex.

West African PE (Lord 1989: 332)

Mása tók sey, kom-ow.
 (master talk (say) come-?)
 ‘The master said, “Come here”.’

For a discussion of this pathway, see also Klammer (2000), Deutscher (2011), and Chappell (2008). Harris and Campbell (1995: 170ff.) use the term “quotation-to-quotative” to refer to the pathway.

SAY > (9) SIMILATIVE

Archaic Chinese *yun*, speech verb > *yun* ‘be like’, similative marker (Long et al. 2012). Koranko *kó* ‘say’, verb > *iko* (‘you say’) ‘like’, ‘as if’, conjunction. Ex.

Koranko (Kastenholz 1987: 334)

À má-ra iko à yé béle-na kére lá.
 3:SG make-TAM like 3:SG TAM pass-TAM horn POST
 ‘It seemed as if he passed the horn on.’

Vai *ro* ‘say’, ‘suppose’, ‘think’, verb > *i:ro*, *iro* (i 2:SG + *ro* ‘say’) ‘as’, ‘as if’, ‘like’, preposition. Ex.

Vai (Koelle [1854] 1968: 123–4)

pòromō bé ĩro músu gbándawau.
 (European COP like woman unmarried)
 ‘A European is like an unmarried woman.’

Kupsapiny *kúle*, participial form of the verb *le* ‘say’ > *kúle* ‘like this’, when placed at the end of a sentence for the manner of an action (Kawachi 2012: 115).

Tamil *en* ‘say, think’, verb of utterance > *ena* (‘say’ in the infinitive) ‘like’. Ex.

Tamil (T. Lehmann 1989: 377)

kumaar puli en-a paay-nt-aan.
 Kumar tiger say-INF jump-PAST-3:M:SG
 ‘Kumar jumped like a tiger.’

Lezgian *na luhudi* ‘you would say’ (you:ERG + archaic future of *luhun* ‘say’), similarity marker ‘as if’. Ex.

Lezgian (Haspelmath 1993: 247)

Na luhudi, aburu- z aku- r- di axwar tir.
 as if they- DAT see- AOP- SBST:SG dream COP:PAST
 'It was as if what they had seen was a dream.'

English *say*, verb > West African PE *sey* 'resemble', complementizer (Lord 1989: 333). For a detailed description of how the simulative construction is expressed in the languages of Europe, see Haspelmath and Buchholz (1998). See also RESEMBLE.

SAY > (10) SUBORDINATOR

In more advanced stages of grammaticalization, SAY-verbs may develop into markers of purpose, cause, and temporal adverbial clauses, becoming general subordinators; see Saxena (1988a; 1988b) and Heine et al. (1991a: 158–9).

Tamang *pi sam* ('say' + 'if') > conditional marker (Lord 1993: 207). Ewe *bé* 'say', verb > *bé(ná)* ('say'-HAB) 'so that', purpose clause marker. Ex.

Ewe (Heine et al. 1991a: 237)

- (a) *é- bé Kofi vá.*
 3:SG-say Kofi come
 'He said that Kofi came.'
- (b) *me-tsó ga nê bé(ná) wo-á-fle agbalẽ.*
 1:SG-take money give:3:SG PURP 3:SG-SUBJUNCT-buy book
 'I gave him money so that he could buy a book.'

Kupsapiny *kúile*, participial form of the verb *le* 'say' > *kúile*, marker for a range of subordinating functions, such as purpose, cause, complementation (Kawachi 2012).

See also SAY > CAUSE; SAY > PURPOSE > CAUSE. This is an instance of a process whereby process verbs, on account of some salient semantic property, give rise to grammatical markers used for clause combining; compare RESEMBLE. However, more research on the exact conceptual nature of this process is needed.

See also SAY > COMPLEMENTIZER; SAY > CONDITIONAL; SAY > PURPOSE.

SAY > (11) TOPIC

Early Modern Chinese *dehua* (attributive marker + 'talk') > Early Modern Chinese *dehua*, topic marker. Early Modern Chinese *yaoshuo* ('will' + 'say') > Early Modern Chinese *yaoshuo*, topic marker. One of the three grammaticalization chains characterizing the development of the verb *kong*² 'say' of Taiwanese, Southern Min is that from the transitive use of the verb in clause-initial position ('talk about (X)') to topic marker and eventually to conditional marker (Chappell 2008; 2017: 159–60).

In Japanese, the quotative conditional expressions *to ie-ba* (QUOT say-COND) ‘when saying X’ and *to ii-(tare/tara)-ba* (QUOT say-PERF-COND) > *to it-tara* ‘when having said X’ were grammaticalized into the emotive topic markers *tteba* and *ttara*, respectively (Suzuki 1999; Shinzato and Suzuki 2007). Korean *ha-* ‘say, do’, light verb > *(un)khAniwa* > *(un)khenyeng*, topic, depreciative ‘let alone’, postposition (Rhee 2016c).

Kupsapiny *kùle*, participial form of the verb *le* ‘say’, verb > *kùle*, topic marker of noun phrases. Ex.

Kupsapiny (Kawachi 2012: 120–1)

kò-in *kùle*, *wó*.
house-that TOP big
‘As for that house, it is big’.

More data are needed to substantiate this pathway. Compare s-QUESTION > TOPIC.

SEE > (1) ALLATIVE

Korean *pota* ‘to see’ (PRES:IND), verb > ‘to (ALL), than’ (Svorou 1994: 112). Historically, allative *pota* derived from *po-taka* (‘see’-transference) (Han 2001; Kim 2001; Jeong 2006; Heo 2007; Narrog and Rhee 2013). Korean *poko* (‘see-and’) > dative *-poko* ‘to’ (Yang 2000; Sohn 2003; Han 2003; Narrog and Rhee 2013). Bihari *tak* ‘see’, verb > *taka* ‘up to’, ‘by’, ‘for’ (Svorou 1994: 116). Halia *tara* ‘look’, ‘see’, verb > ‘to’, ‘towards’, ‘than’, and so on (Svorou 1994: 116). Compare also Tamil *paar* ‘see’, verb of perception and sensation > *paarttu* (participle form), postposition marking mental direction. Ex.

Tamil (T. Lehmann 1989: 129)

kumaar raajaa.v-ai.p paarttu peec-in-aan.
Kumar Raja-ACC toward talk-PAST-3:M:SG
‘Kumar talked toward Raja.’

This appears to be an instance of a pathway whereby process verbs, on account of some salient semantic property, give rise to grammatical markers expressing case relations; compare ARRIVE; COME FROM; FOLLOW; GIVE; GO TO; LEAVE; TAKE. However, more research is needed on the conceptual nature of this particular process.

SEE > (2) COPULA

Creissels (2017b) proposes a process whereby verbs for ‘see’ and/or ‘look’ when used in their imperative form (‘Look at X!’) give rise to ostensive predicates (‘Here is X!’), and the process can lead further to the rise of new copulas (*see* SEE > OSTENSIVE PREDICATOR), and in some languages also to aspect markers. The present pathway thus seems to require an intermediate stage of an ostensive predicate.

In the following example from the Kpelle language of Liberia, (a) illustrates the lexical use of the verb *ka* ‘see’ while (b) shows its use as copula.

Kpelle (Westermann and Melzian 1930: 3, 10, 11, 12; Creissels 2017b: 52)

- (a) *Ku ḡaloŋ ka belei mu.*

1:PL man see house in

‘We saw a man in the house.’

- (b) *ḡaloŋ ka belei mu.*

man COP house in

‘The man is in the house.’

A similar chain of grammaticalization can be hypothesized for the Kita Maninka variety of Manding, where the imperative form of the verb *yé* ‘see’ also appears to have developed into an ostensive predicator, a locational copula, an equative copula, and an incompleted aspect auxiliary (Creissels 2017b: 54). Ex.

Kita Maninka (Creissels 2017b: 53–4)

- (a) *Sékù di tùbabu nání ye kunùn.*

Sékou CPL European four see yesterday

‘Sékou saw four Europeans yesterday.’

- (b) *Nénè yé Kita.*

cold.D COP Kita

‘It is cold in Kita.’

In the Bambara language of Bamako, the verb *yé* ‘see’ has also grammaticalized into an ostensive predicator and an equative copula, but not into a locational copula nor an aspect marker (Creissels 2017b).

Creissels (2017b: 58) argues that the grammaticalization from ostensive predicator to copula was due to a relaxation of the constraints characterizing the former, leading to a “change in the type of speech act expressed. This change involved, on the one hand, the loss of the deictic component that ostensive predicators have and, on the other hand, a change from a clause type whose main function it is to draw the addressee’s attention to an obvious fact to an assertive clause type.”

This process of grammaticalization is not genetically and areally restricted to West Mande languages, as is suggested by the fact that a similar phenomenon has been reported in Arabic varieties (Taine-Cheikh 2013). For example, Creissels (2017b: 57) finds evidence from Algerian Arabic as spoken in Algiers, where a plain copula originating from the imperative of the verb *raʔā* ‘see’ is found.

Compare SEE > OSTENSIVE PREDICATOR; OSTENSIVE PREDICATOR > COPULA.

SEE > (3) EVIDENTIAL, DIRECT

There is a widespread process of grammaticalization whereby visual evidentials of direct perception arise as the result of a reanalysis of a matrix clause containing the verb ‘see’ as a particle or verbal affix (cf. Aikhenvald 2004: 273–4). In fact, the present pathway leads almost exclusively to what Aikhenvald (2004; 2011; 2018) calls VISUAL evidentials, which are typically associated with the full commitment of the speaker.

The visual evidential of Shibacha Lisu, for example, comes from the verb ‘see’ (Aikhenvald 2011: 605). In Maricopa, the visual evidentiality suffix developed from the lexical verb *-yuu-* ‘see’. Ex.

Maricopa (Aikhenvald 2004: 96)

waly-marsh-ma- ‘*yuu*

NEG-win+DUAL-NEG-I:SG-VIS

‘They didn’t win (i.e. they lost), I saw it.’

In Tariana, the present visual marker *-nuka*, *-naka* is related to the first person singular form of the verb *-ka* ‘see’ (Aikhenvald 2011: 604).

In the Southern Nilotic Akie language of north-central Tanzania, the verb *taak-u* (see-*VEN*) ‘see’ has been grammaticalized to an invariable clause-initial DIRECT evidential particle *tááku* (‘I have visible evidence to the effect that’). Ex.

Akie (König et al. 2015: 48)

Tááku kó am-ĪĪ sye.

SEE:EVI NAR eat-AP

‘They are eating (I can see them).’

Korean *po-* ‘see’, verb > *-kapo-*, *-napo-*, evidential auxiliary, inferential ‘seem’ (Ho 1999; Kwon 2012; Rhee 2016c).

More research is needed on the general process leading to the rise of evidential markers (see Willett 1988; Aikhenvald 2004; 2011). This is an instance of a process whereby speech act and mental process verbs, on account of some salient semantic property, give rise to grammatical markers for evidentiality. *See also* HEAR; KNOW; PERFECT; SAY > EVIDENTIAL.

SEE > (4) OSTENSIVE PREDICATOR

Also called ‘presentative particles’, ostensive predictors, like French *voici*, Italian *ecco*, or Russian *vot*, are grammatical expressions whose combination with a noun phrase constitutes the core of clauses aiming to draw the attention of the addressee to the presence of some entity within the situation of discourse (Creissels 2017b: 47). The following is an example of the French ostensive predictor *voici*.

French (Creissels 2017b: 47)

Voici nos amis!

OST our friends

‘Here are our friends!’

Creissels proposes a process whereby verbs for ‘see’ and/or ‘look’ when used in their imperative form (‘Look at X!’) give rise to ostensive predicates (‘Here is X!’), and the process can lead further to the rise of new copulas (see SEE > COPULA), and in some languages also to aspect markers. Ostensive predicates resemble copulas in identifying some participant, where the participant is defined deictically with reference to the situation of discourse, and ostensive predicates cannot be negated or questioned.

A paradigm example of the present pathway is provided by French, where the imperative form (*vois*) of the verb *voir* ‘see’ in combination with the deictic adverbs *ici* ‘here’ and *là* ‘there’ has been grammaticalized to the ostensive predicates *voici* and *voilà*, respectively (Creissels 2017b: 45–6, 58).

The following example from Kpelle illustrates the entire range of grammaticalizations undergone by the verb *ka* ‘see’. In (a), *ka* has its lexical meaning of ‘see’, in (b) it is an ostensive predicate (‘here is X’), (c) illustrates its use as copula, and (d) as a progressive aspect marker.

Kpelle (Westermann and Melzian 1930: 3, 10, 11, 12; Creissels 2017b: 52)

- (a) *Ku ḡaloŋ ka belei mu.*
 1:PL man see house in
 ‘We saw a man in the house.’
- (b) *I seŋkau ka!*
 2:SG money OST
 ‘Here is your money!’
- (c) *Ḍaloŋ ka belei mu.*
 man COP house in
 ‘The man is in the house.’
- (d) *Neni ka pai.*
 woman PROG come
 ‘The woman is coming.’

A similar chain of grammaticalization can be hypothesized for the Kita Maninka variety of Manding, where the imperative form of the verb *yé* ‘see’ also appears to have developed into an ostensive predicate, a locational copula, an equative copula, and an inceptive aspect auxiliary (Creissels 2017b). While it is widely found in the Southwestern branch of the Mande languages of West Africa, not all of these languages have undergone this process to its completion. For example, in the Bambara language of Bamako, the verb *yé* ‘see’ has grammaticalized into an ostensive predicate and an equative copula, but not into a locational copula nor an aspect marker (Creissels 2017b).

In some Mande languages, the imperative form of both the verb for ‘see’ and for ‘look’ have grammaticalized into ostensive predicates, e.g. Dantila Maninka *jé* ‘see’ and *félé* ‘look’, or Standard Bambara *yé* ‘see’ and *flé* ‘look’ (Creissels 2017b).

The gradual transition from lexical imperative verb form to ostensive predicator can be shown with an example from Mandinka, where the form *ɲ fɛlé* (1.SG look) is used in both capacities, meaning either ‘Look at me!’ or ‘Here I am!’. Further examples can be found in the Chadic languages Goemai (Hellwig 2011: 380–2) and Hausa (Newman 2000: 181–2; Creissels 2017b: 46).

This general process of grammaticalization is not genetically and areally restricted to Mande and Chadic languages, as is suggested by the fact that a similar phenomenon has been reported in Arabic varieties (Taine-Cheikh 2013).

Compare SEE > COPULA.

SEE > (5) PASSIVE

This grammaticalization has been suggested by Alain Peyraube (p.c.), who volunteers the following example: Archaic Chinese *jian* ‘to see’ > *jian*, passive marker. Ex.

Archaic Chinese (Alain Peyraube, p.c.)

- (a) *Mengzi jian Liang Hui wang.*
 Mencius see Liang Hui king
 ‘Mencius (went to) see King Hui of Liang.’
- (b) *Peng Chengguo jian sha.*
 Peng Chengguo PASS kill
 ‘Peng Chengguo was killed.’

Evidence for this pathway also comes from Romance languages, in all cases involving a more or less auxiliarized reflexive form of the verb ‘to see’ followed by the main verb in the past participle (see Giacalone Ramat 2017 for details). In Italian, the construction [*vedersi* + past participle], constructed in the reflexive verb form of *vedere* ‘to see’ and followed by the past participle, has given rise to a weakly grammaticalized passive construction. Ex.

Italian (Giacalone Ramat 2017)

Il presidente si vide costretto
 the president REFL see:PAST:3:SG force:PAST:PTPCPL
a dare le dimissioni.
 to give:INF the resignation
 ‘The president was forced/found himself forced to resign.’

In French, the reflexive form of the verb *voir* ‘see’ followed by the main verb constructed in the past participle is used as a semi-auxiliary in a passive construction (Giacalone Ramat 2017). Ex.

French (Alain Peyraube, p.c.)

Il s'est vu frappé par trois voyous.
 he REFL:IS seen beaten by three street:hoodlums
 ‘He has been beaten by three street hoodlums.’

A similar, though more strongly grammaticalized passive construction is found in Portuguese, built on the reflexive form of the verb ‘see’ (*ver-se*, see-REFL); (Lehmann, Pinto de Lima, and Soares 2010), and in Spanish (*verse* + past participle; Giacalone Ramat 2017). Both the Portuguese and the Spanish passives can also be used with inanimate subjects.

More research is needed on this pathway, which appears to be an instance of a more general process whereby constructions involving certain process verbs are grammaticalized to passive constructions; *see* COME; EAT; FALL; GET; GIVE; GO; SUFFER.

‘Seize, to’, *see* TAKE

SEND > CAUSATIVE

Evidence for this pathway comes from genetically unrelated languages of South Asia (Coupe 2018). The Mongsen Ao verb *zək* ‘send’ has developed into the causative suffix *-zək*, where the difference in tone between the two forms can be accounted for in terms of grammaticalization (Coupe 2018: 204). Kham, another Tibeto-Burman language of South Asia, uses the verb *pərĩ-* ‘send’ in a periphrastic causative construction when the causation is indirect, that is, the causee retains volitional control over the caused event (Coupe 2018: 205).

In the Austroasiatic language Khasi, spoken in the West Khasi Hills of Meghalaya state, northeast India, the lexical verb *p^ha?* ‘send’ appears to have grammaticalized into the marker *p^ha?*-, which expresses indirect causation and forms one of the two morphological causatives in the language (Coupe 2018: 205).

The distribution of this pathway is conceivably contact-induced (see Coupe 2018). More crosslinguistic data are needed to substantiate this reconstruction. *See also* DO, GIVE, TAKE > CAUSATIVE.

SHOULDER (body part) > (1) BEHIND

In a number of genetically unrelated languages of Middle America, the relational body part ‘shoulder’ has been grammaticalized to a spatial morpheme for ‘behind’. These languages include Náhuatl (*tepotz-* ‘shoulder’), an Aztec language, Ch’ol (*pat* ‘shoulder’) of Penutian, and Zapotec (*cožə’-* ‘shoulder’) of the Oto-Manguean family (Stolz and Stolz 2001: 1544). Ex.

Ch’ol (Stolz and Stolz 2001: 1544)

<i>t-</i>	<i>i’</i>	<i>pat</i>	<i>mesa</i>
LOC-	POSS:3	shoulder	table
‘behind the table’			

In the Panare language of Venezuela, the body part term *mata* ‘shoulder’ can be assumed to have given rise to the postposition *mata* ‘behind’ (Payne and Payne 2013: 291).

This pathway from concrete body part noun to spatial concept has most likely spread via language contact (see Stolz and Stolz 2001; Heine and Kuteva 2006: 25). We are not aware of languages in other parts of the world that have undergone a grammaticalization of this kind, but *see* SHOULDER > UP; *see also* BACK; BELLY; BUTTOCKS; EYE; FACE; FLANK; HEAD; NECK.

SHOULDER (body part) > (2) UP

Two African languages (Heine et al. 1991a: 126) and four Oceanic languages (Bowden 1992: 36) have been found to have grammaticalized the body part ‘shoulder’ to a locative marker for UP.

Note, however, that UP is not the only possible conceptual target of spatial orientation for expressions for ‘shoulder’; *see* SHOULDER > BEHIND. This grammaticalization appears to be an instance of a more general process whereby certain body parts, on account of their relative location, are used as structural templates to express deictic location; compare BACK; BELLY; BUTTOCKS; EYE; FACE; FLANK; HEAD; NECK.

SIDE > (1) BESIDE

Archaic Chinese *bian* ‘edge, side’, locative noun > Medieval Chinese *bian* ‘nearby, surrounding’ locative noun (Long et al. 2012). Korean *kyeth* ‘side’, noun > *-(uy)kyethey* ‘beside’, postposition (Rhee 2016c). Korean *yep* ‘side, loin, armpit’, *uy-yep-ey* [GEN-side-LOC] > *-(uy)-yep-ey* ‘beside’, postposition. Ex.

Korean (Rhee 2016c)

san-(uy) yep-ey hoswu-ka iss-ta.
 mountain-GEN side-LOC lake-NOM exist-DEC
 ‘There is a lake beside the mountain.’

English *by the side of* > *beside* (Hopper and Traugott 1993: 107). Basque *bazter* ‘riverside’, ‘edge’ > *bazterrean* (= *bazter* + *ean* (LOC)) ‘at the side of’ (Svorou 1994: 81). Basque *alde*, *ondo*, and *albo*, all meaning ‘side’, can function, when case marked, as postpositions meaning ‘beside’. Ex.

Basque (anonymous reader)

zure ondoan
zu- (r)e ondo- an
 you- GEN side- LOC
 ‘beside you’

Kono *fê* ‘side (part)’, relational noun > locative adverb, adposition. Ex.

Kono (Donald A. Lessau, p.c.)

- (a) *cénè fê mà-nyên- nyên!*
 house side on- write-write
 ‘Write (all) over the house wall!’

- (b) *Mbé tá- á yíí fě.*
 I:SG:TAM go-TAM water along
 'I am going along/beside the water.'

Zande *patise* 'the side of the body', noun > *pati, pa* 'beside', preposition (Canon and Gore [1931] 1952: 116, 118). Supyire *ṣkèrè* 'side' > 'beside', postposition (Carlson 1991: 205). Gimira *dad¹, šiš¹* 'side' > postposition *da¹dn³* ('side', case marker), *ši¹šam⁴* ('side', case marker) 'at the side of' (Breeze 1990: 38). Bulu *fefe(l)* 'side', noun > 'beside', 'at' (Hagen 1914: 241). Bulu *mfak* 'side', 'direction', 'way', noun > 'to', 'towards', 'beside', preposition (Hagen 1914: 262). Teso *e-siep* 'side', noun > *o-siep ka* (NEUT-side of) 'beside', local preposition (Hilders and Lawrance 1958: 4, 53). Bulgarian *strana* 'side' > *otstrani* 'from aside' (lit.: 'from side'), adverb. Ex.

Bulgarian

- (a) *Na severnata strana na kăštata njamaše prozorci.*
 on northern:DEF side of house:DEF had:not windows
 'There were no windows on the northern side of the house.'
- (b) *Decata se bjaxa nasăbrali okolo koleloto,*
 children:DEF REFL were gathered around bicycle:DEF
a starecăt gi nabljudavaše otstrani.
 and old:man:DEF them observed from:side
 'The children had gathered around the bicycle, and the old man was watching them from aside.'

Adyge *bɛʷə* 'side', nominal > *bɛʷə-rə-* 'beside the landmark', locative preverb (Arkadiev and Maisak 2018: 123). Aranda *itere* 'the side of', noun > *itere* 'along', 'beside of', adposition (Wilkins 1989: 314–15).

We are dealing with another instance of a more general process whereby relational nouns (including nouns for body parts) give rise to relational (typically spatial or temporal) grammatical markers; compare BOTTOM; PLACE; TOP.

SIDE > (2) LOCATIVE

Medieval Chinese locative noun *bian* 'edge, side' has been generalized to serve various locative functions, including 'on, before, inside, under, at, etc.' (Long et al. 2012), also used as a localizing suffix (Alain Peyraube, p.c.). Proto-Tibeto-Burman **ɣ-nam* 'side/rib' > Proto-Ao **na*, locative marker (Coupe 2018: 199). Lingala *epái* 'side', noun > *epái ya* (side of) 'at', preposition (van Everbroeck 1958: 135).

In some pidgin and creole languages, SIDE-terms appear to have given rise to general locative markers. French *côté* 'side', noun > Indian Ocean CF *kot* (Réunion CF: *kote* (*də*)) 'at the house/home of', 'to', 'towards', 'at the side of', 'against', 'near'. Ex.

Indian Ocean CF (Papen 1978: 452)

Mo reste kot Pol.
 1:SG live LOC Paul
 'I live near Paul's.'

English *side*, noun > Chinese PE *-sajd* 'at', 'to', 'on' (= French *chez*), locative suffix. Ex.

Chinese PE (Hall 1944: 97)

áeɣhaj-sajd ófis-sajd
 (Shanghai-side) (office-side)
 'at Shanghai' 'at the office'

Rather than static location, the target meaning of the pathway is that of direction in some languages, presumably induced by the context in which the item is used. For example, in the Tibeto-Burman language Mongsen Ao of northeast India, the relational noun *tāŋī* 'side' is grammaticalizing with human goals of movement as a postposition meaning 'in the direction of', using a locative or an allative case marker (Coupe 2007; 2016). Ex.

Mongsen Ao (Coupe 2007: 186; 2016)

a-mi? təmáŋ təŋ nə mə-wa-la.
 NRL-person all SIDE ALL NEG-go-NEG:PAST
 '[The baby] didn't go to any of the people.'

This is another instance of a more general process whereby relational nouns (including nouns for body parts) give rise to relational (typically spatial or temporal) grammatical markers; compare BOTTOM; PLACE; TOP.

See also SIDE > NEAR.

SIDE > (3) NEAR

Archaic Chinese *bian* 'edge, side, border', locative noun > *bian* 'near' (Long et al. 2012). Dullay *káro* (*káriló*, locative genitive) 'side', noun > *káriló* 'next to', postposition. Ex.

Dullay (Amborn et al. 1980: 102)

Lóŋo tálcacé káriló šéekáarí.
 cow goat:LOC next:to stands
 'The cow stands next to the goat.'

Bulu *mfôm* 'side', 'adjacent place', 'environment', noun > 'at', 'near', 'next to', preposition (Hagen 1914: 262). Kpelle *kwele* 'side', noun > 'at', 'near to', postposition (Westermann 1924: 12). Albanian *anë* 'side', 'edge', relational noun > *anës* 'at', locative preposition (Buchholz et al. 1993: 35). Tamil *pakkam* 'side', relational noun > *pakkam* 'near', locative postposition. Ex.

Tamil (T. Lehmann 1989: 122)

Anta viiṭ-ṭu pakkam oru aalamaram iru-kkīr-atu.
 that house (OBL) near a banyan:tree be-PRES-3:N:SG
 ‘There is a banyan tree near our house.’

Compare Hagège (1993: 214). We are dealing with another instance of a more general process whereby relational nouns (including nouns for body parts) give rise to relational (typically spatial or temporal) grammatical markers; compare BOTTOM; PLACE; TOP.

NEAR forms can also be derived from some body parts. In Finnish, for example, it appears to be derived from the noun ‘chest’. Ex.

Finnish (Harris and Campbell 1995: 71)

- (a) *lapse-n rinna-lla*
 child-GEN chest-on
 ‘on the child’s chest’
 (b) *lapse-n rinnalla*
 child-GEN POST
 ‘next to the child’

See also SIDE > LOCATIVE.

‘Similar, be’, see SIMILATIVE; SUITABLE

Simile, see SIMILATIVE

SIMILATIVE (‘like’, ‘in the manner of’) > (1) ACCORD (‘according to’)

Haspelmath and Buchholz (1998: 320–1) argue that there is a striking semantic difference between similative and accord clauses but that, nevertheless, “accord clauses generally are not distinct formally from similative clauses”. Following Treis (2017), we hypothesize that there is a grammaticalization pathway leading from the latter to the former.

The expression *kīma* of Old Akkadian of Mesopotamia was not only a similative morpheme but also had a range of other functions including the meaning ‘according to’ (Deutscher 2000: 38). The North Saami marker *nugo* introduces similative phrases, but as a conjunction also accord clauses (Ylikovski 2017).

In the Ethiopian language Kambaata, the similative enclitic =g is also used to introduce accord phrases and clauses (‘according to’). As such, it can be paraphrased as ‘as stated in/by, as laid down in, conforming to’, expressing accordance with information presented earlier or agreement with rules, traditions, etc. (Treis 2017: 104). Libido *k’aaʔla*, similative marker > ‘according to’, marker of accord phrases. Ex.

Libido (Crass 2017)

seerannⁱ k'aaʔla mayaaskoʔa maha-dayⁱ ʔutakaʔo.
 tradition.GLI SIMIL funeral:gift:ACC what:ACC-but give:2:PL:IMPFV
 'However, what do you give [us] as a funeral gift according to the tradition?'

Yemsa *màtó*, similitive word > *mātó*, marker of accord phrases ('according to') (Zaugg-Coretti 2017: 345). Ex.

Yemsa (Zaugg-Coretti 2017: 351)

Wòstè-nā mātó wòstè-nāa-sī mātó dàn-ò.
 work-3 SIMIL work-3-DEF:GEN SIMIL find-3:M:JUUS
 'Let him receive his reward according to the work he has done.' (lit.: 'Let him find like he worked.')

The present pathway exhibits a marked areal patterning in northeastern Africa but it is by no means restricted to Africa. Nevertheless, more information is needed to determine on the one hand the contextual and conceptual base and on the other hand the crosslinguistic significance of this pathway.

SIMILATIVE ('like', 'in the manner of') > (2) COMPLEMENTIZER

Similitive verbs meaning 'be like', 'be equal', 'resemble' provide a source for complementizers (Güldemann 2008). English *be like* serves as a non-verbatim quotative, e.g. *And I'm like: "Gimme a break, will you!"* (Romaine and Lange 1991).

In the Nigerian language Idoma, the verb *bē* 'resemble' has given rise to a complementizer after verbs of thinking, seeing, hearing, and knowing. Similarly, in the Ghanaian language Twi, the verb *sɛ* 'resemble', 'be like', 'be equal' appears to have provided the source for the complementizer *sɛ* (Lord 1993: 160).

Khwe *taá* (or *tá*) 'be like (that)', 'thus', adverb > complementizer of clauses having utterance or cognition verbs as matrix predicates. Ex.

Khwe (Treis 2000a: 16–17)

- (a) *Tá xām kx'úi.*
 thus lion speak
 'Thus speaks the lion.'
- (b) *tá /'úrù-na-han taá tí nʔan- ná-han.*⁸⁵
 2:M:SG forget-JUNC-PERF COMP 1:SG think-JUNC-PERF
 'I thought you had forgotten about it.'

The Berta language of Ethiopia and the Republic of Sudan has a morpheme *shámá* which serves not only as a manner deictic ('like') but also as a complement clause marker (Treis 2017: 131). In the Yemsa language of southern Ethiopia, the similitive morpheme is also used as a marker of complement

⁸⁵ A morpheme-final *n* symbolizes that the vowel preceding it is nasalized.

clauses with matrix verbs of saying, hearing, and cognition (Rapold and Zaug-Coretti 2009).

Tok Pisin PE *olsem* 'thus', adverb > complementizer. Ex.

Tok Pisin PE (Romaine 1988: 142)

- (a) *Elizabeth i tok olsem, "Yumi mas kisim ol samting pastaim."*
 (Elizabeth AGR spoke thus we must get PL thing first)
 'Elizabeth spoke thus, "We must get things first".'
- (b) *Na yupela i no save olsem em i matmat?*
 (and you(PL) AGR NEG know COMP PRON AGR cemetery)
 'And you (PL) did not know that it was a cemetery?'

The exact nature of this pathway is not entirely clear; from the data available it seems that the process typically leads from the similative via quotative to complementizer uses. *See also* SIMILATIVE > PURPOSE.

SIMILATIVE ('like', 'in the manner of') > (3) GLOTTONYM

The term GLOTTONYM stands for derivational morphemes used to derive language names from the names of the people speaking that language. The present pathway has been proposed by Treis and Vanhove (2017: 3), Darmon (2017: 362–3), and Crass (2017: 410–1).

In the Xamtanga language of Ethiopia, the suffix *-äñä* 'like X', presumably related to the similative and equative suffix *-ñä*, is extended to the plural of ethnonyms and/or names of countries to denote languages, e.g. *bilqa* 'Amharic people', *bilqa-(ä)ñä* 'Amharic language'; *ingliz* 'English people/England', *ingliz-äñä* 'English language' (Darmon 2017: 362). In a similar fashion, the similative marker *ʔiso* ('iso) of the Libido language of Ethiopia is added to the name of ethnic groups to form glottonyms, e.g. *libido* 'Libido (ethnic group)', *libititt ʔiso* 'Libido language' (Crass 2017: 410).

The Basque suffix *-(k)era* derives manner nouns from verbs, e.g. *ibil(i)* 'walk', *ibil(k)era* 'way of walking'. Added to toponyms, it denotes languages, e.g. *Italia* 'Italy', *itali-era* 'Italian language' (Darmon 2017: 362).

Similar examples can be found in a number of other languages where derivational morphemes whose functions include that of a similative ('like X', 'in the manner of X') are also used for glottonyms. For example, the German derivational suffix *-isch* has lexicalized similative uses, as in *Kind* 'child' vs *kind-isch* 'childish'; *Hof* 'court' vs *höf-isch* 'courtly'. And it is also used for glottonyms, e.g. *Portugiese* 'Portuguese (person)' vs *Portugies-isch* 'Portuguese language'. More research is needed to determine the conceptual nature and the crosslinguistic distribution of this pathway.

SIMILATIVE ('like', 'in the manner of') > (4) D-NECESSITY

In Bambara, the verb *kán* denotes 'be equal, be equivalent' when taking a subject referent referring to a plurality of individuals, but expresses obligation

when taking an infinitival complement, functioning as a modal auxiliary of obligation (Creissels 2017a). Ex.

Bambara (Creissels 2017: 81)

- (a) *Û ká kán.*
 3:PL POS *kán*
 'They are equal.'
- (b) *Nê ká kán kà mùn ké?*
 1:SG POS *kán* INF what do
 'What must I do?'

In the Ngbandi language of Central Africa, the verb *lénghì* means 'be equal', 'suffice', 'fit', 'deserve' when taking a comitative complement (*nà* 'with' + NP). But when followed by a nominalized verb introduced by the preposition *tí* 'for', one of the modal meanings arising in a negative form is prohibition ('must not'; Creissels 2017a: 83–4).

Creissels (2017a: 79) concludes that "verbs originally expressing similarity between two concrete entities may acquire uses in which they express non-epistemic modalities."

More data are needed to substantiate this pathway. *See also* SUITABLE > D-NECESSITY.

SIMILATIVE ('like', 'in the manner of') > (5) PURPOSE

Crass and Meyer (2008) propose the following multifunctionality pattern as one of the features characterizing the languages of the Ethiopian Linguistic Area: SIMILATIVE – COMPLEMENTIZER – PURPOSE, and we hypothesize that this multifunctionality is the result of a grammaticalization chain leading from similative to complementizers and purpose clause markers.

Treis (2017: 122–3) in fact finds such a multifunctionality in the following Cushitic languages of northeastern Africa (the relevant markers are added in parentheses): Alaaba (*-ga*), Burji (+ *yekk'ee*), Hadiyya (*-is-a*), Kambaata (=g (*g*)), Kemantney (*-ñä*), K'abeena (*-gga*), Libido (*-k'aa?la*), Oromo (*akka* +), Sidaama (=g*ede*), Tunni (*ín* +), and Xamtanga (*-ñä*). Treis finds such multifunctionality sets also in Ethiopian Semitic and Omotic languages. Ethiopian Semitic languages are: Amharic (*-ənd(ä)*), Argobba (*ama-*), Gə'əz (*kama* +), Gumer (*-xäma*), Harari (*-kut*), Inor (*-xä*), Muher (*-häma*), Wolane (*-kō*), and Zay (*-hum*). Finally, this multifunctionality pattern also includes the following North Omotic languages of Ethiopia: Baskeet (*-peen*), Gaamo (+ *mála*), Koorete (*-(ni-)ke*), Maale (+ *gudì*), Oyda (+ *-gaar(a)*), Wolaitta (*-daani*), and Yemsa (+ *màtó*).

Very likely, this wide distribution is the result of language contact, as argued by Crass and Meyer (2009) and Treis (2017). But there are also languages outside northeastern Africa where similative morphemes are used as purpose

clause markers, such as Mon of Thailand and Myanmar and North Saami of northern Norway and northern Finland (Treis 2017: 134). And the extinct Old Akkadian language of ancient Mesopotamia had a preposition or conjunction *kīma* whose functions also included those of a similative standard marker ('like', 'as', 'according to', 'instead of', 'in the manner of') and a purpose clause marker ('so that') (Deutscher 2000: 38; Treis 2017: 128).

See also SIMILATIVE > COMPLEMENTIZER.

SIMILATIVE ('like', 'in the manner of') > (6) QUOTATIVE

This pathway appears to generally result from the grammaticalization of a speech-introducing clause construction serving as a matrix clause and containing similative expressions such as '(be) like', 'like this' (Deutscher 2011). English *like*, comparative conjunction > *like*, non-verbatim quotative. Ex.

English (Fleischman 1999)

- (a) *My love is like a rose.*
- (b) *And I'm like: "Gimme a break, will you!"*
And I'm like OK, how am I gonna get her "chief complaint" out of her?

For a detailed analysis of this use in American English, see Romaine and Lange (1991).⁸⁶ French *genre* 'kind', 'type', 'sort', 'genre', noun > *genre*, non-verbatim quotative. Ex.

French (Fleischman 1999)

- (a) *des gens de ce genre*
'that kind/sort of people'
- (b) *Quand je lui ai dit que t'étais pas sûr de venir elle était vraiment pas contente, genre si vous jouez pas je chante pas.*
'When I told her you weren't sure you were coming [to her party] she was really upset, **like** if you won't [be there to] play [the piano], I won't sing.'

Finnish *niinku* 'like' > *niinku*, non-verbatim quotative. Ex.

Finnish (Fleischman 1999)

- Ja sit mä olin **niinku** että herrajjumala et voi olla totta.*
'And then I was **like** oh my God, I can't believe it.'

Swedish *liksom* 'like' (< 'like' + 'as') > *liksom*, non-verbatim quotative. Ex.

⁸⁶ For reasons not to call English *like* a quotative marker, see Deutscher (2011: 645–6).

Swedish (Fleischman 1999)

Jag tittade på honom och liksom inte en chans!

'I looked at him and **like** no way!'

German *so* 'thus', 'so', 'in this way', adverb of manner > *so*, non-verbatim quotative. Ex.

Colloquial German (Fleischman 1999)

Ich sagte ihm, dass er gehen muss. Und er

(I told him that he go must and he

so, ich werde es mir überlegen.

thus I will it me think:about)

'I told him he had to go. And he's **like** I'll think about it.'

Longzhou dialect of Zhuang *pin*³¹ *nai*²⁴ 'be so, be like this' > *pin*³¹ *nai*²⁴, sentence-final quotative particle (Long et al. 2012).

Khwe *taá* 'be like (that)', 'thus', verb or particle > quotative marker. Ex.

Khwe (Treis 2000a: 15)

mà-ká tcá kúùn-wà- gòè taá tí ≠'ó-a-ra- han.

Q- LOC 2:M:SG go-I- FUT like:that 1:SG ask-II- PERF

'I asked you where you are going.'

See Romaine and Lange (1991), Güldemann (2008), Deutscher (2011) for more details on this pathway. Compare SAY > QUOTATIVE.

SIMILATIVE ('like', 'in the manner of') > (7) TEMPORAL

Evidence from northeastern African languages suggests that, quite commonly, the use of simulative expressions is extended to also mark temporal clauses of immediate anteriority ('as soon as') (Treis 2017: 91, 133). Treis found that at least eighteen Ethiopian languages use their simulative markers also for 'as soon as'. For example, in the Ethiopian Cushitic language Kambaata, the simulative enclitic morpheme =*g* also introduces temporal clauses expressing immediate anteriority ('as soon as') (Treis 2017: 108).

In some languages of the Horn of Africa, simulative markers express not only 'as soon as' but other temporal relations in addition or instead, most of all temporal overlap ('when').

This clustering of SIMILATIVE–TEMPORAL polysemy in northeastern Africa is presumably the result of contact-induced grammaticalization (Heine and Kuteva 2005; see also the contributions in Treis and Vanhove 2017), but the polysemy is not restricted to this particular region. For example, the morpheme *kî* of the extinct Akkadian language of Mesopotamia was not only a preposition that included simulative uses ('like, in the manner of, as', etc.) but also a conjunction ('when, as soon as, after, if') which included temporal functions (Schulze 2017: 48, fn. 15); note that prepositions quite commonly

grammaticalize into conjunctions. Furthermore, the Old Akkadian preposition or conjunction *kīma* was not only used as a similitive morpheme ('like', 'as') but also had a range of other functions, including that of a temporal clause marker ('when', 'as soon as') (Deutscher 2000: 38).

SINCE (TEMPORAL) > CAUSE

Archaic Chinese *you* 'from, after', temporal preposition > *you*, causal conjunction (Long et al. 2012). Latin *posteaquam* 'after', 'ever since' > French *puisque* 'since', causal subordinator (Traugott and König 1991: 195). English *since*, temporal adposition, subordinator > causal subordinator. Ex.

English (Traugott and König 1991: 194)

- (a) *I have done quite a bit of writing since we last met.* (Temporal)
 (b) *Since you are not coming with me, I will have to go alone.* (Causal)

Basque *gero* is an adverb and postposition meaning 'after', 'later'; but when following instrumental/adverbial -*z*, it means 'since' (causal). Ex.

Basque (anonymous reader)

- (a) *Ikusi ta gero, etxera joan naiz.*
Ikusi ta gero etxe- ra joan n- -aiz.
 see[PFV] and after house- ALL go[PFV] 1:SG:ABS- AUX
 'After I saw it, I went home.'
- (b) *Ikusi dudanez gero, badakit nolakoa den.*
Ikusi d-u-da-n-(e)z gero,
 see[PFV] PRES-AUX-1:SG:ERG-SUB-INSTR after
ba-d-aki-t nolako-a d-e-n.
 EMPTY-PRES-know-1:SG:ERG what:kind:of-DET PRES-AUX-SUB
 'Since I've seen it, I know what it's like.'

Aranda -*iperre* 'after', temporal marker > -*iperre*, causal clause marker (Wilkins 1989: 206, 210). Ex.

Aranda (Wilkins 1989: 206, 210)

- (a) *nwerne lhe-ke... dinner-iperre*
 'After dinner, we went ...'
- (b) *Ngkwerne ultake-lhe-ke re arne-nge tnye-ke-l-iperre*
 'Her leg was broken from her falling out of a tree.' (i.e. because she fell out of a tree)

For a discussion of this pathway, see Deutscher (2011). This appears to be an instance of a widespread process whereby spatial and temporal markers are grammaticalized in specific contexts to markers of "logical" grammatical relations, such as adversative, causal, concern, concessive, and conditional relations; see, for example, ALLATIVE; LOCATIVE; TEMPORAL; UP.

SIT ('to sit', 'to stay') > (1) COPULA

Latin *sēdēre* 'sit', verb > Spanish *ser* 'be (*de natura*)' (Corominas 1954b: 194–5). Imonda *ale* 'sit', 'remain', 'stay' > copula. Ex.

Imonda (W. Seiler 1985: 158)

Louise kuii-l ale-f.
 Louise long-NOMIN sit- PRES
 'Louise is tall.'

Sango *duṭi* 'sit', verb > copula expressing description and location. Ex.

Sango (Thornell 1997: 122)

Tōngana mo duṭi na mbēni zò. ...
 when 2:SG sit with INDEF human
 'When you are together with somebody ...'

Not infrequently, verbs meaning 'sit' have some copula-like uses in certain contexts. For example, the verb *kumpa-* 'sit' of the extinct Jiwarli language of western Australia includes such meanings as 'to camp', 'to stay', 'to live', and 'to be' (Austin 1998: 21). This pathway appears to be primarily an instance of desemanticization, but more information is needed on the conceptual nature of the process.

SIT ('to sit', 'to stay') > (2) DURATIVE

In the Wintu language of Northern California, the verb *bOh* 'sit' has given rise to a durative marker ('keep on doing, always, sometimes, remain, still'; Mithun 2018: 312).

Hoocak *nqk* 'be sitting', verb > *=nqk* continuative aspect marker ('do in a sitting position'), auxiliary (Helmbrecht in prep.). Mandan *hąk* 'stand', verb > continuative aspect auxiliary (Helmbrecht in prep.). Biloxi *nqki* 'sit', verb > continuative aspect marker in verbal clauses with a complex predicate (Helmbrecht in prep.).

In the Nyelâyu language of New Caledonia, the verb *taa* 'sit' also expresses a continuative aspect (Ozanne-Rivierre 1988: 202; Moyse-Faurie 2018: 288). Yolngu *nhina-* 'sit', stative verb > marker of durative aspect when used in conjunction with a main verb (Austin 1998: 32). Djinba *nyina-* 'sit', verb > auxiliary with durative function (Waters 1989: 131). Djinang *nyini-* 'sit', verb > auxiliary used for an event that is in a durative state (Waters 1989: 131–4). Nobiin *àagà, àagìr* 'sit', 'live', 'stay', verb > *àa(g)-*, durative marker (verbal prefix). Ex.

Nobiin (Werner 1987: 152)

ày àa(g)-kàbìr.
 'I am eating.'

This pathway is part of a more general process whereby postural verbs ('sit', 'stand', 'lie') are grammaticalized to durative and other aspectual markers (see, e.g., Bybee et al. 1994: 127); compare LIE; STAND, and *see also* SIT > HABITUAL. Kuteva (1999a: 210) proposes the following general four-stage grammaticalization development of the bodily posture verbs SIT, STAND, and LIE into continuous (progressive, durative) markers:

human bodily posture verbs > canonical encoding of spatial position of objects > continuous (with inanimate subjects) > continuous (with both inanimate and animate subjects).

SIT ('to sit', 'to stay') > (3) HABITUAL

SIT-verbs may give rise to progressive markers (*see* SIT > PROGRESSIVE), which again may further develop into habitual markers. Uygur *oltur* 'sit', verb > *oltur*, habitual auxiliary (Long et al. 2012). Yankunyjtjara *nyina-* 'to sit' > auxiliary serving to code a "customary" or generic situation. Ex.

Yankunyjtjara (Goddard 1985: 207; Austin 1998: 32)

Wati- ngku karli at- ra nyina- nyi.
man- ERG boomerang:ACC chop- serial sit- PRES
'The man makes boomerangs.'

Dutch *zitten* 'to sit', verb > *zitten te* + INF 'to do habitually', habitual aspect auxiliary (Stolz 1992b: 292). Bulgarian *sedja* 'sit' + *i* 'and' + main verb > habitual marker. Ex.

Bulgarian (Kuteva 1999a: 195)

Sedi i čisti po čjal den v kăšti
sit:3:SG:PRES and clean:3:SG:PRES along whole day in house
'She cleans the house all day long.' / 'She habitually cleans the house all day long.'

Kanakuru *duwo* 'remain', 'sit', verb > habitual auxiliary. Ex.

Kanakuru (Newman and Schuh 1974: 35)

- (a) *Ā dūwō- tó.*
(3:SG sit- 3:F:SG)
'She remained.' / 'She sat.'
- (b) (*ā*) *dūwō- tó shīr-mái.*
((3:SG) sit- 3:F:SG steal)
'She habitually steals.'

The semantics of the grammaticalized expression may include durative functions in specific contexts. For example, in the Lewo language of Vanuatu, the verb *to* 'sit' indicates temporary duration when combined with the durative aspect (Early 2000: 100; Moysé-Faurie 2018: 288).

In the Shona language of Zimbabwe, the verb *-gara* 'sit', 'live', 'stay' is also used as a durative and habitual auxiliary. Ex.

Shona (Hannan 1987: 184)

- (a) *U-no-gara ku-pi?*
(2:SG-PRES-sit LOC-INTER)
'Where do you live?'
(b) *ndi- no-gara ndi- chi-dya ne-nguva dzino.*
1:SG-PRES-sit 1:SG-PM-eat COM-time this
'I usually eat at this time.'

Sudan Arabic *ga:ʔid* 'sit', verb > Nubi CA *gí*, progressive, habitual particle (Boretzky 1988: 60–1).

This pathway is part of a more general process whereby postural verbs ('sit', 'stand', 'lie') are grammaticalized to habitual and other aspectual markers; compare LIE; STAND; *see also* SIT > DURATIVE, SIT > PROGRESSIVE.

SIT ('to sit', 'to stay') > (4) PROGRESSIVE

Uygur *oltur* 'sit', verb > *oltur*, continuous auxiliary (Long et al. 2012). The verb *kumpa-* 'sit' of Jiwari and other Mantharta languages serves as a progressive auxiliary in certain uses (Austin 1998). Diola Fogany *-lakɔ* 'sit', action verb > past progressive auxiliary. Ex.

Diola Fogany (Blansitt 1975: 26–7)

i-lakɔ i-ri.
1:SG-sit 1:SG-eat
'I was eating.'

or

i-lakɔ fu-ri.
1:SG-sit INF-eat
'I was eating.'

Mamvu *ɬaju* 'sit', 'live', 'stay', verb > past progressive aspect marker (Heine and Reh 1984: 126). Ex.

Mamvu (Vorbichler 1971: 248–50)

ʒbɛ mu-ɬaju.
dance 1:SG-sit
'I was dancing.'

In the Hinuq language of southern Dagestan, progressive converbs are formed with the imperfective converb suffix *-o* and the verb *-iči-* 'be, stand, sit' marked with the narrative converb suffix (Forker 2013: 241–2).

This pathway is part of a more general process whereby postural verbs ('sit', 'stand', 'lie') are grammaticalized to continuous and other aspectual markers. Compare LIE; STAND; *see also* SIT > DURATIVE, SIT > PROGRESSIVE.

SKY > UP

Archaic Chinese *tian* ‘sky’, noun > *tian* ‘top, end’ (Long et al. 2012). Teso *a-kuju* ‘sky’, ‘heaven’, noun > *kuju* ‘above’, ‘over’, ‘up’, adverb (Kitching 1915: 74). Bulu *yôp* ‘sky’, ‘firmament’, noun > ‘above, up, on’, adverb and preposition (Hagen 1914: 313). Kikuyu *igũrũ* ‘sky’, ‘heaven’, noun > (a) ‘on top’, (b) *igũrũ rĩa* (lit.: ‘sky of’) > ‘above’, preposition. Ex.

Kikuyu (Barlow 1960: 202)

Nyonyi i-thi- aga igũrũ rĩa mĩũ.
 (c10:bird c10-go- DUR sky of c4:tree)
 ‘The birds fly above the trees.’

Lingala *likoló* ‘sky’, noun > *o likoló lya/za* (LOC sky GEN) ‘over’, ‘on’, preposition. Ex.

Lingala (van Everbroeck 1958: 141)

ótíyamasáni o likoló lya mésa!
 ‘Put the crockery on the table!’

Moré *nyĩngri* ‘firmament, sky’, noun > ‘above’, ‘up’, adverb. Ex.

Moré (Alexandre 1953b: 292)

- (a) *ädes bë nyĩngri*
 ‘The stars are in the firmament.’
 (b) *Gyěs nyĩngri!*
 ‘Look up!’

In some regions (e.g. in much of the southern half of Africa), this constitutes the primary source for UP markers. Thus, the Proto-Bantu noun **-gudu* or **-judu* ‘sky’, ‘top’ has given rise to many superessive markers (‘above’, ‘up’) in Bantu languages in the form of adverbs, prepositions, or affixes (see Güldemann 1999b: 53–5 for details).

This is an instance of a process whereby a noun, on account of some salient semantic property, gives rise to a grammatical marker highlighting that property (Heine 2011c); *see*, for example, BACK; EARTH; HOME.

SO > DISCOURSE MARKER

English *so*, degree adverb modifier > *so*, discourse marker having text structuring, self-supporting, as well as a range of other functions (Schiffrin 1987: 191–227; Bolden 2009). Ex.

English (Schiffrin 1987: 193)

- (a) *He was so interesting.*
 (b) *A name is a name. So they really don't know.*

German *so*, degree adverb modifier > *so*, discourse marker serving the organization of texts. Ex.

German (own data)

- (a) *Deine Mandelplätzchen schmecken so gut!*
 your almond:cookies taste so good
 ‘Your almond cookies taste so good!’
- (b) *So, nun müssen wir nach Hause.*
 DM now must we to home
 ‘Alright, we must go home now.’

Hungarian *így* ‘this way, so’ (can receive stress) > *így* ‘so’ (unstressed), discourse marker (Dér and Markó 2010). Ex.⁸⁷

Hungarian (Dér and Markó 2010)

De most már így azt tanítják, amivel foglalkoznak.
 ‘But now, **so**, they teach what they are involved in anyway.’

Conceivably, this is a pathway that is restricted to some European languages. More examples from languages outside Europe are urgently needed. The pathway cannot be described exhaustively in terms of grammaticalization. As argued in Heine et al. (2013; 2017), it also involves cooptation, a discourse strategy whereby a unit of sentence grammar is deployed for specific discourse purposes such as expressing functions of text organization, attitudes of the speaker, and/or speaker–hearer interaction. Whereas grammaticalization typically leads to semantic and morphosyntactic integration, cooptation has the opposite effect, that is, the unit concerned is semantically and morphosyntactically unattached, frequently also prosodically marked off. Thus, unlike most of the other data discussed in this book, the evolution of discourse markers, as well as that of interjections, is more complex, being the result of cooptation followed by grammaticalization (Heine 2013).

See also LOOK > DISCOURSE MARKER; NOW > DISCOURSE MARKER; RIGHT > DISCOURSE MARKER; WELL > DISCOURSE MARKER; WHAT > DISCOURSE MARKER.

SONG > CLASSIFIER

Kilivila *vosi* ‘song’, noun > classificatory particle for song, parts of a song (Senft 1996: 175, 352). Hmong *zaj* ‘song’, noun > classifier for sayings, speeches, and songs (Bisang 1999: 131, 167, 173). Concerning the rise and development of classifiers in Chinese, see Peyraube (1998).

This grammaticalization appears to be part of a more general process whereby certain nouns, on account of some specific semantic characteristic, are recruited as structural templates for a folk taxonomic classifica-

⁸⁷ No glosses are provided by the authors.

tion of nominal concepts. *See also* BRANCH; CHILD; MAN; PIECE; TREE; WOMAN. More research is needed on the genetic and areal distribution of this process.

‘Source’, *see* ABLATIVE

‘Speak, to’, *see* SAY

‘Spirit’, *see* SOUL

SOUL (‘soul, spirit’) > REFLEXIVE

This pathway has been documented most of all in Semitic languages (especially Rubin 2005: 19). In a number of Arabic varieties there are reflexive markers to be traced back to a root for ‘soul’, which is attested in Classical Arabic as *nafs*-. These include languages such as the following: Iraqi, Syrian, and Egyptian Arabic *nafs*-, and Gə‘əz *-nafs*-, Syriac, Biblical Hebrew, and Targumic Aramaic *napš*-, Western Neo-Aramaic *nəfs*-, Northeastern Neo-Aramaic (Arbel) *noš*-, and Tigre *nos*-, Tigrinya *näbs*, Modern South Arabian (Harsūsi) *(he)nōf*- (Rubin 2005: 19).

Furthermore, Schladt (2000: 120–4) mentions that the Tibeto-Burman language Lahu and the Bantu language Chimwini of southern Somalia have reflexive forms that appear to be etymologically related to nouns for ‘spirit’ and ‘soul, spirit’, respectively. It seems that the present pathway is rarely found crosslinguistically, and that some of the forms listed are, or are also used as intensifiers (‘emphatic reflexives’).

See also BODY; HEAD; INTENSIFIER.

STAND > (1) COPULA

Latin *stare* ‘stand’, verb > Spanish, Portuguese *estar*, ‘be’, copular auxiliary (Corominas 1954a: 420; Lehmann 1982: 27). Khwe *tiin* ‘stand’, ‘be present’ > *té* ‘be’ (Köhler 1981a: 530). Imonda *lōh* ‘stand’, verb stem > copula *-lōh* (‘verb root’). Ex.

Imonda (Seiler 1985: 107, 158)

- | | | | | | |
|-----|-------------|--------------|--------------|-------------|-----------|
| (a) | <i>agō-</i> | <i>ianèi</i> | <i>sabla</i> | <i>ed-</i> | <i>ia</i> |
| | women- | NPL | two | PX- | LOC |
| | <i>ekuk</i> | <i>lōh-</i> | <i>ual-</i> | <i>fna.</i> | |
| | distance | stand- | DU- | PROG | |

‘The two women were standing there in the distance.’

- (b) *Pilin ed-ia fa-hōdō-lōh-f.*
 plate PX-LOC CLASS-put:up-be-PRES
 ‘The plate is up there.’

This is an instance of a more general process whereby postural verbs serve to develop copular markers; compare LIE; SIT.

STAND > (2) DURATIVE

Hoocak *jee* ‘be standing’, verb > =*jee* continuative aspect marker (‘do in a standing position’), auxiliary (Helmbrecht in prep.). Mandan *hək* ‘stand’ > continuative auxiliary (Helmbrecht in prep.). Biloxi *ne* ‘stand’, verb > continuative aspect marker in verbal clauses with a complex predicate (Helmbrecht in prep.).

Yolngu *dhärra-* ‘stand’, stative verb > marker of durative aspect when used in conjunction with a main verb (Austin 1998: 32). Djinang *djirri-* ‘stand’, verb > auxiliary marking an event that is a durative state (Waters 1989: 131–4). Bulgarian *stoja* ‘to stand’, verb > *stoja* + *i* ‘and’ + main verb > continuous marker. Ex.

Bulgarian (Kuteva 1999a: 194)

Stoi *i* *se* *ogležda* *v* *ogledaloto!*
stand:3:SG:PRES and REFL look:at:oneself:3:SG:PRES in mirror:DEF
‘She’s been looking at herself in the mirror all the time!’

Latin *stare* ‘stand’, verb > Spanish *estar*, durative auxiliary. Ex.

Spanish (Corominas 1954a: 420)

Està *pasando*.
be:3:SG pass:GER
‘He is passing.’

Khwe *té* or *tiin* ‘stand’, ‘be present’, verb > *tè* present tense/continuous marker, especially used to denote an action performed in a standing position (cf. Köhler 1962: 545). Ex.

Khwe (Bernd Heine, field notes)

Tí *mùùn-* *à-* *tè*.
(1:SG see I- PRES)
‘I see (while standing).’

Imonda *lōh* ‘stand’, ‘be’ > durative marker. Ex.

Imonda (Seiler 1985: 105)

Po *feha-lōh-ō-n-b*.
water fall- DUR-LNK-PAST-DUR
‘It was raining for a long time.’

Tariana posture verb ‘stand’ > durative marker (Aikhenvald 1997). Ex.

Tariana (Aikhenvald 1997: 7)

tuiri-kere *na-hwa* *nema*.
bird-island 3:PL-stay 3:PL:stand
‘They stayed at Bird Island for a long time.’

The lexical verb *tur-* ‘to stand up, to stand’ of Turkic languages may express a sequence of two phases where the first signals ‘to get into the state of standing’ and the second ‘to dwell in this state’. Examples provided by Johanson and Csátó (2018: 156) include Tatar *yaz-a tur-* ‘to keep writing’, Kumyk *oxu-p tur-* ‘to read repeatedly, habitually’, Karachay *tig-ib tur-* ‘to sew repeatedly, habitually’, Karachay-Balkar *yiber-ip tur-* ‘to send repeatedly’, Khakas *kil tur-* ‘to come repeatedly’, *surï-p al tur-* ‘to ask each time’, Uyghur *bol-up tur-* ‘to occur again and again’, and Chuvash *pär-zä tïr-* ‘to throw/shoot at intervals’. A possible bridging stage in the transition from lexical to grammatical meaning can be seen in expressions such as Old Uyghur *küzät-ip tur-* ‘to watch (constantly)’, which can also be understood in its lexical meaning ‘to stand watching’.

Durative markers may develop further into habitual markers; for example, Imonda *lôh* ‘stand’, ‘be’, verb > habitual aspect marker. Ex.

Imonda (Seiler 1985: 105)

ed-ia ka nòn li-lôh-f.

PX-LOC I sleep lie-HAB-PRES

‘I (habitually) sleep over there.’

This pathway is part of a more general process whereby postural verbs (‘sit’, ‘stand’, ‘lie’) are grammaticalized to durative and other aspectual markers. Compare LIE; SIT; *see also* SIT > HABITUAL. Kuteva (1999a: 210) proposes the following four-stage grammaticalization development of the bodily posture verbs SIT, STAND, and LIE into continuous (progressive, durative) markers:

human bodily posture verbs > canonical encoding of spatial position of objects > continuous (with inanimate subjects) > continuous (with both inanimate and animate subjects).

STAND > (3) PROGRESSIVE

Dutch *staan* ‘stand’, verb > *staan te* + INF ‘to be doing’, progressive aspect auxiliary (Stolz 1992b: 292). Latin *stare* ‘to stand’, verb > Italian *stare* (*a fare*), (intensive) progressive (Devoto and Oli 1971: 2347). Ex.

Italian (Silvia Luraghi, p.c.)

Che cosa stai leggendo?

(which thing stand:2:SG reading)

‘What are you reading?’

Ngambay-Moundou *ár* ‘stand’, verb > progressive auxiliary. Ex.

Ngambay-Moundou (Heine and Reh 1984: 126)

m-ár m-úsā dā.

1:SG-stand 1:SG-eat meat

‘I am eating meat.’

or

m-ár mbā k-ùsā dā.
 1:sg-stand for nomin-eat meat
 ‘I am eating meat.’

Tatar *tor-* ‘stand’ (preceded by a gerund) > progressive marker (Blansitt 1975: 28). The Diegueño verb for ‘stand’ has given rise to a progressive auxiliary (Blansitt 1975: 26). Ex.

Diegueño (Blansitt 1975: 26)

?a.yp taʔyu.w.
 I:talk I’m:standing
 ‘I’m talking.’

Furthermore, in the G/ui language of Botswana, *céé/cĩĩ* ‘stand’ is a postural verb that appears to have given rise to an imperfective marker (Nakagawa 2016: 132).

For more discussion and examples of this pathway from Semitic and other languages, see Rubin (2005: 129–52). Postural verbs most commonly give rise to grammatical categories for durative and progressive aspects, which again may grammaticalize further into habitual markers.

The situation is different, however, in the Wintu language of Northern California, where the postural verb *suk* ‘stand’ developed into a perfective marker, while another postural verb, *bEy* ‘lie’ became an imperfective marker (Mithun 2018: 313).

Crosslinguistically, postural verbs provide a common source for various kinds of verbal aspect markers. See SIT > PROGRESSIVE; PROGRESSIVE > IMPERFECTIVE; compare LIE; SIT.

‘Start, to’, see BEGIN

‘Stay, to’, see LIVE

‘Stomach’, see BELLY

STOP > PROHIBITIVE

Early Modern Chinese *xiu* ‘stop’, verb > *xiu*, prohibitive adverb (Long et al. 2012). Korean *mal-* ‘stop, cease’, verb > *-cimal-*, ‘don’t’, prohibitive mood auxiliary (Rhee 2003b; 2016c; Seo 2009). Welsh *peidio* ‘cease’, ‘stop’ > prohibitive auxiliary. Ex.

Welsh (Wiliam 1960: 78)

Paid á mynd!
 (stop:IMP:2:SG and go:VN)
 ‘Don’t go!’

Kru languages (Marchese 1986) ‘stop’, verb > negative imperative/optative marker. Ex.

Bassa (Marchese 1986: 191)

bɔ kùà nyu-ε
stop work do-NOMIN
‘Don’t work.’

Klao (Marchese 1986: 191)

bɔ dɛ di-di-dɛ.
stop thing eat-eat-NOMIN
‘Don’t eat anything.’

Tchien Krahn (Marchese 1986: 191)

ɔ bɔ dbū tē-ē.
he stop rope buy-NOMIN
‘He shouldn’t buy a rope.’

Sapo (Marchese 1986: 191)

- (a) *ɔ bɔ kò dī-ē.*
he stop rice eat-NOMIN
‘He stopped eating rice.’
(b) *b- ɔ bʔ kò dī-ē.*
that-he stop rice eat-NOMIN
‘He mustn’t eat rice.’

Wobé (Marchese 1986: 192)

- (a) *ɔ bʔ blè-à.*
he stop sing-NOMIN
‘He stopped singing.’
(b) *ē bʔ á blāā*
you NEG us hit-NOMIN
‘Don’t hit us.’

Teso *ai-nyekin* (INF-stop) ‘stop’, verb > prohibitive auxiliary. Ex.

Teso (Hilders and Lawrance 1956: 30)

Ki-nyek a- losit!
(2:SG-stop INF-go)
‘Do not go!’

Seychelles CF *aret* ‘stop’, verb > negative imperative.⁸⁸ Ex.

Seychelles CF (Corne 1977: 184)

Aret vol sitrô!
(stop steal lime)
‘Stop stealing the limes!’

⁸⁸ This Seychelles CF example appears to be a weakly grammaticalized instance of the process since the lexical meaning (‘stop’) is still present.

This is an instance of a process whereby a verb, on account of some salient semantic property, gives rise to a grammatical marker highlighting that property. *See also* COME FROM; COME TO; CROSS; EXCEED; FALL; PASS; RESEMBLE.

SUFFER > PASSIVE

Vietnamese *bi* ‘suffer’, verb > passive marker (Haspelmath 1990: 41). Korean *tangha-* ‘suffer, experience’, verb > *-tangha-* passive derivational suffix (Rhee and Koo 2014; Rhee 2016c; see also Haspelmath 1990: 41). Warring States period Chinese *bei* ‘to receive’, ‘to suffer’, ‘to be affected’⁸⁹ > Early Medieval Chinese (second–sixth century AD) *bei*, passive marker. Ex.

Early Medieval Chinese (Shi shuo xin yu: Fang zheng; quoted from Peyraube 1996: 176)

Liangzi bei Su Jun hai.
Liangzi PASS Su Jun kill
‘Liangzi was killed by Su Jun.’

More research is needed on the exact nature and the genetic and areal distribution of this process. As Wiemer (2011: 537) observes, this pathway is dominant in Southeast Asia (see also Chappell and Peyraube 2011). This appears to be an instance of a more general process whereby constructions involving inactive verbs are grammaticalized to passive constructions; *see also* EAT; FALL; GET; SEE.

‘Sufficient’, *see* SUITABLE

SUITABLE (‘to be sufficient, enough’, ‘to be fitting’, ‘to be suitable’) > (1) D-NECESSITY (Obligation)

Archaic Chinese *yi* ‘suitable, fitting’, adjective > Medieval Chinese *yi*, auxiliary for deontic modality (Long et al. 2012). The applicative verb form *tshwanela* of the Tswana language of Botswana means ‘suit’, ‘fit’ when taking an object noun phrase. But in the perfect it may also take an infinitival complement and then means ‘must’ (Creissels 2017a: 82). Ex.

Tswana (Creissels 2017a: 82)

Ke tshwanetse go bereka.
kì- ts^hwánétsí χò- bérékà
1:SG tswanela:PERF INF- work
‘I must work.’

Luo *winjore* ‘it is convenient’, ‘fitting’ > *o-winjore* ‘should’, ‘ought’, deontic marker of necessity; *nego* ‘fit into’ > *o-nego* ‘ought’, deontic marker of

⁸⁹ Originally, *bei* was a noun meaning ‘blanket’. It later turned into a verb meaning ‘cover’, ‘wear’ before acquiring the meanings ‘receive’, ‘suffer’, ‘be affected’ (Peyraube 1996: 176).

obligation (Bavin 1995: 119). Acholi *myero* 'need'; 'be suitable', 'fit', 'becoming' > *omyero* (third person past form) 'should', 'have to', marker of deontic modality of necessity and obligation, also marker of epistemic modality (Bavin 1995: 117, 123–5). Ik *itámáan-ón* 'be enough', state verb > 'must', 'have to', marker of deontic modality of obligation. Ex.

Ik (Bernd Heine, own data)

- (a) *itámáan-ón*.
be:enough-INF
'It is enough.'
- (b) *Itámáaná en- íá níci wik*.
be:enough see-1:SG my children
'I have to see my children.'

Evidence for this grammaticalization comes exclusively from African languages; conceivably, therefore, we are dealing with an areal phenomenon. More crosslinguistic data are needed to establish this grammaticalization as a more general process.

See also SUITABLE > PI-POSSIBILITY; SIMILATIVE > D-NECESSITY.

SUITABLE ('to be sufficient, enough', 'to be fitting', 'to be suitable') > (2) PI-POSSIBILITY (Ability)

Archaic Chinese *ke* 'suitable', adjective > Archaic Chinese *keyi*, permissive auxiliary, but in Chinese of Pre-Qin Period and of Han Dynasty, *keyi* sometimes also expressed ability (Long et al. 2012). Classical Chinese *zu* 'suffice', 'be sufficient', verb > auxiliary verb meaning (a) 'be worthy of', (b) 'can', 'be able' (Peyraube 1999: 36ff.). Ex.

Warring States period Chinese (Peyraube 1999: 37)

<i>Gu</i>	<i>tui</i>	<i>en</i>	<i>zu</i>	<i>yi</i>	<i>bao</i>	<i>si</i>	<i>hai</i> .
therefore	carry:out	kindness	able:to	with	protect	four	sea

'Therefore, (if one) carries out (his) kindness, (he) will be able, with (it), to protect the (people of the) world.'⁹⁰

Awtuw *yirin* 'enough' > marker of ability, used in conjunction with the future tense. Ex.

Awtuw (Feldman 1986: 57)

<i>Topor</i>	<i>yæn</i>	<i>yirin</i>	<i>yekə</i>	<i>taw</i>	<i>w-</i>	<i>uwk-</i>	<i>re</i> .
that	child	enough	PART	tree	IMPFV-	fell-	FUT

'That child can fell a tree.'

In the Ngbandi language of Central Africa, the verb *léngbi* means 'be equal', 'suffice', 'fit', 'deserve' when taking a comitative complement (*nà* 'with' +

⁹⁰ Presumably, the intended meaning is 'one's' rather than 'his', and 'one' rather than 'he'.

NP). But when followed by a nominalized verb introduced by the preposition *tí* ‘for’, one of the modal meanings appears to be PI-POSSIBILITY (Creissels 2017a: 83–4).

Sango *língbì* ‘suffice’, ‘fit’, verb > *língbì* ‘can’, marker of ability (Thornell 1997: 143). Lingala *-koka* ‘fit’, verb > *-koka*, auxiliary expressing ability. Ex.

Lingala (Mufwene and Bokamba 1979: 244–7)

- (a) *Kázi a -kok-í na lisano óyo.*
 (Kazi he-fit-NPERF COM game this)
 ‘Kazi should be good for this game.’
- (b) *Kázi a-kok-i ko- beta ndembó.*
 Kazi he-fit -NPERF INF- beat soccer:ball
 ‘Kazi can play soccer.’

It is not always clear whether the data presented here may not in some cases involve C-POSSIBILITY rather than PI-POSSIBILITY. More research is needed on the conceptual and contextual frame of this grammaticalization. This is an instance of a process whereby a verb, on account of some salient semantic property, gives rise to a grammatical marker highlighting that property; *see also* COME FROM; COME TO; CROSS; EXCEED; FALL; PASS; RESEMBLE; STOP. Compare also SUITABLE > D-NECESSITY.

‘Surpass, to’, *see* EXCEED; PASS

SURROUND > AROUND (SPATIAL)

Archaic Chinese *zhou* ‘surround’ + *hui* ‘surround’ > Early Modern Chinese *zhouhui* ‘surrounding, nearby’, locative (Long et al. 2012). Ewe *foxlá* ‘surround’, verb > *foxlá* ‘round about’, ‘round and round’ (Lord 1989: 367). (French *entourer* >) Haitian CF *âturé* ‘surround’, verb > ‘around’ (Sylvain 1936: 133). Ex.

Haitian CF

- Gě pyébwa âturé kay-la.*
 (EXIST tree around house-DEF)
 ‘There are trees around the house.’

For more examples from pidgins and creoles, see Arends et al. (1995) and Muysken and Veenstra (1995: 290ff.). This is an instance of a process whereby a verb, on account of some salient semantic property, gives rise to a grammatical marker highlighting that property; *see also* COME FROM; COME TO; CROSS; EXCEED; FALL; PASS; RESEMBLE; STOP.

T

TAKE (‘to take’, ‘to seize’, ‘to keep’, ‘to hold’) > (1) CAUSATIVE

Chinese *ba* ‘take’, verb > *ba*, causative marker (Alain Peyraube, p.c.). Long et al. (2012) propose the following grammaticalization chain for the forms *jiang*

of Modern Chinese and *no*²⁴ of the Suzhou dialect of Wu: 'take, carry', verb > instrumental preposition > patient marker, preposition > causative marker.

Twì **de* 'take', verb > *de* transivizer, causative marker. Ex.

Twì (Riis 1854: 97; Lord 1989: 137, 143)

o-de *gwañ* *a-ba*.
he-(take) sheep PFV-come
'He has brought a sheep.'

Nupe *la* 'take', verb > transivizer, causative marker. Ex.

Nupe (Lord 1989: 225)

Yigídí lá *mángòrò dzú*.
sun (took) mango red
'The sun reddened the mango.'

Lord (1989: 237) notes that the verb for 'take' in the Muskogean language Chikasaw can mark instruments and has the effect of making intransitive motion verbs transitive (or causative). Still, this grammaticalization needs more research to determine its exact nature and its genetic and areal distribution. *See also* DO, GIVE, SEND > CAUSATIVE.

TAKE ('to take', 'to seize', 'to keep', 'to hold') > (2) COMITATIVE

A somewhat unusual series of grammaticalizations appears to have occurred in Chinese, where the verbs *ji* 'catch up (with)', 'succeed', *yu* 'give', and *gong* 'share (with)' (> 'together' > 'with')⁹¹ are said to have given rise to comitative prepositions (Peyraube 1996: 188–9).

Twì **de* 'take', verb > *de* 'with', comitative (Lord 1989: 134ff.). Ex.

Twì (Lord 1989: 137)

o-de *né nnípa fòro* *bépow*.
he-(take) his men ascend mountain
'He ascends a mountain with his men.'

Nama 'úú 'take', 'seize', verb > -'ú, comitative 'with', 'along', ('accompanitive') suffix (Hagman 1977: 77–8). Ex.

Nama (Krönlein 1889: 312; Hagman 1977: 78)

- (a) *ǒ* //na /gui soa-sa.
(take that one barrel-3:F:SG)
'Take one barrel down.'

⁹¹ In particular the last case deserves attention since, conceivably, there are other languages that have undergone a similar process. Originally, a verb meaning 'to share (with)', *gong*, was grammaticalized to an adverb 'together' in Late Archaic Chinese. Since the early medieval period, it developed into a comitative preposition ('with'), and from the Song period onward it acquired uses as an NP-'and' conjunction (Peyraube 1996: 189–90).

- (b) *títa ke †'úu-nà ra /xií- 'ú.*
 (1:SG PART eat- 3:PL:C IMPFV come-COM)
 'I am bringing food.' (lit.: 'I am coming with food.')

Walman *-aro-* 'take, touch, catch, grab, pick up', transitive verb > *-aro-* comitative marker (Brown and Dryer 2008; Heine 2014).

See Muysken and Veenstra (1995: 290) for examples from pidgins and creoles. The exact conceptual nature of the present process is not yet entirely clear; more examples are needed. Nevertheless, we seem to be dealing with an instance of a process whereby process verbs give rise to grammatical markers expressing case relations; compare COME FROM; FOLLOW; GIVE; GO TO; SEE.

TAKE ('to take', 'to seize', 'to keep', 'to hold') > (3) COMPLETIVE⁹²

Medieval Chinese *jiang* 'take, carry', verb > Early Modern Chinese *jiang*, completive marker (Long et al. 2012).

Dogon *jè* 'take', verb > *-jè-*, aspect marker of completed actions (Calame-Griaule 1968: xxxii). Nupe **(l)á* 'take', verb > *(l)á*, completive focus marker. Ex.

Nupe (Heine and Reh 1984: 163)

**musa á tsu.* > *musa á tsu.*
 Musa took death/dying Musa PRED:FOC died
 'Musa is dead.'

Compare also Gwari *lá*, PL *kú* 'take', verb > perfective aspect marker. Ex.

Gwari (Hyman and Magaji 1971: 66)

wó lá shnamá lá. *wó kú à- shnamá kú.*
 (he PFV yam take:SG) (he PFVPL-yam take:PL)
 'He has taken a yam.' 'He has taken some yams.'

Fa d'Ambu CP *ma* 'take', verb > resultative aspect marker. Ex.

Fa d'Ambu CP (Post 1992: 164)

Mina ma dyumi beza.
 child take sleep already
 'The child has already fallen asleep.'

This grammaticalization appears to be an instance of a more general process whereby process verbs are grammaticalized to auxiliaries denoting tense or aspect functions; compare COME TO; DO; FINISH; GO TO; KEEP; LEAVE.

⁹² The notion completive is a complex one, and a number of the examples discussed here are perhaps more appropriately treated as iimitive categories (Östen Dahl, p.c.). When consulting entries having COMPLETIVE as their target, the reader is advised to also check under IAMITIVE.

TAKE ('to take', 'to seize', 'to keep', 'to hold') > (4) FUTURE

Chinese *jiang* 'hold', 'take', verb > *jiang*, future tense marker (Alain Peyraube, p.c.). Sinto *lav* 'take', verb > future marker. Ex.

Sinto (Ramat 1987: 15)

Lav te gáva.
take:1:SG that go:1:SG
'I shall go.'

Hungarian *fog* 'take', 'fetch', 'start', verb of action > auxiliary verb marking future tense. Ex.

Hungarian (Szent-Iványi 1964: 89)

Várni fog- ok.
(INF:wait fetch- 1:SG:PRES)
'I will wait.'

We are listing this case only tentatively here; more research is needed on its exact nature and genetic and areal distribution. Conceivably, it is an instance of a more general process whereby process verbs are grammaticalized to auxiliaries denoting tense or aspect functions; compare COME TO; DO; FINISH; GO TO; KEEP; LEAVE.

TAKE ('to take', 'to seize', 'to keep', 'to hold') > (5) INSTRUMENT

Medieval Chinese *chi* 'take, hold', verb > *chi*, instrumental preposition > *chi*, patient marker, preposition (Long et al. 2012). Chinese *ba* 'take', 'hold', 'grasp', verb > instrument marker when used as V₁ in a serial verb construction (Peyraube 1988: 619–26, 1996: 168ff.).

Korean *kaci-* 'take, have', verb > (*ul*)*kac(i)ko* 'with', instrumental postposition (Kim 2008; Rhee 2016c). Tetun *lori* 'take', transitive verb > *lori* 'with', instrumental preposition when used in the position of an oblique prepositional phrase at the end of the clause (Klamer 2018: 254–5).

Lahu *yùle* 'take', verb > 'with', instrument postposition ("verposition") (Matisoff 1991). Ex.

Lahu (Matisoff 1991: 434)

<i>yó</i>	<i>á-cu-ka</i>	<i>yù</i>	<i>le</i>	<i>gó-cá</i>	<i>cá</i>	<i>ve.</i>
3:SG	chopstick	take	PART	cabbage	eat	PART

'He eats cabbage with chopsticks.' (lit.: 'He, taking chopsticks, eats cabbage.')

Proto-Timor-Alor-Pantar **med* 'take', transitive verb > *me*, postposition to encode instruments (Klamer 2018: 249ff.).

Nupe *la* 'take', verb > instrument marker (Lord 1989: 226). Dagbane *zang* 'take', verb > instrument marker (Lord 1989: 227). Efik *dá* 'take', verb > instrument case marker. Ex.

Efik (Welmers 1968: 69; Claudi 1993: 45)

Dá èkuri sibe éto.
 take axe cut tree
 'Cut down the tree with an axe.'

Ijo àkí 'take', verb > instrument case marker. Ex.

Kolokuma, dialect of Ijo (Claudi 1993: 46)

Eri ogidi akí -ní indi pẹi-mí.
 He machete take fish cut:up-PAST
 'He cut up a fish with a machete.'

For more examples from pidgins and creoles, see Muysken and Veenstra (1995: 290ff.). That TAKE-verbs assume an INSTRUMENT function in certain contexts can be observed in quite a number of languages. It is unclear, however, whether or to what extent the TAKE-verbs figuring in the previous examples have in fact developed into fully conventionalized INSTRUMENT markers.

We are dealing with an instance of a more general process whereby process verbs, on account of some salient semantic property, give rise to grammatical markers expressing case relations; compare COME FROM; FOLLOW; GIVE; GO TO; SEE.

TAKE ('to take', 'to seize', 'to keep', 'to hold') > (6) PATIENT

Medieval Chinese *chi* 'take, hold', verb > *chi*, instrumental preposition > *chi*, patient marker, preposition (Long et al. 2012). Classical Chinese *bǎ* 'take hold of' > Mandarin Chinese *bǎ*, object marker (Li and Thompson 1981: 463–91; see also Peyraube 1996; Sun 1996: 61ff.; Chappell and Peyraube 2011: 787; Chappell 2015c).⁹³ Chinese *jiang* 'take', 'hold',⁹⁴ verb > *jiang*, preverbal object (or theme/undergoer) marker (Sun 1996: 60–5). Ex.

(a) Old Chinese (Shijing; quoted from Sun 1996: 60)

Wu jiang dache.
 NEG hold cart
 'Do not drive the cart.'

(b) Tenth-century Chinese (Zutangji; quoted from Sun 1996: 68)

Shei jiang sheng-si yu ru?
 Who JIANG live-death give you
 'Who (would) give you (his) life?'

⁹³ In a similar fashion, this Chinese example is described by Peyraube as a development from a verb *ba* 'take', 'hold', 'grasp' to an accusative marker when used as V₁ in a serial verb construction (Peyraube 1988: 619–26).

⁹⁴ Before 600 AD, *jiang* was used primarily as a verb meaning 'assist', 'guide', 'give' (Sun 1996: 60).

Hakka (formal registers), Southern Min and Cantonese *jiāng* 'take, lead', verb > *jiāng*, object marker. Shanghainese, Wu *nɔ*⁵³ 'take, hold', verb > *nɔ*⁵³, object marker (Chappell and Peyraube 2011: 787; Chappell 2015c: 21).

Korean *kaci-* 'take, have', verb > (*ul*)*kac(i)ko*, (*ul*)*kacie*, emphatic accusative case (Rhee 2016c). Proto-Timor-Alor-Pantar **med* 'take', transitive verb > Kamang *me*, Fataluku = *m*, -*m*, postposition to encode the displaced theme in a construction with a 'give' verb (Klamer 2018: 249ff.).

Lord (1993: 135) mentions Kalam in this connection, where the verb *d* 'take' appears to mark instrument and patient objects in specific contexts. Ex.

Kalam (Lord 1993:135)

... bin- ak ak spet ominal d- ap ...
man- DEF DEF spade two take- come
'... the man brings over two spades ...'

Engenni *tou* 'take', verb > object marker (Lord 1989: 230). Vagala *kpa* 'take', verb > object marker (Lord 1989: 237). Ga **kè* 'take', verb > *kè*, accusative case marker (Lord 1982: 287). Twi **de* 'take', verb > *de*, object marker. Ex.

Twi (Lord 1989: 136)

o- de afoa ce boha- m.
he-(take) sword put scabbard- inside
'He put the sword into the scabbard.'

Note that with transfer verbs involving physical manipulation, such as *ma* 'give', *kye* 'give', *bre* 'bring', and *mane* 'send', definite direct objects must be introduced by means of *de*, which according to Lord is historically derived from **de* 'take'. Ex.

Twi (Lord 1989: 204)

ɔ-de sika nó maa me.
he-(take) money the gave me
'He gave me the money.'
**ɔ-maa me sika nó*
he-gave me money DEF
('He gave me the money'.)

See Givón (1975a: 76, 88–9, 93ff.) and Lord (1982;1989:14ff., 1993) for more examples. For examples from pidgins and creoles, see Muysken and Veenstra (1995: 290ff.). This is a pathway that is well documented in the history of Chinese in particular and Sinitic languages in general (see, e.g., Chappell and Peyraube 2011). It appears to be another instance of a more general process whereby process verbs, on account of some salient semantic property, give rise to grammatical markers expressing case relations; compare COME FROM; FOLLOW; GIVE; GO TO; SEE.

TAKE ('to take', 'to seize', 'to keep', 'to hold') > (7) H-POSSESSIVE⁹⁵

Common Germanic **habēn* 'keep, hold', resultative durative verb > English *have*, German *haben* 'have' (Lehmann 1982: 27; Vykypl' 2010: 132). Waata (Oromo dialect) *qaw-* 'take', 'seize', action verb > *qaw-* 'have', marker of predicative possession (HAVE-possession). Ex.

Waata (Claudi 1986: 13)

- (a) *an^l hintal qaw-* ^a.
I girl seize- IMPFV
'I seize a girl.'
- (b) *an^l min qaw-* ^a.
I house seize- IMPFV
'I have a house'.

In some Akan languages of West Africa, there are verbs whose meanings include 'take' as well as 'have', 'possess'; compare Twi *de* 'take', 'hold', 'have', 'possess', 'own' (Lord 1993: 70–1). Furthermore, in the Western Nyulnyulan language Bardi of northwestern Australia, the inflecting verb *-inya* combines the possessive meanings 'have', 'possess' with the meanings 'catch', 'grab' and 'hold' (McGregor in prep.).

This process has been documented abundantly, especially in European languages, where verbs meaning 'take', 'seize', or 'hold' have given rise to 'have'-verbs, that is, to markers of predicative possession. For more details, see Heine (1997a; Heine and Kuteva 2006). There is considerable overlap in the grammaticalization of TAKE-verbs and KEEP-verbs (see Vykypl' 2010). It is therefore quite possible that some of the examples discussed here may ultimately have to be placed more appropriately under (>) KEEP > H-POSSESSIVE.

TAKE ('to take', 'to seize', 'to keep', 'to hold') > (8) C-POSSIBILITY (Root possibility)

In a number of languages from different branches of the Turkic family, the verb *al-* meaning 'take', but also 'get', has been grammaticalized to modal auxiliaries expressing physical and mental ability, mostly also permission. Both the data and the hypothesis presented here are adopted from Johanson and Csató (2018: 162).

Chulym *al-* 'to take', 'to get' > *al-* 'be able to', auxiliary expressing physical and mental ability. Trakai Karaim *aša-* 'to eat', *aša-yal-* 'be able to eat'. Karachay-Balkar *bar-al-* (<*bar-a al-*) 'be able to go'. Tatar *yaz-* 'to write', *yaz-a al-* 'be able to write'. Bashkir *yad-* 'to write', *yad-a al-* 'be able to write'. Kirghiz *ber-* 'to give', *ber-e al-* 'be able to give'. Kazakh *kör-e al-* 'be able to see'. Uzbek *oқи-* 'to read', *oқи-y-âl-* 'be able to read'. Kashghar Uyghur *bar-* 'to go', *bar-al-* 'be able to go'.

⁹⁵ H-POSSESSIVE, or HAVE-possession, stands for constructions of predicative possession, as in *I have a dog*.

The present pathway is presumably genetically induced and is proposed here only tentatively; but *see also* GET > PI-POSSIBILITY.

TAKE ('to take', 'to seize', 'to keep', 'to hold') > (9) REPLACIVE

This pathway has so far been reported from southwestern China only, but it is documented in two different language families, namely Tai-Kadai and Sino-Tibetan. For this reason we have it adopted here, based on the description provided by Huang and Wu (2018). The replacive meaning ('instead', 'rather than') emerges in the second of two clauses expressing a contrast, where one of the two clauses is negated. The replacive marker, called selective marker by the authors, is provided by a verb meaning 'take' (TAKE).

Pinghua *tshəu*³³ 'take', verb > *tshəu*³³, replacive marker. Ex.

Pinghua (Huang and Wu 2018)

<i>kem</i> ³³ <i>ja</i> ⁵³	<i>ŋə</i> ²²	<i>məu</i> ²²	<i>tshəu</i> ⁵⁵	<i>sok</i> ⁵⁵	<i>sə</i> ⁵³
tonight	1:SG	NEG	with	uncle	sleep
<i>ŋə</i> ²²	<i>tshəu</i> ⁵⁵	<i>səm</i> ³³	<i>sə</i> ⁵³	<i>tshəu</i> ³³	
1:SG	with	aunt	sleep	TAKE	
'I won't sleep with my uncle tonight, I will sleep with my aunt instead [selecting (my aunt)].'					

Zhuang *au*¹ 'take', verb > *au*¹, replacive marker. Ex.

Zhuang (Huang and Wu 2018)

<i>po:k</i> ⁷	<i>kəi</i> ⁷	<i>ka:i</i> ⁵ <i>lau</i> ²	<i>mi</i> ²	<i>naŋ</i> ⁶	<i>hɔ</i> ⁵ <i>ɛe</i> ⁵
time	last	1:PL	NEG	take	train
<i>naŋ</i> ⁶	<i>fəi</i> ⁵ <i>ki</i> ⁵	<i>au</i> ¹			
take	plane	TAKE			

'We won't take the train this time, we will take the plane instead [selecting (the plane)].'

More data from languages in other parts are needed to establish this as a relevant process of grammaticalization.

TASTE ('to taste') > EXPERIENTIAL

Experientials are aspect markers dedicated to coding "that an event has taken place at least once at some point in the past" (Chappell 2001c: 57; *see also* Comrie 1976: 58; Dahl 1985: 141). The verb *cháng* 'taste' has been used throughout the more than 3,000 years of Chinese history; see (a). Later on, *cháng* was extended to express either 'experience' or 'try to', which was often followed by another verb. It is in this context that *cháng* was grammaticalized as an experiential marker; see (b) (Yuzhi Shi, p.c.). Ex.

Classical Chinese (Shijing, 1000–700 BC; Yuzhi Shi, p.c.)

- (a) *Jūnzi yǒu jiǔ, zhuō-yán cháng zhī.*
gentleman have wine pour-AFFIX taste it
'The gentleman had wine. (We) poured and tasted it.'

Classical Chinese (Zuozhuan, approximately 370 BC; Yuzhi Shi, p.c.)(b) *Wú cháng xué cǐ yǐ.*

I EXPER learn this FP

‘I once studied it before.’

The inflected experiential auxiliary *-myong* of Lhasa Tibetan can presumably be traced back to a verb for ‘taste’ in classical Tibetan (Scott DeLancey, p.c.). Ex.

Lhasa Tibetan (Scott Delancey, p.c.; DeLancey 2018)*kho bod-la 'gro myong-ba.red.*

he Tibet-LOC go EXPER-PERF:CONTINGENT

‘He has been to Tibet.’

Wolof *mos* ‘taste’, verb > *mas* or *mos* ‘to have experienced once before doing’, experiential marker (Stéphane Robert, p.c.; Voisin and Vittrant 2012). Ex.

Wolof (Stéphane Robert, p.c.)*Mos nga dem Paris?*

taste PERF:1:SG go Paris

‘Have you ever been to Paris?’

waaw, mos naa dem (Paris).

yes taste PERF:2:SG go (Paris)

‘Yes, I have been (to Paris).’

More data on this pathway are urgently needed to establish this as a recurrent process of grammaticalization. *See also* CROSS, EVER, KNOW, PASS, TOUCH > EXPERIENTIAL.

TEMPORAL > (1) ADVERSATIVE

Vaiso *mu* ‘(time) COP’ ‘it is (the) time’ > *sómu* ‘at the same time’, ‘but’, ‘however’, conjunction (Koelle [1854] 1968: 39). Lingala *ndé* or *nzóka ndé* ‘while’, ‘when’, ‘then’, temporal conjunction > ‘but’, ‘although’, adversative conjunction. Ex.

Lingala (van Everbroeck 1958: 83)*nabyángáki yó, nzóka ndé okendéki kotámbola.*

‘I called you but/while you were out for a walk.’

Giocalone Ramat and Mauri (2009; 2011: 658) distinguish two pathways here, namely (a) one having temporal simultaneity or overlap and (b) another having temporal continuity as their source. (a) is illustrated by English *while*, Italian *mentre* ‘while, until’ > ‘whereas’, French *alors que* ‘when’ > ‘whereas’ and *ce pendant* ‘during this’ > *cependant* ‘whereas’. Examples of (b) include Italian *tuttavia*, French *toutefois* ‘always, continuously’ > ‘nonetheless’.

This appears to be an instance of a widespread inferential process whereby temporal markers are grammaticalized in specific contexts to markers of

“logical” grammatical relations, such as adversative, causal, concessive, and conditional relations; *see*, for example, SINCE; TEMPORAL > CAUSE, CONCESSIVE.

TEMPORAL > (2) CAUSE

Archaic Chinese *yushi* ‘at that time, from that time’, temporal marker > *yushi*, causal conjunction (Long et al. 2012). Old High German *dia wila so* ‘so long as’ > German *weil* ‘because’ (Traugott and König 1991: 197). Latin *posteaquam* ‘after’, ‘ever since’ > French *puisque* ‘since’, causal marker; French *quand* ‘when’, ‘because’ (Traugott and König 1991: 197). Latin *dum* ‘when’, ‘as long as’, ‘because’ (Traugott and König 1991: 197). Finnish *kun* ‘when’, ‘while’, ‘as’, ‘since’, ‘because’ (Traugott and König 1991: 197). Estonian *paräst* ‘after’, ‘because of’; *kuna* ‘while’, ‘as’, ‘since’, ‘because’ (Traugott and König 1991: 195). Romanian *din moment ce* ‘from the moment’, ‘because,’ and so on (Traugott and König 1991: 195).

For a special instance of this path of grammaticalization, *see* SINCE > CAUSE. This appears to be an instance of a widespread process whereby spatial and temporal expressions are grammaticalized in specific contexts to markers of “logical” grammatical relations such as adversative, causal, concern, concessive, and conditional relations; *see*, for example, ALLATIVE; LOCATIVE; SINCE; TEMPORAL > CONCESSIVE; TEMPORAL > CONDITIONAL; UP.

TEMPORAL > (3) CONCESSIVE

Archaic Chinese *ji*, temporal adverb > *ji*, causal conjunction (Long et al. 2012).

Liancheng dialect of Hakka *ɕʌʔ*, temporal word > *ɕʌʔ*, concessive marker (Long et al. 2012). Old English *while þe* ‘at the time that’ > Middle English *while* ‘during’ > Modern English ‘although’ (Traugott and König 1991: 199–203). German *während* ‘while,’ temporal preposition, conjunction > temporal, concessive conjunction. Ex.

German

- (a) *Während er aß, las er Zeitung.*
 while he ate read he newspaper
 ‘While he was eating he read a newspaper’.
- (b) *Während es gestern noch regnete, scheint jetzt die Sonne.*
 while it yesterday still rained shines now the sun
 ‘While it was still raining yesterday, the sun is shining now’.

Baka *ʔeké* ... *ne* ‘while’, marker of temporal clauses > *ʔeké*, marker of concessive clauses. Ex.

Baka (Christa Kilian-Hatz, p.c.)

na.ngé bèlà ʔa à mbɛɛ
 POSS:3:SG work 3:SG:NAR ASP finish:PAST
ʔe kè namò bèlà ʔe mbè só.
 while POSS:2:SG work 3:SG finish yet
 ‘His work is finished, while yours is not yet.’

Bulgarian *dokato* ‘while’, ‘at the same time’, temporal marker > *dokato* ‘although’, concessive clause marker. Ex.

Bulgarian

- (a) *Dokato ti gotviš, az šte čistja banjata.*
 while you cook:2SG:PRES I FUT clean:1SG:PRES bathroom: DEF
 ‘While you are cooking, I’ll be cleaning the bathroom.’
- (b) *Dokato namiram poezijata mu za interesna, romanite mu mi xaresvat mnogo poveče.*
 while find:1SG:PRES poetry:DEF his for interesting
 novels:DEF his me like:3:PL:PRES much more
 ‘Although I find his poetry interesting, I like his novels much better’.

The following example from Seychelles CF may also belong here, although the marker concerned, *dâ* ‘in’, may also refer to locative rather than to temporal participants. Seychelles CF *dâ* ‘in’, preposition > concessive marker. Ex.

Seychelles CF (Corne 1977: 148)

Dâ tu sô fatigue, i ti bizuê ed pov balen.
 (in all his tire 3:SG PAST must help poor whale)
 ‘Even though he was tired, he had to help poor Whale.’

For a detailed discussion of the sources for concessive markers, see König (1985a; 1985b; 1988). This appears to be an instance of a widespread process whereby spatial and temporal markers are grammaticalized in specific contexts to markers of “logical” grammatical relations, such as adversative, causal, concern, concessive, and conditional relations; *see*, for example, under ALLATIVE; LOCATIVE; SINCE; TEMPORAL > CAUSE, TEMPORAL > CONDITIONAL; UP.

TEMPORAL > (4) CONDITIONAL

Early Modern Chinese *shi*, temporal word > *shi*, conditional marker or topic marker (Long et al. 2012). Hopper and Traugott (1993: 179) observe that one source of conditional connectives consists of “temporals expressing duration, or temporals that are ambiguous between duration and punctuality,” and they give the following examples:⁹⁶ Hittite *mān* ‘when’, ‘if’, ‘potential’. Tagalog

⁹⁶ They also cite the Swahili connective *i-ki-wa* (lit.: ‘if it is’) as an example, which we prefer to ignore since conditional protasis is already expressed by the marker *-ki-* ‘if’.

(*ka*)*pag(ka)*, *kung* ‘if’, ‘then’, ‘while’; Indonesian *djika* ‘if’, ‘when’; *kalau* ‘if’; ‘when’, ‘as for’. Karok =*aha.k* ‘when’ > =*aha.k* ‘if’ (Bright 1957: 126). Further examples suggestive of a transition from temporal to conditional markers are provided by Mauri and Sansò (2014b: 98) and Frajzyngier (1996b: 376–81), e.g. Dongolese Nubian *-k* ‘when, if’.

Old Italian *sempre que* ‘every time (when), whenever, on all occasions that’, temporal connective > *sempre que*, conditional marker (Mauri and Sansò 2014b). Hollenbach (1995: 186) argues that in some Mixtec languages, the noun *nú* ‘face’ has given rise to temporal markers (‘when’, ‘whenever’) (e.g. in Yosondúa), which have further developed into markers of conditional protasis (e.g. in Diuxi-Tilantongo). See also Haiman (1985b), Traugott (1985b), as well as Traugott and Dasher (2002: 36–7) for a reconstruction of English *as/so long as*, and Mauri and Sansò (2014b) for a detailed historical reconstruction of Italian *sempre que*.

This appears to be an instance of a widespread process whereby spatial and temporal markers are grammaticalized in specific contexts to markers of “logical” grammatical relations, such as adversative, causal, concern, concessive, and conditional relations; see, for example, ALLATIVE; LOCATIVE; SINCE; TEMPORAL > CAUSE; TEMPORAL > CONCESSIVE; UP.

TEMPORAL > (2) LEST

A LEST-clause is a semantically elaborate category which encodes the counterfactuality of the realization of an undesirable verb situation that is to be avoided. It involves two verb situations, X and Y. Verb situation X is featured as necessary for the avoidance of the undesirable verb situation Y, whereby there is a causal element involved (Kuteva, Aarts, Popova, and Abbi, in prep.).

Virgin Islands Dutch Creole offers a semantically transparent example of how a structure which initially involved a temporal subordinate clause – a clause beginning with the temporal marker *fo* ‘before’ – gave rise, over time, to a LEST-structure. Ex.

Virgin Islands Dutch Creole (Van Sluijs 2015)

- (a) *Ju fo bli een jaa mi*
 2:SG MOD stay indef year with
ons, fo ju nee am fa ons.
 1:PL before 2: SG take 3: SG of 1: PL
 ‘You must stay with us for one year, before you take her from us.’
- (b) *Dan Anáánsi a ho fo*
 then A. PAST have fo
loo bet padún fo sini
 go ask pardon before 3: PL
du am a fort.
 do 3: SG LOC prison

‘Then Anansi had to ask for forgiveness, lest they put him in prison.’

Dutch *straks* ‘soon’, temporal connective > LEST-clause marker. Ex.

Dutch (Germanic; Indo-European, Boogaart (2009: 172))

<i>Aai</i>	<i>dat</i>	<i>beest</i>	<i>nou niet, zegt</i>
stroke.IMP	DEM	beast	now NEG say:3:SG:PRES
<i>mama,</i>	<i>straks</i>	<i>bijt</i>	<i>ie.</i>
Mum	soon/ LEST	bite.3:SG: PRES	3:SG

‘Do not stroke that beast, says Mum, or else it will bite.’

In the Mangarrayi (Mangarayi) language of the Northern Territory of Australia, a temporal connective – the adverb *barl̥al̥aga* ‘right now, today’ – has developed into a LEST marker; see the form *barl̥aga* below:

Mangarrayi (Merlan 1982: 147)

<i>Bargil</i>	<i>nama,</i>	<i>barl̥aga</i>	<i>nya-wayi-n.</i>
hard	hold (IMP)	now/LEST	you-fall-PRES

‘Hold on tight, or else you might fall.’

For more examples of this pathway, see Angelo and Schultze-Berndt (2016). See also NEGATION > LEST.

‘That’, see DEMONSTRATIVE

THEN (Temporal) > (1) DISCOURSE MARKER

Old English *þa* ‘then’, adverb > discourse marker, signalling foregrounded actions, narrative segmentation, or discourse-level shift (Brinton 2008a: 29–31). Present-Day English *then*, temporal adverb > *then*, discourse marker (Schiffrin 1987: 316). Ex.

English (Schiffrin 1987: 255)

Debby: *Oh, where in South Philadelphia were you born?*
 Ira: *16th and South.*
 Debby: *Oh, OK. That's sort of close to centre city, then.*

French *alors* ‘now, then’, adverb > *alors*, discourse marker. Spanish *entonces* ‘then’, adverb > *entonces* ‘then, therefore, thus’, discourse marker (Stolz 2007). The Spanish discourse marker *entonces* was borrowed in a wide range of languages spoken in the former Spanish empire (Stolz 2007), including Totonac of Mexico, Guaraní of Paraguay, Hiligaynon of the Philippines, and Rapanui of Easter Island (Stolz 2007: 77–9). Italian *allora* ‘then, at that time’, temporal adverb > *allora*, discourse marker (Stolz 2007: 80). The Italian discourse marker *allora* was borrowed in language regions where Italian is spoken as a dominant language, found, e.g. in Maltese, (Italo-)Albanian, Cimbrian, and Molisean (Stolz 2007; see also Heine 2016).

Lingala (*é*)*bóngó* ‘now, then’, adverb, conjunction > (*é*)*bóngó*, discourse marker (Nzoimbengene 2016: 259–75). !Xun (W2 dialect) *kündò'à* ‘there, then’, locative and temporal adverb > *kündò'à*, discourse marker expressing text cohesion (König and Heine forthcoming). Ex.

!Xun, W2 dialect (Heine and König 2015)

- (a) *mí má ā bö m kē kündò'à.*
 1:SG TOP PROG can eat TR there
 'I can eat there.'
- (b) *làālè kündò'à xāh kē n!j-ā n!hà'è l!xāún.*
 jackal DM DM PAST sit-T lion back
 'And the jackal sat on the lion's back.' (7/36; text collection, König and Heine forthcoming)

The present pathway cannot be described exhaustively in terms of grammaticalization. As argued in Heine et al. (2013; 2017), it also involves cooptation, a discourse strategy whereby a unit of sentence grammar, such as an adverb, is deployed for specific discourse purposes like expressing functions of text organization, attitudes of the speaker, and/or speaker–hearer interaction. Whereas grammaticalization typically leads to semantic and morphosyntactic integration, cooptation has the opposite effect, that is, the unit, such as *kündò'à* in (b) above, is semantically and morphosyntactically unattached, frequently also being prosodically marked off. Thus, unlike most of the other data discussed in this book, the evolution of discourse markers and interjections is more complex, being the result of cooptation followed by grammaticalization (Heine 2013).

See also LOOK > DISCOURSE MARKER; NOW > DISCOURSE MARKER; RIGHT > DISCOURSE MARKER; WELL > DISCOURSE MARKER; SO > DISCOURSE MARKER; WHAT > DISCOURSE MARKER.

THEN > (2) FUTURE

Bari (*e*)*dé* 'then', 'afterward', adverb > *dé*, future tense marker (Heine and Reh 1984: 120). Ex.

Bari (Spagnolo 1933: 105–6)

- (a) *Dé nan kən ...*
 then 1:SG do
 'I do ... then'
- (b) *Nan dé kən ...*
 1:SG FUT do
 'I shall do ...'

Lingala (van Everbroeck 1969: 68)

- ndé-na-sál-i. ndé-to-ké-i na ebale.*
 (then-1:SG-WORK-PAST) (then-1:PL-go-PAST⁹⁷ to river)
 'I'll work.' 'We'll go to the river.'

Tok Pisin PE *baimbai* 'afterward', 'later' (< English *by-and-by*) > future tense marker (Sankoff and Laberge 1974).

⁹⁷ It is very likely that the past marker *-i* in both of these examples has a function other than past tense.

While being a semantically plausible pathway of grammaticalization, this process appears to be far less common compared to other pathways leading to the rise of future tense markers; *see* especially COME TO; GO TO; WANT.

THERE > (1) DEMONSTRATIVE

Elements like English *here* and *there* are classified in some conventions as locative adverbial demonstratives (Dixon 2010b: 228–9), or simply as demonstratives (Diessel 2006: 473–4). In a number of languages, a clear formal relationship can be observed between expressions for ‘here’ and ‘there’ and ‘this’ and ‘that’, respectively. For example, Rubin (2005: 73) describes such a relationship in some Semitic languages, such as Old Babylonian, where distal demonstrative ‘that, those’ had the base *ulli-*, and this base is also found in the adverbs *ullikīam* ‘there’, *ullānum* ‘thence’, *ullīš(am)* ‘thither’. And the forms *zhi*, *shi*, and *ci* of Archaic Chinese had both an adverbial function indicating a place meaning ‘here, there’ and a demonstrative function meaning indicating a person or a thing, meaning ‘this, that’ (Long et al. 2012).

We have no problems with such alternative terminologies as long as they make it clear that there is a principal difference between (a) elements pointing to an object, determining nouns, frequently agreeing with the noun in number, gender, and/or case (e.g. *this*, *that*), and (b) elements pointing to a place, modifying verbs or clauses, which do not normally show agreement in number, gender, or case (e.g. *here*, *there*). In this book we refer to type (a) elements as demonstratives and to type (b) as locative adverbs, and our concern is with the diachronic relation between the two.

French *là* ‘there’, adverb > *-là* ‘that’, distal demonstrative. Ex.

French

- (a) *Il est là.*
he is there
‘He is there.’
- (b) *cet homme-là*
this man-DISTAL
‘that man’

Baka *kò* ‘there’, distal adverb > distal demonstrative. Ex.

Baka (Christa Kilian-Hatz, p.c.)

- (a) *Wósòlò kò kò!*
stand:up only there
‘Let’s stop there!’
- (b) *Ma nyì bo kò ode.*
1:SG know person that NEG
‘I don’t know that person.’

Ngbaka *ké* ‘there’, locative adverb > ‘that’, demonstrative. Ex.

Ngbaka (Heine et al. 1993: 206)

- (a) zùlà ké ...
 rat there
 ‘There is a rat ...’
 (b) mɔ bá kpàná ké!
 you take pot that
 ‘Take that pot!’

Hausa *cân* ‘there’, locative adverb > *cân*, ‘that’, distal demonstrative. Ex.

Hausa (Cowan and Schuh 1976: 165; Philip Jaggat, p.c.)

- (a) Audù yanã cân.
 (Audu 3:M:IPFV over:there)
 ‘Audu is over there.’
 (b) dabbōbin cân
 (animals:of over:there)
 ‘those animals (over there)’

The directionality of this grammaticalization appears to be well established (*see also* HERE), but there are also examples that can be interpreted as being suggestive of an opposite directionality; more research is needed on this issue. Note that there is a view according to which demonstratives are diachronically, so to speak, “primitives of grammaticalization”; that is, they may give rise to various kinds of grammatical markers, while they themselves cannot be historically derived from other entities like lexical items (Plank 1979; Diessel 1999b: 150–2).

THERE > (2) PERS-PRON

Perhaps most commonly, the result of the process from a deictic expression of spatial distance (‘there’) to personal pronoun is a second person pronoun. As the following development in Japanese shows, however, the process can be more complex: the second person pronoun *anata* ‘you’ of Japanese originates in a spatial deictic noun signalling roughly ‘over there’ (or ‘that part’) in Late Old Japanese, first used as a third person marker (‘person over there’) in Early Modern Japanese, subsequently being extended and specialized as a second person pronoun around 1750 (Traugott and Dasher 2002: 230). Furthermore, Hagège (1993: 216–17) mentions Vietnamese *đây* (or *đó*) ‘there’, which means ‘you’ when one wants to avoid the hierarchical or affective connotations linked to the use of personal pronouns.

In the Afro-Brazilian Calunga language, which arose in the course of the last centuries among African slaves in the state of Minas Gerais, the second person pronoun (‘you’) is *camano-ai* (‘person-there’ > ‘you’), using an adverb of spatial distance, while the first person pronoun *camano-cá* (‘person-here’ > ‘I’) uses an adverb of spatial proximity (Byrd 2006; Heine and Song 2010: 140–2).

The contribution of spatial deixis to the rise of third person pronouns has been pointed out in a number of studies, most of all involving demonstrative pronouns (Diessel 1997; 1999a; 1999b; Heine and Song 2010; 2011).

In sign languages, the deictic space is commonly exploited as a conceptual template for structuring personal deixis: pointing gestures (and eye gaze) provide a convenient source for concepts of both spatial and personal deixis, and Pfau and Steinbach (2006; 2011) propose the following chain of grammaticalization for sign languages: pointing gesture > locative > demonstrative pronoun > personal pronoun > agreement marker.

Compare HERE; DEMONSTRATIVE > THIRD PERS-PRON.

‘They’, see PERS-PRON, THIRD PLURAL

THING > (1) COMPLEMENTIZER

Japanese *koto* ‘matter, thing’, noun > marker of propositional and factive complements (Otori 2011: 636). Ex.

Japanese (Kuno 1973; quoted from Lehmann 1982: 65)

<i>Ano</i>	<i>hito</i>	<i>ga/no</i>	<i>hon</i>	<i>o</i>	<i>kai-</i>
that	person	NOM/GEN	book	ACC	write-
<i>ta</i>	<i>koto</i>	<i>ga</i>	<i>yoku</i>	<i>sirarete</i>	<i>iru.</i>
PART	NOMIN	NOM	well	known	is

‘That that person has written a book is well known.’

!Xun (W2 dialect) *tcí* ‘thing’, noun > *tcé* (<*tcí-è*, thing-REL) ‘what’, complementizing pronoun (Heine and König 2015). Ik *kɔɔbáa* ‘thing, matter’, noun > ‘that’, complementizing pronoun.⁹⁸ Ex.

Ik (König 2002: 324–6)

<i>Tá</i>	<i>ye-</i>	<i>i-</i>	<i>i</i>	<i>kɔɔbá-</i>	<i>a</i>	<i>itíyá-</i>	<i>ida.</i>
NEG	know-	1:SG-	NEG	what-	NOM	do-	2:SG-

‘I don’t know what you do.’

This appears to be an instance of a more general process whereby certain generic nouns serving as nominal complements are grammaticalized to markers of complement clauses. In many languages, this process has not proceeded beyond an incipient stage where it remains controversial whether, or to what extent, the relevant noun constitutes a noun or a clause subordinator. *See also* MATTER; PERSON; PLACE.

THING > (2) INDEFINITE PRONOUN

Nahuatl *itlaa* ‘thing’ > *tlaa* ‘something’, indefinite pronoun (Lehmann 1982: 51). Swahili *kitu* ‘thing’, noun > ‘something’, ‘anything’, when used in object function in negative clauses. Ex.

⁹⁸ Since Ik nouns retain their case inflections even when grammaticalized to complementizers, this language has several case-inflected clause subordinators (see König 2002; Schrock 2014).

Swahili

si-on- i ki- tu.
 NEG:1:SG-see-NEG C7-thing
 ‘I don’t see anything.’

Yoruba *ohun kan* (‘thing one’) > *nkan* ‘something’ (Heine and Reh 1984: 272).

In the Soninke language of West Africa, the plural noun *hóonú* ‘things’ has been grammaticalized to a pronoun meaning ‘some of them’, used for both animate and inanimate referents (Creissels in prep.b).

Albanian *gjë* ‘thing’, noun > *gjë*, indefinite pronoun. Ex.

Albanian (Buchholz et al. 1993: 173)

a ke gjë për të thënë?
 ‘Do you have something to say?’

Turkish *şey* ‘thing’, noun > *bir şey* (‘one thing’) ‘something’, indefinite pronoun (Lewis [1967] 1985: 54, 77).

See also Lehmann (1982: 51–2); Heine and Reh (1984: 272); Haspelmath (1997a: 182). This grammaticalization appears to be an instance of a more general process whereby generic nouns give rise to pronominal categories; compare MAN; PEOPLE; PERSON; PLACE.

A process from noun to indefinite pronoun has also been observed in signed languages such as German Sign Language (DGS) and Sign Language of the Netherlands (NGT) (Pfau and Steinbach 2006); see PERSON > INDEFINITE PRONOUN.

THING > (3) NOMINALIZER

Korean *kes* ‘thing’, noun > *-ulkes*, nominalizer (Rhee 2008, 2016c; Kim and Horie 2009; Kim 2012; Sohn and Nam 2013). Ewe *nú* ‘thing’, noun > *-nú, nú-*, derivational nominalization marker, cf. *nú-du-du* [thing-eat-eat] ‘food’ (Bernd Heine, personal data). In the Tundra Nenets language of northern Russia, the noun *s’er* ‘thing, business’ has given rise to a semantically empty nominalizer (Nikolaeva 2014: 316–17).

In Northern Mansi (spoken in western Siberia), the noun *wārmal’* ‘thing, work’ has grammaticalized – from its use in participial relative clauses – into a nominalizer. Combining with participles it can create action nominals and other abstract nouns (Bíró 2017). Ex.

Northern Mansi (Bíró 2017: 5)

Xaništaŋt-ən wārmal’ jōmas tēla.
 study-PTCPL.PRES NOMIN good thing
 ‘Studying is a good/useful thing.’

In Surgut (Eastern) Khanty, the word *wār* ‘work, thing’ and the word *wer* in the northern dialects of Khanty have come to function as nominalizers;

following Csepregi (2013: 105), Bíró (2017: 18) reports that they can combine with participles and create action nominals. Ex.

Khanty (Csepregi 2013: 105, cited in Bíró 2017: 18)

mən-tə *wār*
go- PTCPL.PRES NOMIN
'leaving, travelling'

Skribnik (2010), cited in Bíró (2017: 19), points out that South Siberian Turkic languages, use the form *kerek* 'thing-to-do, business' as a nominalizer. In Altay-kızı (a South Siberian Turkic language), the word *neme* 'thing' has come to function as a nominalizer: it is applied to form nominalizations for inanimate participants as well as animate participants and events (even though with a pejorative meaning); see Skribnik 2014, cited in Bíró (2017: 19).

This appears to be a widespread process where nouns for 'thing' are extended to denote thing-like concepts, but data from more languages are needed to substantiate the pathway. In addition to 'thing' there are a number of other kinds of nouns having a generic meaning that may grammaticalize to nominalizers, e.g. 'place'.

See also PLACE > NOMINALIZER.

THING > (4) A-POSSESSIVE⁹⁹

Classical Arabic *hana* 'thing' > Chadian Arabic *hanā* (F *hint*), genitive marker, e.g. *bēt hanā Mūsa* 'Musa's house' (Rubin 2005: 53). Thai *khǎŋ* 'thing', 'object', noun > genitive marker. Ex.

Thai (Matisoff 1991: 391)

- (a) *paj sýy khǎŋ*
 'go buy things'
(b) *mīa khǎŋ phǒm*
 wife GEN 1:SG
 'my wife'

Khmer *rəbɔh* 'thing', noun > genitive marker. Ex.

Khmer (Matisoff 1991: 391)

- (a) *Rəbɔh nuh kee haw thaə kmaw-day.*
 thing DEM 3:SG call QUOT pencil
 'That thing is called a pencil.'

⁹⁹ A-POSSESSIVE stands for attributive possession, expressed, for example, in English by either *of* or *'s* (see Heine 1997a).

- (b) *puəq-maaq touc rəbʋh kñom pii neeq nih*
 friend little GEN 1:SG two CLASS DEM
 ‘these two little friends of mine’

In Japanese, the construction [possessor *no* possessee] is said to go back to a construction [possessor’s thing, possessee] (Lehmann 1982: 110). Proto-Khwe (Central Khoisan) **ti* ‘thing’ > Khwe (*di* ‘property’ >) *di* ‘of’, marker of alienable possession (Bernd Heine, personal notes). More research is needed on the exact nature and the genetic and areal distribution of this process.

THING > (5) W-QUESTION

In this pathway, it is a noun for ‘thing’, usually together with the interrogative modifier ‘which?’, that is grammaticalized to a question marker ‘what?’. In some languages such as Kukama-Kukamiria or Italian, however, it is the simple noun for ‘thing’ that appears to have given rise to the question marker. Italian *cosa* ‘what’ (< *che cosa* ‘which thing’). Modern Greek *ti pragma* ‘which thing’ > ‘what?’ (Silvia Luraghi, p.c.).

Ewe *nú kà* (thing which?) ‘which thing?’, noun phrase > *núkà* ‘what?’ (Westermann 1905). Kukama-Kukamiria *mari* ‘thing’, noun > *mari* ‘what?’, interrogative word (Vallejos 2016: 175). Ex.

Kukama-Kukamiria (Vallejos 2016: 177)

mari inu yumi=ui na=tsu
 what 3:PL:FEMALE:SPEECH give=PAST 2:SG=DAT
 ‘What did they give you?’

Classical Arabic ‘*ayyu šay’in*, literally ‘which thing?’, came to be used as a substitute for ‘what?’ early on in the vernacular language (see Rubin 2005: 25 for examples in modern Arabic varieties).

Examples of this pathway can be found in a number of pidgin and creole languages (see Muysken and Veenstra 1995: 125–7; Heine and Kuteva 2007: 183–4), e.g. Kenya Pidgin Swahili *kitu gani* (thing which?) ‘which thing?’ > *kitu gani* ‘what?’ (instead of Standard Swahili *nini* ‘what?’; Heine and Kuteva 2007: 184).

See also PERSON > W-QUESTION.

‘This’, see DEMONSTRATIVE

THREATEN > PROXIMATIVE

Portuguese *ameaçar* ‘threaten’, Spanish *amenazar* ‘threaten’, French *menacer* ‘threaten’, German *drohen* ‘threaten’, Slovak verb *hroziť* ‘threaten’ > ‘be about to, be likely to’, proximative aspect and modal auxiliary with negative connotations. Ex.

Portuguese (Pinto de Lima 2006: 209; Heine and Miyashita 2008a: 87)

- (a) *seu irmão ameaçava destruir os*
 her brother threatened destroy the
planos de seus sobrinhos.
 plans of her nephews
 'Her brother threatened destroying the plans of her nephews.'
- (b) *uma [...] melodia de amor [...] ameaçava não acabar.*
 a melody of love threatened never to:finish
 'A melody of love "threatened" to never end.'

This pathway can be observed in some form or other in more than twenty languages of western and central Europe, including Romance, Germanic, and some Slavic languages. The functions of the resulting grammatical categories are complex. While expressing proximative aspectuality appears to be the predominant function, the category also includes temporal, modal, and evidential features (Heine and Miyashita 2004; 2008a).

The pathway is suggestive of a grammaticalization process that spread via language contact in the course of the last 600 years. Note that so far no clear instances of this process have been found outside Europe (Heine and Kuteva 2006: 80–94; Heine and Miyashita 2008a; see also Askedal 1997; Traugott 1993; 1997; Cornillie 2004; 2008; Heine and Miyashita 2004; Pinto de Lima 2006; Levin-Steinmann 2010: 125–33; Cornillie and de Toledo y Huerta 2017).

This appears to be another instance of a more general grammaticalization process whereby verbs are grammaticalized to auxiliaries denoting tense or aspect functions. The process is presumably triggered by the extension from typically human subjects to inanimate subjects. *See also* PROMISE > PROXIMATIVE.

THREE (NUMERAL) > TRIAL

Ambrym *sol* 'three', numeral > -*sol*, trial, paucal marker on personal pronouns and other word categories.¹⁰⁰ Ex.

Ambrym (Paton 1971: 16, 24, 44–6)

- (a) *veen ŋa- sol*
 woman PART- TRI
 'three women'
- (b) *gam- sol*
 2:PL- TRI
 'you three'

¹⁰⁰ It would seem that the Ambrym trial marker -*sol* expresses in the same way trial and paucal (i.e. 'few') number. Paton (1971: 24) observes that trial "may mean either *three* or *a few*, i.e. any reasonably small number".

!Xun *!áo* 'three', cardinal numeral > (a) *-!(a)o*, plural marker on personal pronouns (Northwestern !Xun), *-!a*, pronominal plural suffix (Southeastern! Xun); (b) *-!ao*, trial suffix on personal pronouns (Heine and König 2015). Gadsup-Agarabi *kamore* 'three', numeral > *-kaamode*, trial number marker (on nouns) (Stolz 1992b: 643).

As the examples from the "Khoisan" language !Xun suggest, this pathway may also lead to the rise of plural markers, and we speculate that this might be due to the following overall chain of grammaticalization: THREE > TRIAL > PLURAL. More research is needed here, but also on the genetic and areal distribution of this grammaticalization, which is an instance of a process whereby lower numerals may assume the function of grammatical number markers, typically on nouns; compare ONE; TWO.

THROW ('to throw (away)') > PERFECT

Diyari *wara-* 'throw', verb > perfect auxiliary. Ex.

Diyari (Austin 1981: 91)

<i>Karari</i>	<i>nandu</i>	<i>tukudu</i>	<i>wayi-na</i>	<i>wara-yi.</i>
today:LOC	3:SG: F:ERG	kangaroo	cook-PARTCP	AUX- PRES

'She cooked a kangaroo today.' (lit.: 'she threw cookingly')

Palaung *pét* 'throw away', 'finish', verb > perfect or completive marker (Bybee and Dahl 1989: 58; Bybee et al. 1994: 58). Korean *pelita* 'to throw away' > perfect (Bybee and Dahl 1989: 58). Fore *kai* ('cast aside' >) perfect (Bybee and Dahl 1989: 58). Japanese *shimau* 'put something away', 'finish' > perfect marker (Ono 1992; Ono and Suzuki 1992).

Japanese *sutsu* (*utsu*, *tsu*) 'throw away' > completive marker (Watanabe 2000: 28). Among the semantic extensions that the Korean verb *pele-* 'throw away, discard' has experienced there is that of a completive auxiliary (Rhee 1996; Strauss and Sohn 1998; Lee 2013; Baik 2016). Ex.

Korean (Baik 2016: 50–51)

- (a) *kunye-nun ssuleki-lul peli-ess-ta.*
 she-TOP waste-ACC throw:away-PAST-DEC
 'She threw away waste.'
- (b) *kunye-nun ku il-ul kkamahkey ic-e-peli-ess-ta.*
 she-TOP the matter-ACC completely forget-NF-COMPL-PAST-DEC
 'She had clean forgotten the matter.'

Liancheng dialect of Hakka *p'ie* 'throw away', verb > *p'ie*, perfect marker (Long et al. 2012).

Kirgiz *taf ta-* 'throw away, discard' > *taf ta-*, completive/perfect marker (Long et al. 2012).

More research on the conceptual nature of this process is needed; it appears to be an instance of a more general grammaticalization whereby process verbs

are grammaticalized to auxiliaries denoting tense or aspect functions; compare COME TO; DO; FINISH; GO TO; KEEP; LEAVE; TAKE.

PERFECT markers may further develop into PAST tense markers (Bybee et al. 1994: 81–7); compare Diyari *wara* ‘throw’ > auxiliary encoding immediate past time (Austin 1981: 91). See PERFECT > PAST.

TIME > TEMPORAL

Archaic Chinese *shi* ‘time’, noun > Early Modern Chinese *shi* ‘when’ (Long et al. 2012).

Japanese *toki* ‘time’, noun > ‘when’, temporal adverbial subordinator. Ex.

Japanese (Bisang 1998a: 647)

Tori ga/no tob- u toki
bird SUBJ/GEN fly- PRES time
‘when a bird flies’

Classical Newari *belas* ‘time’, noun > temporal subordinator (Genetti 1991). !Xun (W1 dialect) *n!an’a* ‘time’, noun > ‘while’, temporal conjunction (Heikkinen 1987: 41). Turkish *zaman* ‘time’ serves to construct temporal subordinate clauses. Ex.

Turkish (anonymous reader; Lewis [1967] 1985: 185)

Türkiyede çalıştığım zaman
Türkiye- de çalış- tik-im zaman
Turkey- LOC work- PART-1:SG time
‘when I worked in Turkey’

Kupto *sàrti* ‘time’, noun > ‘when’, conjunction (Leger 1991: 22). Kwami *lókòshi* ‘time’, noun (loanword from Hausa) > ‘when’, conjunction (Leger 1992: 27). Kikuyu *hingo* (noun class 9/10) ‘time’, noun > ‘until’, temporal conjunction. Ex.

Kikuyu (Mathias Schladt, p.c.)

- (a) *a- ceragĩr-ũo hingo ci- othe.*
3:SG- be:late c10-time c10- all
‘He is always late.’
- (b) *Ikara na rĩ- hiũ rĩ- rĩ o hingo ng- oka.*
IMP:STAY with c14- knife c14- this exactly time 1:SG- come
‘Keep this knife until I come.’

Tamil *pootu* ‘time’, relational noun > noun functioning as a temporal clause marker. Ex.

Tamil (T. Lehmann 1989: 341)

<i>Kumar</i>	<i>viĩt- ukku</i>	<i>va-nt-a</i>	<i>pootu</i>
Kumar	house-DAT	COME-PAST-ADJV	time
<i>elloorum</i>	<i>tuunik-ĩfk</i>	<i>koñ-ƣu</i>	<i>iru-nt-aarkal.</i>
everyone	sleep- PARTCP	HOLD-PARTCP	BE-PAST-3:PL

‘At the time at which Kumar came home, everyone was sleeping.’

This is an instance of a process whereby a noun, on account of some salient semantic property, gives rise to a grammatical marker highlighting that property; *see*, for example, BACK; EARTH; HOME; SKY.

TOMORROW > (1) FUTURE

Kipsikiis *tuun* ‘tomorrow’, adverb of time > *tuun* ‘tomorrow and a few days after’, tense marking verbal proclitic (Dimmendaal 1995: 34). Neyo *keele* ‘tomorrow’ > *le*, future tense marker. Ex.

Neyo (Marchese 1984: 206–7, 1986: 257)

<i>É</i>	<i>yì</i>	<i>le</i>	<i>saaa</i>	<i>nà</i>	<i>jàjɔɔ</i>	<i>pi</i>	<i>wéé.</i>
1:SG	POT	FUT	also	your	CORN:DEF	FIX	INTJ

‘Later (in the day), I will cook your corn.’

Cedepo *kà* ‘tomorrow’ > tense marker. Tepo *ɲàɲà* ‘tomorrow’ > *ɲà*, tense marker (Marchese 1986: 256). Bakwé *sremagbàpek* ‘tomorrow’ > *pe*, tense marker (Marchese 1986: 257). Mandinka *sina* ‘tomorrow’ (*si* ‘sun’, *na* ‘come’) > *si*, future tense marker (Claudi 1994 : 198).

While being a semantically plausible pathway of grammaticalization, this process appears to be far less common compared to other pathways leading to the rise of future tense markers; *see* especially COME TO; GO TO; WANT.

TOMORROW > (2) NEXT

Hausa *gôbe* ‘tomorrow’ + temporal noun > ‘next’, ‘following’; for example, *watàn gôbe* ‘next month’ (Ma Newman 1990: 179, 281). Kenya Pidgin Swahili *kesho* ‘tomorrow’ + temporal nouns > ‘next’, ‘following’. Ex. *mwaka kesho* ‘next year’.

More research is needed on the exact nature and the genetic and areal distribution of this process.

TOP > UP

Korean *wi* ‘top’, noun > *-(uy)wiy* ‘on top of, over, above’, superior postposition (Narrog and Rhee 2013; Rhee 2016c). Korean *sang* ‘top’, noun > *-sangey* ‘on, above’, superior postposition (Narrog and Rhee 2013; Rhee 2016c). Hausa *kâi* ‘head’ noun + masculine genitive linker *-n* > locative preposition *kân* ‘on (top of)’ (Cowan and Schuh 1976: 58; Philip Jaggard, p.c.). Kpelle *na* ‘top side’, noun > ‘on’, ‘over’, ‘above’, postposition (Westermann 1924: 12). Swahili *juu* ‘top’, relational noun > ‘above’, adverb; *juu ya* ‘top of’ > ‘on (top of)’, ‘above’, ‘over’, preposition. Colonial Quiché *vi* ‘top’ > ‘on top’, ‘over’, ‘above’, locative marker. Ex.

Colonial Quiché (Dürr 1988: 58–9)

<i>cate</i>	<i>puch</i>	<i>x-e-acan-ic</i>	<i>ch-u-vi</i>	<i>che.</i>
then	and	CPL-3:ABS-ascend-IS	LOC-3:SG:ERG-top	tree

‘And then they climbed the tree.’

We are dealing with another instance of a more general process whereby relational nouns, including nouns for body parts, give rise to relational (typically spatial or temporal) grammatical markers; compare BOTTOM; PLACE; SIDE.

TOUCH ('to touch') > EXPERIENTIAL

Experientials are aspect markers dedicated to coding "that an event has taken place at least once at some point in the past" (Chappell 2001a: 57; see also Comrie 1976: 58; Dahl 1985: 141). The experiential marker *tioʔ*⁸ of the Hui'an dialect of Min was originally a verb meaning 'touch, reach, get'. It is either preceded by *pat*⁷, which is also an experiential marker having 'know' as its source, plus the verb; see (a). Alternatively, it co-occurs with the preverbal auxiliary verb *u*⁴ 'have' or its negative form *bo*² 'not have'; see (b).

Hui'an dialect of Min (Chen, forthc.)

- (a) *ua*³ *pat*⁷⁻⁸ *khui*⁵⁻⁴ *tioʔ*⁸⁻⁴ *pak*⁷⁻⁸*kiã*¹
 1:SG EXPER go EXPER PROPER NOUN
 'I have been to Beijing.'
 (b) *lan*³ *u*⁴/*bo*² *bŋ*⁵ *tioʔ*⁸
 1:PL have/not:have ask EXPER
 'I have/have never asked (him).'

The Hausa verb *taɓà* 'touch' can be assumed to have been grammaticalized to an experiential marker. Ex.

Hausa (Bernard Caron, p.c.)

- ká:* *taɓà* *tàfi* *tu:rai?*
 2:SG touch go:to Europe
 'Have you ever been to Europe?' (lit: have you 'touched' going to Europe?).

Conceivably, there is also evidence for this pathway from American Sign Language (ASL), where the sign TOUCH appears to have an experiential function (see also FINISH > IAMITIVE):

American Sign Language (ASL; Sexton 1999: 115–6; Heine and Kuteva 2007: 75)

TOUCH FINISH JAPAN YOU

'Have you ever been to Japan?'

More data on this pathway are urgently needed to establish this as a recurrent process of grammaticalization. See also CROSS, EVER, KNOW, PASS, TASTE > EXPERIENTIAL.

TRACE ('trace', 'track') > (1) AFTER

Welsh *ôl* 'trace', 'track', *ar ôl* 'on the track of' > *ar ôl*, adposition 'after'. Ex.

Welsh (Wiliam 1960: 35)

Ar dy ôl
 (PREP 2:SG:POSS track)
 'after you'

Basque *atz* 'trace', 'track', 'footprint' has given rise to the postposition *atzean* 'behind'. Ex.

Basque (anonymous reader)

etxe(aren) atzean
*etxe-(a-ren) atze- an*¹⁰¹
 HOUSE-(ART-GEN) behind- LOC
 'behind the house'

Common Slavic **slědu* 'trace', noun > Common Slavic **poslědi* 'afterward' > Russian *posle* 'after', Croatian *poslije* 'after', Bulgarian *sled* 'after' (Haspelmath 1997b: 64). Finnish *jälki* 'trace', 'track', noun > *jälkeen* 'after' (Haspelmath 1997b: 64). Latvian *pēdis*, instrumental plural of *pēds* 'trace, i.e. in the traces (of)' > *pēc* 'after' (Haspelmath 1997b: 65–6). For more details, see Haspelmath (1997b: 65–6).

We are dealing with another instance of a more general process whereby relational nouns (including nouns for body parts) give rise to relational (typically spatial or temporal) grammatical markers; compare BOTTOM; PLACE; SIDE.

TRACE ('trace', 'track') > (2) BEHIND

Kono *gbà* 'trace', *gbá-à* 'at/in the trace' > *gbàà*, locative adverb, postposition 'back', 'backward', 'behind'. Ex.

Kono (Donald A. Lessau, p.c.)

- (a) *nàngùmá gbà*
 cat trace
 'trace of a cat'
- (b) *Yéé i gbàà!*
 return 2:SG backward
 'Go back!'

Bambara *nò* 'trace (of an animal)' + *fě* 'at' > *nò fě* 'behind (in a line of people)'. Ex.

Bambara (Ebermann 1986: 119, 224)

- (a) *sogo nò filè!*
 (animal trace see)
 'Look, the trace of the animal!'

¹⁰¹ The vowel *e* following *atz* is required for phonological reasons; the item is now analyzed as *atze* 'space behind' + *-an* locative (anonymous reader).

- (b) *i ka i b̄ila bèè nò f̄è*
 ‘stand behind’ (lit.: ‘to put/place oneself in the trace of all’)

This appears to be another instance of a more general process whereby relational nouns (including nouns for body parts) give rise to relational (typically spatial or temporal) grammatical markers; compare BOTTOM; PLACE; SIDE.

TREE > CLASSIFIER

Ancient Chinese *méi* ‘tree trunk’ > general classifier (Chappell and Peyraube 2011: 793). Archaic Chinese *zhu* ‘(tree) stump’ > Medieval Chinese *zhu*, classifier (Long et al. 2012). (Modern) Chinese *gè* ‘(bamboo) tree’¹⁰² > *ge*, general classifier (Bisang 1999: 164). Ex.

Chinese (Bisang 1999: 132)

<i>sān</i>	<i>ge</i>	<i>jiàoshòu</i>
three	CL	professor
‘three professors’ (unmarked)		

Concerning the rise and development of classifiers in Chinese, see Peyraube (1998).

Yi *zo*³³ *bo*³³ ‘tree’ > *bo*³³, classifier for trees (Long et al. 2012). Hani *bo*⁵⁵ ‘tree’ > *bo*⁵⁵, classifier for trees (Long et al. 2012). Southern Zhuang *mai*⁴ ‘tree’ > *mai*⁴, classifier for trees, bamboo, etc. (Long et al. 2012).

Shiwilu *nala* ‘tree (trunk)’, noun > *-na(n)* classifier for ‘long, large, rigid, wooden’ objects (Zariquiey 2018: 357). Akatek *te* ‘tree’, noun > classificatory particle (Zavala 2000: 134). Vietnamese *cây* ‘tree’, ‘plant’, noun > classifier for stick-shaped or plantlike objects (Löbel 1996: 172; Bisang 1999: 138, 169). Kilivila *bwa* ‘tree’, noun > *bwa*, classificatory particle for trees and wooden things (Senft 1996: 20, 173). Kilivila *kai* ‘tree’, ‘wood’, noun > *ke*, general classifier (unmarked form for inanimates), classificatory particle for wooden things and rigid, long objects (Senft 1996: 27, 174, 352). Ex.

Kilivila (Senft 1996: 20)

<i>ma-</i>	<i>ke-</i>	<i>na</i>	<i>nuya</i>	<i>bwa-</i>	<i>veaka</i>
this-	wooden-	this	coconut	tree-	big
‘this big coconut tree’					

Note that nouns for ‘tree’ have repeatedly been grammaticalized into classificatory particles in both Kilivila and Chinese; that is, more than one lexical morpheme denoting ‘tree’ have served as the source for this development in both languages.

This grammaticalization appears to be part of a more general process whereby certain nouns, on account of some specific semantic characteristic,

¹⁰² According to Peyraube (1998: 56), the lexical meaning of *ge* is ‘bamboo trunk’.

are recruited as structural templates for a folk taxonomic classification of nominal concepts (*see also* BRANCH; CHILD; MAN; PIECE; SONG; WOMAN). More research is needed on the genetic and areal distribution of this process.

TRUE ('true', 'real') > INTENSIVE

Archaic Chinese *qing* 'truth' > *qing*, intensive marker, adverb (Long et al. 2012).

Early Modern Chinese *zhen* 'true' > *zhen*, intense marker, adverb (Long et al. 2012).

Old French *verai* 'tru(ly), truthful(ly)' > (borrowing) Middle English *verray* > Modern English *very*, e.g. *very tall* (Plank 1979: 333; Lorenz 2002: 145–6). Hungarian *igaz* 'true', *igaz-án* 'really' (anonymous reader). American Sign Language *TRUE* > *INTENSIVE* (Roland Pfau, p.c.; *see also* Sexton 1999). Baka *ko* 'truly', 'really', 'completely', adverb > 'very', intensive marker. Ex.

Baka (Christa Kilian-Hatz, p.c.)

- (a) *ʔé ko lè-báka!*
3:SG truly child-Baka
'He is a true Baka!'
- (b) *wósé ʔé ko jókò!*
woman 3:SG very beauty
'The woman is very pretty!'
- (c) *Mo mééle bèlà ko síti.*
2:SG do:PAST work very badly
'You have worked very badly.'

In English, Lorenz (2002: 152) found one common source of intensives in "adverbs expressing a high degree of certainty or speaker commitment, such as *actually, clearly, decidedly, definitely, doubtless, essentially, exactly, genuinely, necessarily, obviously, patently plainly, positively, precisely, really, seriously, simply, sincerely, surely, truly, undeniably, or undoubtedly*".

This pathway differs from many others in that it may be short-lived, not uncommonly arising in a young generation of speakers and falling into disuse when these speakers grow older (Lorenz 2002: 143). More research is needed on the exact nature and the genetic and areal distribution of this process. *See also* BAD > INTENSIVE.

'Turn around, to', *see* RETURN

TWO (numeral) > (1) DUAL

Mandarin Chinese *liang* 'two' + *ge*, classifier > *liang* 'two' > *lia*, dual marker for personal pronouns (Long et al. 2012). Xide Yi *ŋi*²¹ 'two', numeral > *ŋi*²¹, dual suffix (Long et al. 2012). Baima *ŋi*³⁴³ 'two' follows a pronoun as dual marker (Long et al. 2012).

Yindjibarndi *kuyha-*, *kuyharra* ‘two’, common noun > *-kuyha*, dual number marker (Wordick 1982: 53, 300). Ambrym *ru* ‘two’, cardinal numeral > *-ro* dual marker on personal pronouns and other word categories. Ex.

Ambrym (Paton 1971: 16, 44–6)

- (a) *vanten* *ŋa* *ru*
man PART two
‘two men’
(b) *ŋe-* *ro*
they- DU
‘they (two)’

Samoan *lua* ‘two’ > *-lua/-’ua*, dual marker on pronouns (Stolz 1992b: 646–7). Alyawarra *athirra* ‘two’ > *-athirra*, dual number marker (Stolz 1992b: 639–46). !Xun, W1 dialect *tsa* ‘two’, numeral > *-tsá*, dual suffix on personal pronouns and nouns. Ex.

!Xun, W1 dialect (Heikkinen 1987: 11, 91)

- ì-tsa* *túih!*
2:PL-DU rise
‘Rise you two!’

Seychelles CF *de* ‘two’ (< French *deux* ‘two’) > dual marker in certain contexts involving paired objects. Ex.

Seychelles CF (Corne 1977: 21)

- mô* *de* *lipie*
(my two foot)
‘my feet’

This grammaticalization path is common in Papuan languages.¹⁰³ Compare Old English *wit* ‘we two’, which goes back to a compound **we-dwo* ‘we two’ (Joseph 1998: 359).

This is an instance of a more general process whereby lower numerals are pressed into service to function as number markers, typically on nouns and personal pronouns; compare ONE; THREE. Still, more research on the areal and genetic distribution of this process is needed. *See also* TWO > NP-AND; DUAL > NP-AND.

TWO (NUMERAL) > (2) NP-AND

Aranda *tara* ‘two’ > marker of noun phrase coordination. Ex.

¹⁰³ We owe this information to an anonymous reader of the first edition of this book, who also suggested that the Gothic dual marker *-t* goes back to the numeral ‘two’.

Aranda (Stassen 2000; quoted from Strehlow 1944: 208)

<i>ara</i>	<i>aranga</i>	<i>tara</i>
red:kangaroo	euro	two

‘the red kangaroo and the euro (*Macropus robustus*)’

Aranda *therre* ‘two’, numeral > ‘and’, NP-coordinator conjoining names of two people who form a common couple, such as husband and wife (Wilkins 1989: 371). Ex.

Aranda (Wilkins 1989: 371)

Ayenge lhe-ke Sandy therre-nge Wendy therre-nge.

‘I went with Sandy and Wendy.’ (Where Sandy and Wendy are sisters)

Alyawarra *athirra* ‘two’, numeral > *-athirra*, dual number marker > sociative marker ‘with’, ‘and’ (Stolz 1992b: 639–40). Vai *fěra* ‘two’, numeral > ‘with’, ‘and’, particle conjoining noun phrases. Ex.

Vai (Koelle [1854] 1968: 27, 39; Donald A. Lessau, p.c.)

- (a) *tām fěra*
 ten two
 ‘twelve’
- (b) *wu fěra wu bōnu*
 2:PL with 2:PL:POSS friends
 ‘ye and your friends’

!Xun, W1 dialect *tsa* ‘two’, cardinal numeral > *sá*, particle conjoining noun phrases, associative dual. Ex.

West !Xun (Heikkinen 1987: 69)

sá dǎhmà
 the:two wife
 ‘he and his wife’

Seychelles CF *de* ‘two’, cardinal numeral (< French *deux* ‘two’) > marker conjoining two participants in certain contexts. Ex.

Seychelles CF (Corne 1977: 21)

Nu de Gabriel, nu ava ale.
 (we two Gabrielle we FUT go)
 ‘Gabrielle and I shall go.’

In Khwe (Kxoe), it seems that it was the third person dual suffix *-tcà*, rather than the numeral for ‘two’, which has given rise to an NP-AND marker involving two participants. Ex.

Khwe (Treis 2000a: 105)

- (a) *á-tcà*
 DEM-3:M:DU
 ‘they’ (two male referents)

- (b) *xáò-tcà* /'é-tcà
 hippopotamus-3:M:DU fire-3:M:DU
 'the hippo and the fire'

Note that numerals for 'two' appear to constitute crosslinguistically the main source for dual markers (see TWO > DUAL); note further that the Khwe dual marker *-tcà* appears to be etymologically related to the numeral *tsā* or *tsa* 'two' in the neighboring !Xun language¹⁰⁴ (Heikkinen 1987; Dickens 2005). See also DUAL > NP-AND. It remains unclear whether we are dealing with a straight evolution from numeral to marker of NP-coordination or whether there is an intermediate stage of a dual category; that is, whether the most common pathway may not be TWO > DUAL > NP-AND.

U

UNTIL ('until', 'up to') > EQUATIVE COMPARATIVE

Classical Chinese *ru* 'go to', verb > *ru* 'be as good as, catch up with', verb > *ru*, standard marker in an equative comparison equative comparative marker (Long et al. 2012). Dogon *bà*: 'until', 'up to', locative, temporal adposition > equative comparative marker. Ex.

Dogon (Calame-Griaule 1968: 28–9)

vò mù bà: yése.

'He is as rich as I.' (lit.: 'He owns up to me')

Lezgian *q'wan* 'up to', 'as far as', 'until', locative/temporal postposition > 'as much/many as', marker of quantitative comparisons (Haspelmath 1993: 439f.). For a detailed description of how the equative is expressed in the languages of Europe, see Haspelmath and Buchholz (1998).

UP > (I) ADDITIVE

Kono *kùmà* 'over', 'on top', adverb, postposition > numeral linker 'and' (joining tens with digits). Ex.

Kono (Donald A. Lessau, p.c.)

Àà dèn tân kùmà dùù- nù
 3:SG:POSS child ten and five- PL
 'his/her fifteen children'

Romanian *cincisprezece* 'fifteen' (= *cinci-spre-zece* 'five-over-ten') (Popinceanu 1962: 32). See also Heine (1997b: 18–34).

¹⁰⁴ Khwe and !Xun are presumably genetically unrelated. What appears to be more relevant to the present case is that these two Khoisan languages exhibit a close areal relationship.

More research is needed on the genetic and areal distribution of this process.

UP > (2) COMPARATIVE

Zhaba *tha*³³ ‘up’ > *tha*³¹, comparative auxiliary (Long et al. 2012). Chukchi *-ik* ‘on’, locative suffix > marker of standard noun phrases in comparative constructions. Ex.

Chukchi (Stassen 1985: 147)

Gamga- qlá ‘ul-ik qetvu-ci-ium.
all- men-on strong-more-1:SG
‘I am stronger than all men.’

Naga *-ki* ‘on’, locative suffix > ‘than’, marker of standard noun phrases in comparative constructions. Ex.

Naga, Sino-Tibetan (Stassen 1985: 147)

Themma hau lu ki vi-we.
man this that on good-is
‘This man is better than that man.’

Ubykh *-n* ‘on’, locative case suffix > ‘than’, marker of standard noun phrases in comparative constructions. Ex.

Ubykh (Stassen 1985: 147)

Yi- gune wo- gune-n ca-qasaga-j.
this-tree that-tree-on more-big-3:SG
‘This tree is taller than that tree.’

Miwok *-y* ‘on’, locative suffix > ‘than’, marker of standard noun phrases in comparative constructions. Ex.

Miwok (Stassen 1985: 148)

Oš’akci-? tunić kci-? manik nangakci-y.
girl-NOM small:one-NOM more boy-on
‘The girl is smaller than the boy.’

Salinan *ti* ‘on’, locative marker > ‘than’, marker of standard noun phrases in comparative constructions. Ex.

Salinan (Stassen 1985: 149)

Ragas-mo in luwa ti hek.
surely-you more man on me
‘You are certainly more of a man than me.’

Mandinka *ma* ‘on’, locative postposition > ‘than’, marker of standard noun phrases in comparative constructions. Ex.

Mandinka (Stassen 1985: 149)

A ka gya ni ma.
 he is big me on
 ‘He is bigger than me.’

Tamazight *fell/foull* ‘on’, ‘upon’, preposition > ‘than’, marker of standard noun phrases in comparative constructions. Ex.

Tamazight (Stassen 1985: 149)

Enta ihengrin foull i.
 he is:tall upon me
 ‘He is taller than me.’

Tamil *-il-* ‘on’, locative suffix > ‘than’, marker of standard noun phrases in comparative constructions. Ex.

Tamil (Stassen 1985: 151)

At-il-um ittu cinnatu.
 that-on-PART this big
 ‘This is bigger than that.’

Mapuche *meu* ‘on’, ‘to’, locative marker > ‘than’, marker of standard noun phrases in comparative constructions. Ex.

Mapuche (Stassen 1985: 153)

Karlos doi fucha-i Francesko meu.
 Karlos more tall-3:SG Francesko on/to
 ‘Karlos is taller than Francesko.’

In many Polynesian languages, verbs meaning ‘go down’ and ‘go up’ mark the standard of comparatives of inequality. Reflexes of Proto-Polynesian **hake* ‘go up’ are used when the comparison or action denotes an increase in quantity or height, e.g. being better, of higher status, older, healthier, etc., while reflexes of **hifo* ‘go down’ are used when the comparison involves a decrease or a lower height or quantity (Moyse-Faurie 2018: 292).

This is another instance of a process whereby spatial markers are grammaticalized to markers introducing the standard of comparison; compare ABLATIVE; LOCATIVE.

UP > (3) CONCERN

Modern Chinese *shang* ‘up’, locative noun > (*zai*) ... *shang* ‘with respect to’, concern marker (Long et al. 2012). English *on*, locative preposition > ‘about’, concern marker. Ex.

English (anonymous reader)

- (a) *The book is on the table.*
- (b) *She was speaking on Chinese porcelain.*

German *über* ‘over’, preposition > ‘about’, concern marker. Ex.

German

- (a) *Der Vogel fliegt über die Kirche.*
the bird flies over the church
‘The bird is flying over the church.’
- (b) *Er spricht nicht gerne über seine Vergangenheit.*
he speaks not with:pleasure over his past
‘He doesn’t like to speak about his past.’

Spanish *sobre* ‘on’, preposition > ‘about’. Ex.

Spanish (anonymous reader)

- (a) *sobre la mesa*
on the table
‘on the table’
- (b) *un libro sobre el euskera*
a book on the Basque
‘a book about Basque’

French *sur* ‘on’, preposition > ‘about’, preposition. Ex.

French (anonymous reader)

- (a) *sur la table*
on the table
‘on the table’
- (b) *une conférence sur la drogue*
a conference on the drug
‘a lecture on drug addiction’

In the Guipuzcoan dialect of Basque, the common postposition *gain(e)an* (from *gain*-(e)*an* ‘top’-LOC) has recently come to be used in vernacular speech as a concern marker. Ex.

Basque, Guipuzcoan dialect (anonymous reader)

- (a) *mendi gain- ean*
mountain top- LOC
‘on top of the mountain’
- (b) *kimika gain- ean*
chemistry top- LOC
‘about chemistry’

Swahili *juu ya* ‘above’, ‘on top of’, ‘up’, preposition > concern marker. Ex.

Swahili

- (a) *Ndege yu-ko juu ya nyumba.*
bird C1-LOC above house
‘The bird is above the house’.

- (b) *A- na- kataa ku-sema juu ya ajali yake.*
 he-PRES- refuse to-speak on:top:of accident his
 'He refuses to talk about his accident.'

In the Palula language of northern Pakistan, the meanings of the postposition *jhuli* 'on (top of), on to, over, about, due to' include that of presenting a topic ('on, about, concerning') when taking an oblique pronominal argument (Liljegren 2016: 189).

See also GIVE; LOCATIVE. This appears to be an instance of a widespread process whereby spatial and temporal markers are grammaticalized in specific contexts to markers of "logical" grammatical relations, such as adversative, causal, concern, concessive, and conditional relations; *see*, for example, ABLATIVE; ALLATIVE; LOCATIVE; SINCE; TEMPORAL.

USE ('to use', 'to employ') > (1) HABITUAL

English *used to* > past habitual marker. Ex.

English

- (a) *He used all the money.*
 (b) *He used to come on Tuesdays.*

Hagège (1993: 217) observes that verbal items denoting 'be used to' or 'get used to' tend to develop into markers for static or dynamic habituais. This grammaticalization, while so far poorly documented, appears to be an instance of a more general process whereby process verbs are grammaticalized to auxiliaries denoting tense or aspect functions; compare COME TO; DO; FINISH; GO TO; KEEP; LEAVE; TAKE; THROW.

USE ('to use', 'to employ') > (2) INSTRUMENT

Korean *ssu-* 'use', verb > *-losse* 'with, by means of', instrumental postposition (Rhee 2016c).

We have listed this pathway even though there is only one language to clearly instantiate it. But in a number of languages there is a lexical option whereby a USE-verb is employed to express the instrument or the means of performing an action, e.g. English *David used a knife to open the tin*. If substantiated by more evidence, this would be an instance of a process whereby a verb on account of some salient semantic property gives rise to a grammatical marker highlighting that property; *see*, e.g., COME FROM; COME TO; CROSS; EXCEED; GO TO; PASS; RESEMBLE; TAKE.

V

VENITIVE (ventive) > (1) CHANGE-OF-STATE

Tuvaluan *mai* 'hither', venitive directional > marker of change-of-state, used to express, for example, changes from sleeping to waking, from childhood to

adulthood, from non-being or death to life, from darkness to light, from poor to good health, and from less to more desirable states (Besnier 2000: 526; Moyse-Faurie 2018: 290).

Turkana *-unⁱ* verbal venitive suffix ('motion hither') > change-of-state (inchoative) suffix when attached to verbs of state ('become'), e.g. *-jɔk* 'be good' vs *-jɔk-on'* 'become good' (own data, Bernd Heine). Maa *-v(n)*, venitive ('motion hither') derivational extension > *-v* inchoative marker (Tucker and Mpaayei 1955: 141; König 1993: 294–316).

This pathway appears to be part of a process whereby movement in space is conceptualized metonymically as temporal change from one state to another; compare COME TO > CHANGE-OF-STATE; GO > CHANGE-OF-STATE.

VENITIVE (ventive) > (2) FUTURE

Iraqw *ni*, venitive marker ("hither marker") > near future tense marker (NFUT) having present relevance. Ex.

Iraqw (Mous 1993: 134–5)

- (a) *Inós ni xa-xээр di-r*
 3:SG VEN HAB-come.3:F:SG place:CONSTRUCT:CASE-F
doo-ren-ee.
 house-1:PL:POSS-BACKGROUND
 'She comes to our house'.
- (b) *Atén ni da'-áan.*
 1:PL NFUT sing-1:PL
 'We are going to sing'.

Maa *-v(n)*, venitive ('motion hither') derivational extension > *-v*, (inchoative marker >) future tense marker with verbs of state (Tucker and Mpaayei 1955: 141; König 1993: 294–316).

The evidence supporting this process comes from two different language families (Cushitic and Nilotic), but the languages concerned may be areally related. More research is needed on the genetic and areal distribution of this process.

Ventive, *see* **VENITIVE**

W

WANT ('want', 'like', 'love', 'desire') > (1) AVERTIVE

This pathway is apparently restricted to events referring to the past. Archaic Chinese *yu* 'hope to, want to', auxiliary > *yu* 'almost', adverb (Long et al. 2012). Bulgarian *štjax* 'want' (PAST), verb > avertive auxiliary (Kuteva 1998a). Ex.

Bulgarian (Kuteva 1998a:115)

- (a) *Ne štjax dori da go pogledna.*
 not want:1:SG:PAST even to him take:a:look:at:1:SG:PRES
 'I didn't even want to take a look at him.'
- (b) *Pomniš li, če lani*
 remember:2:SG:PRES Q that last:year
štjax da si izkãrtja
 want:1:SG:PAST to REFL break:1:SG:PRES
edin zãb ot toja proklet oriz!
 one tooth from this damn rice
 'Remember, last year I nearly broke a tooth of mine because of that damn rice!'

Mandinka *lãfi* 'want', verb > *lãfi* 'be about to', proximative, avertive auxiliary (Creissels in prep.b), *Â lãfi-tã fãa-la* (lit. 'he wanted to die') 'He almost died'. Venda *toḁa u* (wanted:PERF INF) 'have wanted to', verb form > *toḁou*, 'almost' marker. Ex.

Venda (Poulos 1990:332; Heine 1997d: 5)

- (a) *Ndo toḁa u mu rwa.*
 (I want:PERF INF him hit)
 'I wanted to hit him.'
- (b) *Ndo toḁou mu rwa.*
 (I almost him hit)
 'I nearly hit him.'

Tswana *-batla* 'want', verb > 'nearly', 'almost' or 'on the point of but never quite doing' (Cole [1955] 1987: 292). Southern Sotho *-batla* 'want', 'seek', 'desire', verb > auxiliary marking the avertive ('act almost'). Ex.

Southern Sotho (Doke and Mofokeng [1957] 1985: 247)

- (a) *kẽ-ile ka-batla libuka tseō.*
 'I wanted those books.'
- (b) *Kẽ-ile ka-batla kẽ-ẽ-shōa.*
 'I nearly died.'

Margi *àyí* 'want', verb > 'nearly'. Ex.

Margi (Hoffmann 1963: 219)

- kwálbá ìnkù àyí gà tã'díy, dī gà dzùgwà kà'ùbá.*
 (ink pot wanted to fall, then 1:SG caught)
 'The ink pot nearly fell, then I caught it.'

In conjunction with the particle *ber*, the verb *hōm* 'want' of the Mehri language of Yemen and Oman has grammatical uses as an avertive marker ('nearly') (Rubin 2018).

For more details, see Kuteva (1998a). This grammaticalization is an instance of a more general process whereby verbs are grammaticalized to auxiliaries

denoting tense or aspect functions; compare COME TO; DO; FINISH; GO TO; KEEP; LEAVE; TAKE; THROW.

WANT ('want', 'like', 'love', 'desire') > (2) FUTURE

Archaic Chinese *yu* 'hope to, want to', auxiliary > *yu*, future marker (Long et al. 2012).

Mandarin Chinese *yào* 'want', verb > future marker (Li and Thompson 1981: 175–6). Old English *willan*, verb > *will*, future tense (Aijmer 1985). Latin *volere* 'want', verb > Romanian future marker. Ex.

Latin (Pinkster 1987:195)

- (a) *Volo cantare.*
(want:1:SG sing:INF)
'I want to sing'.

Romanian

- (b) *Voi cânta.*
(want:1:SG sing:INF)
'I will sing'.

Modern Greek *thelô ina* 'I wish that' (older construction) > *tha*, future tense morpheme (Hopper and Traugott 1993: 24; see especially Tsangalidis 1999).

Akie *mach* 'want', verb of volition > *mach-*, auxiliary verb for future tense, followed by the main verb in the subjunctive of the perfective aspect (König et al. 2015: 46–7). Mabiha *ku-lembe-la* (INF-want) 'want', verb > *-lembe-la*, remote future tense marker. Ex.

Mabiha (Botne 1989:170)

- tu-lembe-la ku-tenda*
(1:PL-want INF-make)
'we will make (remote future)'

Swahili *-taka* 'want', 'desire', verb > *-ta-*, future tense marker. Ex.

Swahili

- (a) *a-na-taka ku-ja.*
3:SG-PRES-want INF-come
'She wants to come'.
(b) *a-ta-ku-ja.*
3:SG-FUT-INF-come
'She will come.'

Omyene *-bela* 'desire', verb > *-be-*, future tense marker (Botne 1989: 173). Kuba *-bondela* 'want', 'ask for', verb > *-bondo-*, future tense marker (Botne 1989: 173). Luba *-saka* 'want', verb > *-sa-*, future marker (Botne 1989: 173). Kimbundu *-andala* 'want', 'wish', verb > *-anda-*, *-ando-*, or *-ondo-*, future marker. Ex.

Kimbundu (Botne 1989:173)

tu-anda ku-banga
 (1:PL-FUT INF-make)
 'we will make'

Persian *xwāstan* 'want, wish', verb > future tense marker (Jahani 2015).
 Bulgarian *šte* 'wants' (3:SG:PRES), verb > future tense marker, invariable particle. Ex.

Bulgarian

- (a) *Ne te šte za bulka.*
 not you:ACC want:3:SG:PRES for bride
 'He does not want you as a bride'.
 (b) *Toj šte doide.*
 3:SG FUT come:3:SG:PRES
 'He will come'.

For examples of WANT-futures in Semitic languages see Rubin (2005: 36–38). The process has been discussed in detail by Bybee et al. (1991); see also Bybee et al. 1994; Raumolin-Brunberg and Nurmi (2011: 256–61). For a monographic treatment, see Tsangalidis (1999).

This grammaticalization has been proposed to be one of the defining features of the Balkan Sprachbund. For example, Romani varieties in the Balkans developed a future tense category marked with *ka(m)-*, which is derived from the verb *kam-av* 'want, love' (Boretzky 1989: 368). While it is unclear which of the languages provided the ultimate model for the Balkan WANT-futures, it is fairly uncontroversial that contact-induced grammaticalization played some role in the spread of these future tenses.

Furthermore, a number of Germanic languages of northern Europe appear to have developed a verb of volition into a future tense category, e.g. English *will*, Danish *ville*, Norwegian Bokmål *vil*, Faroese *vil*, and Frisian *wal* (Dahl 2000b: 322). For a collostrutural reconstruction of the Danish *ville*-future and the English *will*-future, see Hilpert (2008).

The process is an instance of a more general process whereby verbs are grammaticalized to auxiliaries denoting tense or aspect functions; compare COME TO; DO; FINISH; GO TO; KEEP; LEAVE; TAKE; THROW. WANT-verbs exhibit a widespread overlap with (>) LOVE verbs.

WANT ('want', 'like', 'love', 'desire') > (3) D-NECESSITY (Obligation)

Krug (2002) proposes the following reconstruction for English *want*: around 1700, *want* came to take on the meaning 'desire' with nominal complements and 'volition' with infinitival *to* complements, the latter giving rise to what Krug describes as a modal auxiliary construction. Up until the early twentieth century, ['desire' + NP] constituted the dominant construction, in the second half of the twentieth century the ['volition' + *to* infinitive] construction became

the dominant one, which nowadays accounts for the majority of verbal uses of *want*. Presumably in the early twentieth century, a second auxiliary construction arose, this time expressing obligation ('ought to') rather than volition and being strongly associated with second person subject referents, as in *You want to mind your step*.

The verb *hōm* 'want' of the Mehri language of Yemen and Oman has grammaticalized into a cohortative marker, e.g. *nəhōm nəghōm* 'let's go' (Rubin 2018). In Tucano, when the auxiliary verb *ia* 'want' takes an impersonal subject, the sense is one of an impersonal obligation (Bybee et al. 1994: 186). The verb *x^wje(jə)* 'want' of Besleney Kabardian has been grammaticalized to an auxiliary expressing deontic necessity (Arkadiev and Maisak 2018: 129–30).

Narrog (2012a: 161) found the following seven languages where 'want'- or 'wish'-verbs or constructions have a general necessity or obligation use: Abkhaz, Awa Pit, Modern Chinese, Kannada, Marathi, Maricopa, and Punjabi.

WANT ('want', 'like', 'love', 'desire') > (4) PROXIMATIVE

Early Modern Chinese *yu* 'hope to, want to', auxiliary > *yu* 'nearly, close to' (Long et al. 2012). Modern Chinese *yao* 'hope to, want to', auxiliary > *yao* 'nearly, close to' (Long et al. 2012).

Manda *-lond-* 'want, wish, need', verb of volition > *-lond-* 'be about to', proximative auxiliary (Bernander 2017: 217–18). ᐱᐱni *ka* 'want', verb > 'be about to', proximative auxiliary. Ex.

ᐱᐱni (Heine 1999: 21)

- (a) *Tsá ka-ra-hàn sê-kù-fiè óó-xa...*
2:M:SG want-JUNC-PERF marry-REC-PASS tomorrow
'You want to marry (your lady) tomorrow...'
- (b) *á-m̐ yì-má /q'ái-/xè ka-tè.*
DEM-M:SG tree-M:SG fall-INT want-PRES
'That tree is about to fall.'

Mandinka *lâfĩ* 'want', verb > *lâfĩ* 'be about to', proximative, avertive auxiliary (Creissels in prep.b). Ewe *dí* 'want', verb > proximative marker. Ex.

Ewe (Ameka 1990:145; Heine 1997d: 5)

- (a) *Kofí dí bé ye-a kpó wò.*
Kofi want that LOG-IRR see 2:SG
'Kofi wants to see you.'
- (b) *Tsi dí bé ye-a dza.*
water want that LOG-IRR fall
'It is about to rain.' (lit.: 'Water wants to fall.')

The Akie verb *mach* 'want' is used in its imperfective form as an auxiliary for the proximative aspect ('be on the verge of, be about to'; König et al. 2015: 61).

Chamus, dialect of Maa, -yyéú 'want', (k)e-yyéú 's/he wants', verb form > (k)eyyéú, proximative particle. Ex.

Chamus, dialect of Maa (Heine 1992: 338–9)

- (a) k-á-yyéú n-daâ.
 k-1:SG-want F-food
 'I want food'.
 (b) (k)eyyéú a- ók nánw kolé
 PROX 1:SG- drink I:NOM milk
 'I was about to drink milk.'

Chrau *co'nh* 'want to', verb > 'almost', 'about to', non-negatable preverbal particle. Ex.

Chrau (Matisoff 1991: 394)

- (a) Anh co'nh saq.
 1:SG want:to go
 'I want to go'.
 (b) Anh co'nh chu't.
 1:SG almost die
 'I am about to die'.

Hungarian *akar* 'want', 'wish', 'like', verb > proximative marker. Ex.

Hungarian (Halász 1973:15)

- (a) nem akar dolgoz-ni.
 (not 3:SG:PRES:want work- INF)
 'He does not want to work.'
 (b) A haz össze akar döl-ni.
 (ART house together want collapse- INF)
 'The house is about to collapse.'

Persian *xastan* 'want', verb > *xastan* 'to be on the point of doing something', auxiliary. Ex.

Persian (Lambton 1979: 54)

Mixast bemirad.
 want:3:SG:IMPERF die:3:SG:SUBJUNCT:PRES
 'He was about to die.'

In conjunction with the particle *ber*, the verb *hōm* 'want' of the Mehri language of Yemen and Oman has grammatical uses as a proximative marker ('be about to') (Rubin 2018).

Old English *willan* 'want', verb > *willan* 'be about to', auxiliary. Ex.

Old English (Anglo-Saxon Dictionary: 1227)

Hit wolde dagian.
 'The day was about to break.'

Thompson *-mémn*, desiderative suffix expressing wishes > *-mémn*, ‘impending event’. Ex.

Thompson (Thompson and Thompson 1992:107–8)

- (a) /x^{wə}-t-mémn kn.
‘I want to go home’
- (b) /wux^{wt}-mémn.
‘It acts as though it is going to snow.’

For a more detailed treatment of this instance of grammaticalization see Heine (1994b; 1997d) and Kuteva (1998a). As this work suggests, this pathway is usually the result of context-induced reinterpretation whereby the use of a WANT-verb is extended to a context where the main verb denotes an activity that the subject referent cannot reasonably be expected to want to happen, such as ‘to die’ or ‘to get lost’. In such contexts, a proximative interpretation is likely to arise as an optional meaning. Once the WANT-verb is further extended to contexts involving inanimate subject referents, the lexical ‘want’-meaning is suppressed and the proximative meaning is the only one that survives.

This grammaticalization is an instance of a more general process whereby verbs are grammaticalized to auxiliaries denoting tense or aspect functions; compare COME TO; DO; FINISH; GO TO; KEEP; LEAVE; TAKE; THROW. *See also* LOVE; compare NEAR.

WELL (adverb) > DISCOURSE MARKER

English *well*, adverb > *well*, discourse marker (e.g. Schiffrin 1987: 316; Traugott 1995; Jucker 1993; 1997; Traugott 1995). Ex.

English (constructed example)

- (a) *I can't hear you well.*
- (b) ***Well***, *I can't hear you.*

German *gut* ‘good, well’, adjective and adverb > *gut*, discourse marker (Detges and Waltereit 2007: 64). French *bien* ‘well’, adverb > *bien*, discourse marker (Detges and Waltereit 2007: 64). Spanish *bien* ‘well’ was originally used exclusively as an adverb. As a discourse marker it is found from the late eighteenth and early nineteenth century onwards, referring to the outcome of a contrast between two arguments, where it relates two chunks of discourse to one another (Detges and Waltereit 2007: 67–71).

Hungarian *hát* ‘well’ has given rise to the most frequently used discourse marker of the language (Dér and Markó 2010).

The present pathway cannot be described exhaustively in terms of grammaticalization. As argued in Heine (2013) and Heine et al. (2017), it also involves cooptation, a discourse strategy whereby a unit of sentence grammar, in this case an adverb, is deployed for specific discourse purposes such as expressing functions of text organization, attitudes of the speaker, and/or speaker–hearer

interaction. Whereas grammaticalization typically leads to semantic and morphosyntactic integration, cooptation has the opposite effect, that is, the unit, such as *well* in (b) above, is semantically and morphosyntactically unattached, frequently also being prosodically marked off. Thus, unlike most of the other data discussed in this book, the evolution of discourse markers is more complex, being the result of cooptation followed by grammaticalization (Heine 2013).

See also NOW > DISCOURSE MARKER; RIGHT > DISCOURSE MARKER; THEN > DISCOURSE MARKER; WHAT > DISCOURSE MARKER.

WHAT (question word) > DISCOURSE MARKER

In this pathway, an interrogative word for ‘what?’ is placed at the right periphery of an utterance, frequently set off prosodically (or by a comma in writing), in order to mark an appeal on the part of the speaker to the hearer for agreement and solidarity, very much like a tag question. According to Kuteva et al. (2018), in this new function ‘what’ can be treated as a discourse marker of appeal for solidarity. Ex.

Modern British English (OED 1906, C. Mansfield, Girl & Gods, xvi)

Good-bye, Miss Thornton, awfully jolly evening—what?

Singapore Colloquial English (<http://forums.hardwarezone.com.sg/printthread.php?t=1733690&pp=50>)¹⁰⁵

*H** L**** no good meh? quite a nice place what, no?*¹⁰⁶

In Spoken German, too, the interrogative word *was?* ‘what?’ expresses appeal for solidarity when used at the right periphery of the utterance. Ex.

Nicht schlecht die Show, was?

not bad the show what

‘It was/is not bad, the show, right?’

Likewise, it is possible to use interrogative *quoi?* ‘what?’ in Spoken French as a marker of solidarity. Ex.

Spoken French (Beeching 2002: 293)

On ne va pas se brouiller, que diable! Errare humanum est, quoi!

‘We’re not going to fall out, damn it! Errare humanum est, after all!’

According to Beeching (2002: 293–4, cited in Kuteva et al. 2018), this is an example of “a reinforcement of the appeal inherent in ‘Let’s not fall out!’ . . . The speaker provides further justification for his initial speech act, emphatically punctuated by *quoi*. *Quoi* constitutes an appeal to the interlocutor to accept the speaker’s argument.”

¹⁰⁵ Posted by: Ore0_Cheescake V2.0 19–05-2008 05:17 pm.

¹⁰⁶ Presumably, H** L**** is text-talk abbreviation for ‘hell’. *Meh* is a discourse marker used to express uncertainty in Singapore Colloquial English.

In Tamil, the interrogative form *enna* 'what' has come to function as a marker of appeal for solidarity when used at the end of the clause. Ex.

Tamil (Lakshmi Bai 1991: 203)

Naan paticcuttu tareen enna.
 I having:read will:give:it what
 'I will finish reading it and give it to you, OK?'

Similarly, in Telugu, clause-final *eenti* 'what' marks appeal for agreement. Ex.

Telugu (Lakshmi Bai 1991: 203)

nuu saayintram raavaali eenti.
 you in:the:evening should:come what
 'You must come in the evening, OK?'

A similar development of the interrogative word *mwe* 'what' into a discourse marker of solidarity can be observed in Korean. Ex.

Korean (Kuteva et al. 2018: 52)

[Context: A and B are in a hurry and A is considering jay-walking]

A: *kunyang kenne-ca amwu-to an po-nuntey, mwe.*
 just cross-HORT anyone-even not look-SFP what

'Let's just cross (the street). No one's watching (us), OK.'

This pathway is in need of further research. Kuteva et al. (2018) propose rhetorical questions of agreement as an intermediate stage in this particular development. As far as the data available suggest, the interrogative word 'what?' can be regarded as an extra-clausal constituent in the terminology of Dik (1997) or an agreement/solidarity thetical in the sense of Kaltenböck et al. (2011) and Heine et al. (2013). On this view, the development of this category involves cooptation, i.e. a shift from a sentence grammar unit to a marker serving specific discourse purposes of speaker–hearer interaction before undergoing grammaticalization (cf. Heine 2013).

See also NOW > DISCOURSE MARKER; RIGHT > DISCOURSE MARKER; SO > DISCOURSE MARKER; THEN > DISCOURSE MARKER; WELL > DISCOURSE MARKER.

'Will', see WANT

'Wish', see WANT

WOMAN ('woman', 'wife') > (1) CLASSIFIER

Zhuang *ta⁶ luk⁸ buk* 'young woman' > *ta⁶*, general classifier, or classifier for young women (Long et al. 2012). Akatek *ix* or *'ix* 'woman', noun¹⁰⁷

¹⁰⁷ The writing of the noun for 'woman' is not consistent: both forms, *ix* and *'ix*, do occur (see Zavala 2000: 121, 122).

> 'ix, classificatory particle for human beings, saints, and mythological animals (Zavala 2000: 134). Ex.

Akatek (Zavala 2000: 121,122)

- (a) *manaj* 'ox- *wan* 'ix *tu'*
not three- CLASS woman DISTAL
'It is not the three women [that the boss said].'
(b) *'eyta'* 'ox- *wan* *eb'* 'ix 'ix
EXIST:PAST three- CLASS HUM:PL CLASS woman
'There were three women lying down.'

Note that in this Akatek example, the process has grammaticalized to the extent that the lexical source meaning ('woman') can cooccur with the target meaning (classifier) in the same utterance of (b).

Kilivila *vivila*, *vivina* 'woman', noun > *na*, classificatory particle for persons of female gender, animals, stars, planets, moon, carvings in human likeness, corpses, spirits, dwarfs (Senft 1996: 174, 353). Ex.

Kilivila (Senft 1996: 22)

O da- valu- si e- sisu- si tommota to- paisewa
in 1:INCL- village- PL 3- live- PL people human:beings- work
vivila na-salau tauwau to- bugubagula tommota gala
woman female-busy men male- work:in:the:garden people not
to- dubakasala kena kumwedona e- nukwali-
human:beings- rude but all 3- know-
si bubune- si bwena.
pl manners- their good

'In our village live people taking pleasure in their work. The women are busy, the men are good gardeners. The people are not rude, but all have good manners.'

Concerning the rise and development of classifiers in Chinese, see Peyraube (1998).

This grammaticalization appears to be part of a more general process whereby certain nouns, on account of some specific semantic characteristic, are recruited as structural templates for a folk taxonomic classification of nominal concepts; *see also* BRANCH; CHILD; MAN; PIECE; SONG; TREE. More research is needed on the genetic and areal distribution of this process.

WOMAN ('woman', 'wife') > (2) FEMALE

Nouns meaning 'woman' or 'wife' appear to be natural candidates for nominal modifiers referring to female participants and, in fact, in a number of languages nouns for 'woman', 'wife', or 'mother' have given rise to closed-class items denoting 'female', encoded as adjectival or derivational markers.

There are at least forty varieties of Chinese in the northern areas of China that use a prefix meaning 'woman' to refer to female animals. Zhuang *me*⁶ 'woman' > *me*⁶, marker for female animals (Long et al. 2012). Ewe *nyónu* 'woman', noun > *-nyónu* 'female', derivative suffix of limited productivity. Ex.

Ewe (cf. Westermann 1907: 48–9)

vi *vi-nyónu*
 ‘child’ ‘daughter’

The Proto-Bantu nominal root **-kadi* includes ‘woman’, ‘wife’, and ‘female’ among its meanings, and this root has given rise to a derivative suffix ‘female’ in a number of eastern and southern Bantu languages (see, e.g., Güldemann 1999b; Creissels in prep.a). Proto-Bantu **-kadi* ‘woman’, ‘wife’, ‘female’, noun > Hunde *-katsi* ‘female’, derivative suffix.

Hunde (Mateene 1992:121; quoted from Güldemann 1999b: 57)

<i>mu-</i>	<i>twá-</i>	<i>katsi</i>	<i>im-</i>	<i>bwá-</i>	<i>katsi</i>
C1-	pygmy-	FEM	C9-	dog-	FEM
‘a pygmy woman’			‘bitch’		

Amharic *set* ‘woman’, noun > *set* ‘female referent’, modifier, e.g. *set læǧ* (woman child) ‘girl’, *set hakim* (woman doctor) ‘(female) doctor’ (Rubin 2005: 26).

More research is needed on the areal and genetic distribution of this pathway, which is an instance of a more general process whereby certain nouns, on account of some specific semantic characteristic, develop into grammatical markers highlighting this characteristic; *see also* CHILD; MAN; MOTHER.

Y

YESTERDAY > PAST

Baka *ngili* ‘yesterday’, adverb > *-ngi*, verbal suffix of near past. Ex.

Baka (Brisson and Boursier 1979: 342)

Pàmé *ʔe* *wòtò-* *ngi* *ngili*.
 wild:boar 3:SG pass- PAST yesterday
 ‘A wild boar passed (here) yesterday.’

Nyabo *pàmā* ‘yesterday’ > *ma*, past tense marker. Borobo *tróto* ‘yesterday’ > *to*, past tense marker. Dyabo *pama* ‘yesterday’ > *ma*, past tense marker. Cedepo *tómótè* ‘yesterday’ > *tè*, past tense marker. Tepo *tototo* ‘yesterday’ > *to*, past tense marker. Grebo *tèdòdò* ‘yesterday’ > *dò*, past tense marker (all examples from Marchese 1986: 256). River Cess Bassa *pàniwà* ‘yesterday’, adverb > *wà*, past tense enclitic. Ex.

River Cess Bassa (Marchese 1984: 206; 1986: 256)

ɔ *kpɔ* *wà* *smi-ɔ* *seèedè*.
 he catch PAST fish-DEF a:long:time:ago
 ‘He caught the fish a long time ago.’

Grand Bassa *maḃàa* ‘yesterday’ > *maá*, past tense marker (Marchese 1986: 256). Gbuu *pooplakana* ‘yesterday’ > *ka*, past tense marker (Marchese 1986: 257). Noyo *kaalaa* ‘yesterday’ > *la*, past tense marker. Ex.

Neyo (Marchese 1984: 206–7; 1986: 257)

Ma bóylee blá la mɔɔ.
 but foot kill PAST me
 ‘But my foot was killing me.’

Kipsikiis *koon* ‘yesterday’ > *kɔɔ* *-/koo-* (hesternal), past tense marker (Dimmendaal 1995: 34).

Gllana, Naro *thuu* ‘yesterday’, adverb > *thu*, recent past marker (Anne Maria Fehn, p.c.).

This is a conceptually plausible but possibly areally induced pathway of grammaticalization, since it appears to be confined to Africa. More research is needed on the exact nature and the genetic and areal distribution of this process.

Appendix 1 Source–Target List

<i>Source</i>	<i>Target</i>
Ability <i>see</i> PI-POSSIBILITY	
ABLATIVE	> (1) AGENT (2) COMPARATIVE (3) INSTRUMENT (4) MATERIAL (5) PARTITIVE (6) PAST, NEAR (7) A-POSSESSIVE (8) SINCE (TEMPORAL)
ACCOMPANY	> COMITATIVE
ADVERSATIVE	> MIRATIVE
AFTER	> CONSECUTIVE
AGAIN	> (1) CONCESSIVE (2) REFLEXIVE
ALL	> (1) PLURAL (2) SUPERLATIVE
ALLATIVE	> (1) COMPLEMENTIZER (2) INFINITIVE (3) PATIENT (4) PURPOSE (5) RECIPIENT (6) SEE (7) SWITCH-REFERENCE (8) TEMPORAL (9) UNTIL (TEMPORAL)
ALONE	> (1) ONLY (2) REFLEXIVE
ALREADY	> IAMITIVE
ALSO	> NP-AND
VP-AND	> (1) S-QUESTION (2) SUBORDINATOR
ANDATIVE	> EVIDENTIAL, DIRECT
ANTICAUSATIVE	> PASSIVE

(cont.)

<i>Source</i>	<i>Target</i>
Apprehensive <i>see</i> LEST	
AREA	> LOCATIVE
ARRIVE	> (1) ALLATIVE (2) PI-POSSIBILITY (3) SUCCEED (4) UNTIL (TEMPORAL)
BACK	> (1) AFTER (2) BEHIND (3) CAUSE (4) EARLIER (5) THEN (6) UP (SPATIAL)
BAD	> INTENSIVE
BEAT	> PRO-VERB
BEGIN	> (1) FIRST (NUMERAL) > (2) FIRST (TEMPORAL) (3) INCEPTIVE
BEHIND (SPATIAL)	> AFTER
BELLY	> (1) IN (SPATIAL) (2) IN (TEMPORAL)
BENEFACTIVE	(1) A-POSSESSIVE (2) PURPOSE (3) RECIPIENT
BODY	> (1) INTENSIFIER > (2) MIDDLE (3) RECIPROCAL (4) REFLEXIVE
BOTTOM	> DOWN (SPATIAL)
BOUNDARY	> UNTIL
BOWELS	> IN (SPATIAL)
BRANCH	> CLASSIFIER
BREAST	> FRONT
BUTTOCKS	> (1) BEHIND (2) DOWN
CAUSE	> ADVERSATIVE
CENTRE	> (1) BETWEEN (2) IN (SPATIAL)
CHANGE-OF-STATE	> (1) COPULA (2) FUTURE (3) PASSIVE
CHILD	> (1) CLASSIFIER (2) DIMINUTIVE (3) PARTITIVE
CHILDREN	> PLURAL
CIRCLE	> AROUND (SPATIAL)

(cont.)

<i>Source</i>	<i>Target</i>
COME	> (1) IMPERATIVE (2) NEW-EVENT (3) PASSIVE (4) PROGRESSIVE (5) VENITIVE
COME FROM	> (1) ABLATIVE (LOCATIVE, TEMPORAL) (2) NEAR PAST
COME TO	> (1) BENEFACTIVE (2) CHANGE-OF-STATE (3) FUTURE (4) PROXIMATIVE (5) PURPOSE
COMITATIVE	> (1) AGENT (2) NP-AND (3) S-AND (4) CAUSATIVE (5) EXIST (6) INSTRUMENT (7) MANNER (8) PASSIVE (9) H-POSSESSIVE (10) PROGRESSIVE (11) TEMPORAL
COMPARATIVE (+ NEGATION)	> NO LONGER
COMPLEMENTIZER	> PURPOSE
COMRADE	> (1) COMITATIVE (2) RECIPROCAL
CONDITIONAL	> CONCESSIVE
COPULA	> (1) AGENT (2) AVERTIVE (3) CONDITIONAL (4) CONSECUTIVE (5) FOCUS (6) OBLIGATION
COPULA, LOCATIVE	> (1) APPLICATIVE (2) EXIST (3) LOCATIVE (4) H-POSSESSIVE (5) PROGRESSIVE
CROSS	> (1) EXPERIENTIAL (2) PERLATIVE
Dative <i>see</i> RECIPIENT	
Defeat, to <i>see</i> EXCEED	
DEFINITE	> (1) ERGATIVE (2) SUPERLATIVE

(cont.)

<i>Source</i>	<i>Target</i>
DEMONSTRATIVE	> (1) COMPLEMENTIZER (2) CONJUNCTION (3) COPULA (4) DEFINITE (5) FILLER (6) FOCUS (7) PERS-PRON, THIRD (8) RELATIVE (9) SUBORDINATOR
Deontic modality <i>see</i> D-NECESSITY, D-POSSIBILITY	
DESCEND	> DOWN
Desire <i>see</i> WANT	
DO	> (1) CAUSATIVE (2) EMPHASIS (3) OBLIGATION (4) PRO-VERB (5) PROGRESSIVE
DUAL	> NP-AND
EAR	> LOCATIVE
EARTH	> DOWN
EAT	> PASSIVE
EDGE	> LOCATIVE
ENTER	> IN (SPATIAL)
ENVIRONS	> AROUND (SPATIAL)
ERGATIVE	> CAUSE
EVER	> EXPERIENTIAL
EVIDENTIAL, INFERRED	> MIRATIVE
EXCEED	> (1) COMPARATIVE (2) ELATIVE
EXIST	> (1) COPULA (2) H-POSSESSIVE (3) PROGRESSIVE
EYE	> (1) BEFORE (2) FRONT
FACE	> (1) FRONT (2) UP
FAIL	> AVERTIVE
FALL	> (1) CHANGE-OF-STATE (2) DOWN (3) PASSIVE
FATHER	> MALE
FIELD	> OUT
FINISH	> (1) AFTER (2) ALREADY (3) COMPLETIVE

(cont.)

<i>Source</i>	<i>Target</i>
	(4) CONSECUTIVE
	(5) IAMITIVE
	(6) PAST
	(7) PERFECTIVE
FIRST (TEMPORAL)	> BEFORE
FLANK	> SIDE (SPATIAL)
FOLLOW	> (1) ACCORDING TO
	(2) BEHIND
	(3) CAUSE
	(4) COMITATIVE
	(5) NP-AND
FOOT	DOWN
FOOTPRINT	> BEHIND
FOREHEAD	> FRONT
FRONT	> (1) BEFORE
	(2) LATER
FUTURE	> E-NECESSITY
GET	> (1) CHANGE-OF-STATE
	(2) D-NECESSITY
	(3) PASSIVE
	(4) PAST
	(5) H-POSSESSIVE
	(6) C-POSSIBILITY
	(7) D-POSSIBILITY
	(8) E-POSSIBILITY
	(9) PI-POSSIBILITY
	(10) SUCCEED
GIVE	> (1) BENEFACTIVE
	(2) CAUSATIVE
	(3) CAUSE
	(4) CONCERN
	(5) IMPERATIVE
	(6) PASSIVE
	(7) PATIENT
	(8) PERMISSION
	(9) PURPOSE
	(10) RECIPIENT
GO	> (1) ANDATIVE
	(2) CHANGE-OF-STATE
	(3) DEMONSTRATIVE
	(4) DURATIVE
	(5) HABITUAL
	(6) IMPERATIVE
	(7) NEW-EVENT
	(8) PASSIVE

(cont.)

<i>Source</i>	<i>Target</i>
GO TO	> (9) PROGRESSIVE > (1) ALLATIVE > (2) FUTURE > (3) PURPOSE
GOD	> INTERJECTION
GOOD	> D-POSSIBILITY
HAND	> (1) AGENT > (2) FIVE > (3) LOCATIVE > (4) H-POSSESSIVE
HEAD	> (1) FRONT > (2) INTENSIFIER > (3) MIDDLE > (4) REFLEXIVE > (5) UP > (6) CLASSIFIER
HEAR	> EVIDENTIAL
HEART	> IN (SPATIAL)
HELP	> BENEFACTIVE
HERE	> (1) CAUSE > (2) DEMONSTRATIVE > (3) PERS-PRON > (4) RELATIVE
HOME	> (1) LOCATIVE > (2) A- POSSESSIVE
HOOR	> TEMPORAL
HOUSE	> LOCATIVE
HOW? (W-QUESTION)	> (1) COMPARATIVE > (2) SIMILATIVE
IAMITIVE	> PERFECT
IN (SPATIAL)	> (1) DURATIVE > (2) PROGRESSIVE > (3) TEMPORAL
INDEFINITE	> COMMON
INDEFINITE PRONOUN	> PERS-PRON, FIRST PLURAL
INSTRUMENT	> (1) ABLATIVE > (2) AGENT > (3) ERGATIVE > (4) MANNER
INTENSIFIER	> (1) EVEN > (2) PERS-PRON, THIRD > (3) REFLEXIVE
Intention <i>see</i> B-NECESSITY	
INTERIOR	> (1) IN (SPATIAL) > (2) TEMPORAL

(cont.)

<i>Source</i>	<i>Target</i>
ITERATIVE	> (1) HABITUAL (2) STILL
Intestines <i>see</i> BOWELS	
Itive <i>see</i> ANDATIVE	
KEEP	> (1) DURATIVE (2) H-POSSESSIVE (3) PROGRESSIVE
KNOW	> (1) EVIDENTIAL (2) EXPERIENTIAL (3) HABITUAL (4) PI-POSSI BILITY
LACK	> NEGATION
LEAVE	> (1) ABLATIVE (2) COMPLETIVE (3) EGRESSIVE (4) IMPERATIVE (5) NEGATION (6) PERMISSION
LIE	> (1) DURATIVE (2) PROGRESSIVE
LIMIT	> UNTIL
LIP	> LOCATIVE
LISTEN	> DISCOURSE MARKER
LIVE	> (1) COPULA, LOCATIVE (2) HABITUAL (3) PROGRESSIVE (4) EXIST
LIVER	> LOCATIVE
LOCATIVE	> (1) AGENT (2) BENEFACTIVE (3) CAUSE (4) COMITATIVE (5) COMPARATIVE (6) COMPLETIVE (7) CONCERN (8) EXIST (9) INSTRUMENT (10) PERS-PRON (11) A - POSSESSIVE (12) H-POSSESSIVE (13) PROGRESSIVE (14) RELATIVE (15) SUBORDINATOR (16) TEMPORAL
LOOK	> DISCOURSE MARKER

(cont.)

<i>Source</i>	<i>Target</i>
LOVE	> (1) AVERTIVE (2) FUTURE (3) INTENTION (4) PROXIMATIVE
Make <i>see</i> DO	
MAN	> (1) CLASSIFIER (2) INDEFINITE PRONOUN (3) INTERJECTION (4) MALE (5) THIRD PERS-PRON
MANNER	> SIMILATIVE
MATTER	> (1) CAUSE (2) COMPLEMENTIZER (3) PURPOSE
MORE	> ADVERSATIVE
MOTHER	> AUGMENTATIVE
MOTHER	> FEMALE
MOUTH	> FRONT
NEAR	> (1) AFTER (2) AVERTIVE, PROXIMATIVE
B-NECESSITY (Intention)	> (1) FUTURE (2) PURPOSE
D-NECESSITY (Obligation)	> (1) FUTURE (2) B-NECESSITY (3) E-NECESSITY (4) D-POSSIBILITY (5) PURPOSE
NECK	> LOCATIVE
NEAR	> AVERTIVE, PROXIMATIVE
B-NECESSITY (Intention)	> FUTURE
B-NECESSITY (Intention)	> PURPOSE
D-NECESSITY (Obligation)	> FUTURE
D-NECESSITY (Obligation)	> E-NECESSITY (Probability)
D-NECESSITY (Obligation)	> D-POSSIBILITY (Permission)
D-NECESSITY (Obligation)	> PURPOSE
NEED	> OBLIGATION
NEGATION	> (1) LEST (2) S-QUESTION
NEGATION, EXIST	> NO, NEGATION
NOMINALIZER	> (1) DISCOURSE MARKER (2) PASSIVE (3) RELATIVE
NOW	> (1) DISCOURSE MARKER (2) STILL

(cont.)

<i>Source</i>	<i>Target</i>
Obligation <i>see</i> D-NECESSITY	
On <i>see</i> UP	
ONE	> (1) ALONE (2) INDEFINITE (3) INDEFINITE PRONOUN (4) ONLY (5) OTHER (6) SAME (7) SINGULATIVE (8) SOME (9) TOGETHER
OR	> S-QUESTION
OSTENSIVE PREDICATOR	> COPULA
OWE	D-NECESSITY
OWNER	> INTENSIFIER
PASS	> (1) AFTER (2) COMPARATIVE (3) EXPERIENTIAL (4) PAST (5) PATH
PASSIVE	> POTENTIAL
PATH	> (1) AGENT (2) INSTRUMENT
PEOPLE	> (1) PERS-PRON, FIRST PLURAL (2) PERS-PRON, THIRD PLURAL (3) PLURAL
PERFECT	> (1) EVIDENTIAL, INFERRED (2) MIRATIVE (3) PAST (4) PERFECTIVE
PERHAPS	> (1) OR (2) S-QUESTION
PERLATIVE	> AGENT
Permission <i>see</i> D-POSSIBILITY	
PERS-PRON, PLURAL	> SINGULAR (Honorific)
PERS-PRON, THIRD	> (1) AGREEMENT (2) COPULA (3) DEFINITE
PERS-PRON, THIRD PLURAL	> (1) IMPERSONAL (2) PASSIVE (3) PLURAL
PERSON	> (1) INDEFINITE PRONOUN (2) PERS-PRON, FIRST PLURAL (3) PERS-PRON, THIRD (4) W-QUESTION

(cont.)

<i>Source</i>	<i>Target</i>
PIECE	> CLASSIFIER
PLACE	> (1) CAUSE (2) LOCATIVE (3) NOMINALIZER (4) REPLACIVE
A-POSSESSIVE	> (1) AGENT (2) PARTITIVE (3) RECIPIENT
H-POSSESSIVE	> (1) EXIST (2) FUTURE (3) OBLIGATION (4) PERFECT
C-POSSIBILITY (Root possibility)	> (1) D-POSSIBILITY (2) E-POSSIBILITY
D-POSSIBILITY (Permission)	> D-NECESSITY
PI-POSSIBILITY (Ability)	> (1) C-POSSIBILITY (2) D-POSSIBILITY (3) E-POSSIBILITY
PROGRESSIVE	> (1) HABITUAL (2) IMPERFECTIVE (3) PRESENT
PROPERTY	> A-POSSESSIVE
PROMISE	> PROXIMATIVE
PURPOSE	-> (1) CAUSE (2) INFINITIVE
PUT	> COMPLETIVE
S-QUESTION	> CONDITIONAL
S-QUESTION	> (1) CONDITIONAL (2) TOPIC
W-QUESTION	> (1) COMPLEMENTIZER (2) INDEFINITE PRONOUN (3) RELATIVE
QUOTATIVE	> COMPLEMENTIZER
Reach, to <i>see</i> ARRIVE	
Reason, <i>see</i> CAUSE	
Receive, to <i>see</i> GET	
RECIPIENT	> (1) AGENT (2) COMPARATIVE (3) PATIENT (4) A-POSSESSIVE (5) B-POSSESSIVE (6) H-POSSESSIVE
REFLEXIVE	> (1) ANTICAUSATIVE (2) ANTIPASSIVE (3) MIDDLE

(cont.)

<i>Source</i>	<i>Target</i>
	(4) PASSIVE
	(5) RECIPROCAL
RELATIVE	> COMPLEMENTIZER
REMAIN	> (1) DURATIVE
	(2) HABITUAL
RESEMBLE	(1) COMPARATIVE
	(2) COMPLEMENTIZER
	(3) SIMILATIVE
RETURN	> (1) AGAIN
	(2) ITERATIVE
RIGHT	> DISCOURSE MARKER
Root possibility <i>see</i> C-POSSIBILITY	
SAME	> INTENSIFIER
SAY	> (1) CAUSE
	(2) COMPLEMENTIZER
	(3) CONDITIONAL
	(4) DISCOURSE MARKER
	(5) EVIDENTIAL, QUOTATIVE
	(6) EVIDENTIAL, REPORTED
	(7) PURPOSE
	(8) QUOTATIVE
	(9) SIMILATIVE
	(10) SUBORDINATOR
	(11) TOPIC
SEE	> (1) ALLATIVE
	(2) COPULA
	(3) EVIDENTIAL, DIRECT
	(4) OSTENSIVE PREDICATOR
	(5) PASSIVE
SEND	> CAUSATIVE
SHOULDER	> (1) BEHIND
	(2) UP
SIDE	> (1) BESIDE
	(2) LOCATIVE
	(3) NEAR
SIMILATIVE	> (1) ACCORD
	(2) COMPLEMENTIZER
	(3) GLOTTONYM
	(4) D-NECESSITY
	(5) PURPOSE
	(6) QUOTATIVE
	(7) TEMPORAL
SINCE (TEMPORAL)	> CAUSE
SIT	> (1) COPULA
	(2) DURATIVE

(cont.)

<i>Source</i>		<i>Target</i>
		(3) HABITUAL
		(4) PROGRESSIVE
SKY	>	UP
SO	>	DISCOURSE MARKER
SONG	>	CLASSIFIER
SOUL	>	REFLEXIVE
STAND	>	(1) COPULA
		(2) DURATIVE
		(3) PROGRESSIVE
STOP	>	PROHIBITIVE
SUFFER	>	PASSIVE
SUITABLE	>	(1) D-NECESSITY
		(2) PI-POSSIBILITY
SURROUND	>	AROUND (SPATIAL)
TAKE	>	(1) CAUSATIVE
		(2) COMITATIVE
		(3) COMPLETIVE
		(4) FUTURE
		(5) INSTRUMENT
		(6) PATIENT
		(7) H-POSSESSIVE
		(8) C-POSSIBILITY
		(9) REPLACIVE
TASTE	>	EXPERIENTIAL
TEMPORAL		(1) ADVERSATIVE
		(2) CAUSE
		(3) CONCESSIVE
		(4) CONDITIONAL
		(5) LEST
THEN	>	(1) DISCOURSE MARKER
		(2) FUTURE
THERE	>	(1) DEMONSTRATIVE
		(2) PERS-PRON
THING	>	(1) COMPLEMENTIZER
		(2) INDEFINITE PRONOUN
		(3) A- POSSESSIVE
		(4) W-QUESTION
		(5) NOMINALIZER
THREATEN	>	PROXIMATIVE
THREE	>	TRIAL
THROW	>	PERFECT
TIME	>	TEMPORAL
TOMORROW	>	(1) FUTURE
		(2) NEXT
TOP	>	UP

(cont.)

<i>Source</i>	<i>Target</i>
TOUCH	> EXPERIENTIAL
TRACE	> (1) AFTER (2) BEHIND
TREE	> CLASSIFIER
TRUE	> INTENSIVE
TWO	> (1) DUAL (2) NP-AND
UNTIL	> EQUATIVE COMPARATIVE
UP	> (1) ADDITIVE (2) COMPARATIVE (3) CONCERN
USE	> (1) HABITUAL (2) INSTRUMENT
VENITIVE	> (1) CHANGE-OF-STATE (2) FUTURE
Ventive <i>see</i> VENITIVE	
WANT	> (1) AVERTIVE (2) FUTURE (3) D-NECESSITY (4) PROXIMATIVE
WELL	> DISCOURSE MARKER
WHAT	> DISCOURSE MARKER
WOMAN	> (1) CLASSIFIER (2) FEMALE
YESTERDAY	> PAST

Appendix 2 Target–Source List

Target	Source
Ability <i>see</i> PI-POSSIBILITY	
ABLATIVE (LOCATIVE, TEMPORAL)	< (1) COME FROM (2) LEAVE
ACCORD	< (1) FOLLOW (2) SIMILATIVE
ADDITIVE	< UP
ADVERSATIVE	< (1) CAUSE (2) MORE (3) TEMPORAL
AFTER	< (1) BACK (2) BEHIND (SPATIAL) (3) FINISH (4) NEAR (5) PASS (6) TRACE
AGAIN	< RETURN
AGENT	< (1) ABLATIVE (2) COMITATIVE (3) COPULA (4) HAND (5) INSTRUMENT (6) LOCATIVE (7) PATH (8) PERLATIVE (9) A-POSSESSIVE (10) RECIPIENT
AGREEMENT	< PERS-PRON, THIRD
ALLATIVE	< (1) ARRIVE (2) GO TO (3) SEE
ALONE	< ONE (NUMERAL)
ALREADY	< FINISH
NP-AND	< (1) ALSO (2) COMITATIVE

(cont.)

<i>Target</i>	<i>Source</i>
	(3) DUAL
	(4) TWO
	(5) FOLLOW
S-AND	< COMITATIVE
ANDATIVE	< GO
ANTICAUSATIVE	< REFLEXIVE
ANTIPASSIVE	< REFLEXIVE
APPLICATIVE	< COPULA, LOCATIVE
Apprehensive <i>see</i> LEST	
AROUND (SPATIAL)	< (1) CIRCLE
	(2) ENVIRONS
	(3) SURROUND
AVERTIVE	< (1) COPULA
	(2) FAIL
	(3) LOVE
	(4) NEAR
	(5) WANT
BEFORE	< (1) EYE
	(2) FIRST (TEMPORAL)
	(3) FRONT
BEHIND	< (1) BACK
	(2) BUTTOCKS
	(3) FOLLOW
	(4) FOOTPRINT
	(5) SHOULDER
	(6) TRACE
BENEFACTIVE	< (1) COME TO
	(2) GIVE
	(3) HELP
	(4) LOCATIVE
BESIDE	< SIDE
BETWEEN	< CENTRE
CAUSATIVE	< (1) COMITATIVE
	(2) DO
	(3) GIVE
	(4) SEND
	(5) TAKE
CAUSE	< (1) BACK
	(2) ERGATIVE
	(3) FOLLOW
	(4) GIVE
	(5) HERE
	(6) LOCATIVE
	(7) MATTER
	(8) PLACE

(cont.)

<i>Target</i>	<i>Source</i>
	(9) PURPOSE
	(10) SAY
	(11) SINCE (TEMPORAL)
	(12) TEMPORAL
CHANGE-OF-STATE	< (1) COME TO
	(2) FALL
	(3) GET
	(4) GO
	(5) VENITIVE
CLASSIFIER	< (1) BRANCH
	(2) CHILD
	(3) HEAD
	(4) MAN
	(5) PIECE
	(6) SONG
	(7) TREE
	(8) WOMAN
COMITATIVE	< (1) ACCOMPANY
	(2) COMRADE
	(3) FOLLOW
	(4) LOCATIVE
	(5) TAKE
COMMON	< INDEFINITE
COMPARATIVE	< (1) ABLATIVE
	(2) EXCEED
	(3) HOW? (W-QUESTION)
	(4) LOCATIVE
	(5) PASS
	(6) RECIPIENT
	(7) RESEMBLE
	(8) UP
COMPARATIVE, EQUATIVE	< UNTIL
COMPLEMENTIZER	< (1) ALLATIVE
	(2) DEMONSTRATIVE
	(3) MATTER
	(4) W-QUESTION
	(5) QUOTATIVE
	(6) RELATIVE
	(7) RESEMBLE
	(8) SAY
	(9) SIMILATIVE
	(10) THING
COMPLETIVE	< (1) FINISH
	(2) LEAVE
	(3) LOCATIVE

(cont.)

<i>Target</i>		<i>Source</i>
		(4) PUT
		(5) TAKE
CONCERN	<	(1) GIVE
		(2) LOCATIVE
		(3) UP
CONCESSIVE	<	(1) AGAIN
		(2) CONDITIONAL
		(3) TEMPORAL
CONDITIONAL	<	(1) COPULA
		(2) S-QUESTION
		(3) SAY
		(4) TEMPORAL
CONJUNCTION	<	DEMONSTRATIVE
CONSECUTIVE	<	(1) AFTER
		(2) COPULA
		(3) FINISH
COPULA	<	(1) CHANGE-OF-STATE
		(2) DEMONSTRATIVE
		(3) EXIST
		(4) OSTENSIVE PREDICATOR
		(5) PERS-PRON, THIRD
		(6) SEE
		(7) SIT
		(8) STAND
COPULA, EQUATIVE	<	COPULA, LOCATIVE
COPULA, LOCATIVE	<	LIVE
DEFINITE	<	(1) DEMONSTRATIVE
	<	(2) PERS-PRON, THIRD
DEMONSTRATIVE	<	(1) GO
		(2) HERE
		(3) THERE
DIMINUTIVE	<	CHILD
DISCOURSE MARKER	<	(1) LISTEN
		(2) LOOK
		(3) NOMINALIZER
		(4) NOW
		(5) RIGHT
		(6) SAY
		(7) SO
		(8) THEN
		(9) WELL
		(10) WHAT
DOWN	<	(1) BOTTOM
		(2) BUTTOCKS
		(3) DESCEND

(cont.)

<i>Target</i>		<i>Source</i>
		(4) EARTH
		(5) FALL
		(6) FOOT
DUAL	<	TWO
DURATIVE	<	(1) GO
		(2) IN
		(3) KEEP
		(4) LIE
		(5) REMAIN
		(6) SIT
		(7) STAND
EARLIER	<	BACK
EGRESSIVE	<	LEAVE
ELATIVE	<	EXCEED
EMPHASIS	<	DO
Epistemic modality <i>see</i> E-NECESSITY, E-POSSIBILITY		
ELATIVE	<	EXCEED
ERGATIVE	<	(1) DEFINITE
		(2) INSTRUMENT
EVEN	<	INTENSIFIER
EVIDENTIAL	<	(1) HEAR
		(2) KNOW
EVIDENTIAL, DIRECT	<	(1) ANDATIVE
		(2) SEE
EVIDENTIAL, INFERRED	<	(1) MIRATIVE
		(2) PERFECT
EVIDENTIAL, QUOTATIVE	<	SAY
EVIDENTIAL, REPORTED	<	SAY
Exclamation <i>see</i> INTERJECTION		
EXIST	<	(1) COMITATIVE
		(2) LOCATIVE COPULA
		(3) LIVE
		(4) LOCATIVE
		(5) H-POSSESSIVE
EXPERIENTIAL	<	(1) CROSS
		(2) EVER
		(3) KNOW
		(4) PASS
		(5) TASTE
		(6) TOUCH
FEMALE	<	(1) MOTHER
		(2) WOMAN
FILLER	<	DEMONSTRATIVE
FIRST (NUMERAL)	<	BEGIN
FIRST (TEMPORAL)	<	BEGIN
FIVE	<	HAND

(cont.)

<i>Target</i>	<i>Source</i>
FOCUS	< (1) COPULA (2) DEMONSTRATIVE
FRONT	< (1) BREAST (2) EYE (3) FACE (4) FOREHEAD (5) HEAD (6) MOUTH
FUTURE	< (1) CHANGE-OF-STATE (2) COME TO (3) GO TO (4) LOVE (5) B-NECESSITY (6) D-NECESSITY (7) H-POSSESSIVE (8) TAKE (9) THEN (10) TOMORROW (11) VENITIVE (12) WANT
HABITUAL	< (1) GO (2) ITERATIVE (3) LIE (4) KNOW (5) LIVE (6) PROGRESSIVE (7) REMAIN (8) SIT (9) USE
IAMITIVE	< (1) ALREADY (2) FINISH
IMPERATIVE	< (1) COME (2) GIVE (3) GO (4) LEAVE
IMPERFECTIVE	< (1) PROGRESSIVE (2) STAND
IMPERATIVE	< (1) COME (2) GO (3) GIVE (4) LEAVE
IMPERFECTIVE	< PROGRESSIVE
IMPERSONAL	< PERS-PRON, THIRD PLURAL
IN (SPATIAL)	< (1) BELLY (2) BOWELS (3) CENTRE

(cont.)

<i>Target</i>		<i>Source</i>
		(4) ENTER
		(5) HEART
		(6) INTERIOR
IN (TEMPORAL)	<	(1) BELLY
		(2) IN (SPATIAL)
INCEPTIVE	<	BEGIN
INDEFINITE	<	ONE
INDEFINITE PRONOUN	<	(1) MAN
		(2) ONE
		(3) PERSON
		(4) W-QUESTION
		(5) THING
INFINITIVE	<	(1) ALLATIVE
	<	(2) PURPOSE
Instead <i>see</i> REPLACIVE		
INSTRUMENT	<	(1) ABLATIVE
	<	(2) COMITATIVE
		(3) LOCATIVE
		(4) PATH
		(5) TAKE
		(6) USE
INTENSIVE	<	(1) BAD
		(2) TRUE
INTENSIFIER	<	(1) BODY
		(2) HEAD
		(3) OWNER
		(4) SAME
Intention <i>see</i> B-NECESSITY		
INTENTION	<	LOVE
INTERJECTION	<	(1) GOD
		(2) MAN
ITERATIVE	<	RETURN
Itive <i>see</i> ANDATIVE		
LATER	<	(1) FRONT
		(2) THEN
LEST	<	(1) NEGATION
	<	(2) TEMPORAL
LOCATIVE	<	(1) AREA
		(2) COPULA, LOCATIVE
		(3) EAR
		(4) EDGE
		(5) HAND
		(6) HOME
		(7) HOUSE
		(8) LIP

(cont.)

<i>Target</i>	<i>Source</i>
	(9) LIVER
	(10) NECK
	(11) PLACE
	(12) SIDE
MALE	< (1) FATHER
	(2) MAN
MANNER	< (1) COMITATIVE
	(2) INSTRUMENT
MATERIAL	< ABLATIVE
MIDDLE	< (1) BODY
	(2) HEAD
	(3) REFLEXIVE
MIRATIVE	< (1) ADVERSATIVE
	(2) EVIDENTIAL, INFERRED
	(3) PERFECT
NEAR	< SIDE
B-NECESSITY (Intention)	< (1) LOVE
	(2) D-NECESSITY
D-NECESSITY (Obligation)	< (1) COPULA
	(2) DO
	(3) GET
	(4) NEED
	(5) OWE
	(6) H-POSSESSIVE
	(7) SIMILATIVE
	(8) D-POSSIBILITY
	(9) WANT
	(10) SUITABLE
E-NECESSITY (Probability)	< (1) FUTURE
	(2) D-NECESSITY
NEGATION	< (1) LACK
	(2) LEAVE
	(3) NEGATION, EXIST
NEW-EVENT	< (1) COME
	(2) GO
NEXT	< TOMORROW
NO	< NEGATION, EXIST
NO LONGER	< COMPARATIVE (+ NEGATION)
NOMINALIZER	< (1) PLACE
	(2) THING
Obligation <i>see</i> D-NECESSITY	
OR	< PERHAPS
OTHER	< ONE
OSTENSIVE PREDICATOR	< SEE
OUT	< FIELD
PARTITIVE	< (1) ABLATIVE

(cont.)

<i>Target</i>		<i>Source</i>
		(2) CHILD
		(3) A-POSSESSIVE
PASSIVE	<	(1) ANTICAUSATIVE
		(2) CHANGE-OF-STATE
		(3) COME
		(4) COMITATIVE
		(5) EAT
		(6) FALL
		(7) GET
		(8) GIVE
		(9) GO
		(10) NOMINALIZER
		(11) PERS-PRON, THIRD PLURAL
		(12) REFLEXIVE
		(13) SEE
		(14) SUFFER
PAST	<	(1) FINISH
		(2) GET
		(3) PASS
		(4) PERFECT
		(5) YESTERDAY
PAST, NEAR	<	(1) ABLATIVE
		(2) COME FROM
PATH	<	PASS
PATIENT	<	(1) ALLATIVE
		(2) GIVE
		(3) RECIPIENT
		(4) TAKE
PERFECT	<	(1) H-POSSESSIVE
		(2) IAMITIVE
		(3) THROW
PERFECTIVE	<	(1) FINISH
		(2) PERFECT
PERLATIVE	<	CROSS
Permission <i>see</i> D-POSSIBILITY		
PERS-PRON	<	(1) HERE
		(2) LOCATIVE
		(3) THERE
PERS-PRON, FIRST PLURAL	<	(1) INDEFINITE PRONOUN
		(2) PEOPLE
		(3) PERSON
PERS-PRON, THIRD	<	(1) DEMONSTRATIVE
		(2) INTENSIFIER
		(3) MAN
		(4) PERSON
PERS-PRON, THIRD PLURAL	<	PEOPLE

(cont.)

<i>Target</i>		<i>Source</i>
PLURAL	<	(1) ALL (2) CHILDREN (3) PEOPLE (4) PERS-PRON, THIRD PLURAL (5) THREE
A-POSSESSIVE	<	(1) ABLATIVE (2) BENEFACTIVE (3) HOME (4) LOCATIVE (5) PROPERTY (6) RECIPIENT (7) THING
B-POSSESSIVE	<	RECIPIENT
H-POSSESSIVE	<	(1) COMITATIVE (2) COPULA, LOCATIVE (3) EXIST (4) GET (5) HAND (6) KEEP (7) LOCATIVE (8) RECIPIENT
C-POSSIBILITY (Root possibility)	<	(1) PI-POSSIBILITY (2) SUITABLE (3) TAKE
D-POSSIBILITY (Permission)	<	(1) GET (2) GIVE (3) GOOD (4) LEAVE (5) C-POSSIBILITY (6) D-NECESSITY (7) PI-POSSIBILITY
E-POSSIBILITY (Possibility)	<	(1) GET (2) C-POSSIBILITY (3) PI-POSSIBILITY
PI-POSSIBILITY (Ability)	<	(1) ARRIVE (2) GET (3) KNOW (4) C-POSSIBILITY (5) SUITABLE
POTENTIAL	<	PASSIVE
PRESENT	<	PROGRESSIVE
PRO-VERB	<	(1) BEAT (2) DO
Probability <i>see</i> E-NECESSITY		
PROGRESSIVE	<	(1) COME

(cont.)

<i>Target</i>	<i>Source</i>
	(2) COMITATIVE
	(3) COPULA, LOCATIVE
	(4) DO
	(5) EXIST
	(6) GO
	(7) IN (SPATIAL)
	(8) KEEP
	(9) LIE
	(10) LIVE
	(11) LOCATIVE
	(12) SIT
	(13) STAND
PROHIBITIVE	< STOP
PROXIMATIVE	< (1) COME TO
	(2) LOVE
	(3) NEAR
	(4) PROMISE
	(5) THREATEN
	(6) WANT
PURPOSE	< (1) ALLATIVE
	(2) BENEFACTIVE
	(3) COME TO
	(4) COMPLEMENTIZER
	(5) GIVE
	(6) GO TO
	(7) MATTER
	(8) B-NECESSITY
	(9) D-NECESSITY
	(10) SAY
	(11) SIMILATIVE
S-QUESTION	< (1) VP-AND
	(2) NEGATION
	(3) OR
	(4) PERHAPS
W-QUESTION	< (1) PERSON
	(2) THING
QUOTATIVE	< (1) SAY
	(2) SIMILATIVE
RECIPIENT	< (1) ALLATIVE
	(2) BENEFACTIVE
	(3) GIVE
	(4) A-POSSESSIVE
RECIPROCAL	< (1) BODY
	(2) COMRADE
	(3) REFLEXIVE

(cont.)

<i>Target</i>	<i>Source</i>
REFLEXIVE	< (1) AGAIN (2) ALONE (3) BODY (4) HEAD (5) INTENSIFIER (6) SOUL
RELATIVE	< (1) DEMONSTRATIVE (2) HERE (3) LOCATIVE (4) NOMINALIZER (5) W-QUESTION
REPLACIVE	< (1) PLACE (2) TAKE
SAME	< ONE
SIDE (SPATIAL)	< FLANK
SIMILATIVE	< (1) HOW? (2) MANNER (3) RESEMBLE (4) SAY
SINCE (TEMPORAL)	< ABLATIVE
SINGULAR (Honorific)	< PERS-PRON, PLURAL
SINGULATIVE	< ONE
SOME	< ONE
STILL	< (1) ITERATIVE (2) NOW
SUBORDINATOR	< (1) VP-AND (2) DEMONSTRATIVE (3) LOCATIVE (4) SAY
SUCCEED	< (1) GET (2) ARRIVE
SUPERLATIVE	< (1) ALL (2) DEFINITE
SWITCH-REFERENCE	< ALLATIVE
TEMPORAL	< (1) ALLATIVE (2) COMITATIVE (3) HOUR (4) IN (SPATIAL) (5) INTERIOR (6) LOCATIVE (7) SIMILATIVE (8) TIME
THEN	< BACK
THIRD PERS-PRON	< (1) DEMONSTRATIVE (2) MAN

(*cont.*)

<i>Target</i>		<i>Source</i>
TOGETHER	<	ONE
TOPIC	<	(1) S-QUESTION (2) SAY
TRIAL	<	THREE
UNTIL	<	(1) ALLATIVE (2) ARRIVE (3) BOUNDARY (4) LIMIT
UP	<	(1) BACK (2) FACE (3) HEAD (4) SHOULDER (5) SKY (6) TOP
VENITIVE	<	COME
ventive <i>see</i> VENITIVE		

Appendix 3 A List of Languages

The following is a list of all languages treated in this work, including some signed languages. The information on language classification added after a semi-colon is meant to assist the reader in locating the languages treated; that is, it serves primarily a referential purpose. Some of the genetic classifications consulted are not, or no longer, agreed upon by the relevant authorities; hence, the information on classification must be taken with care. Information is confined to listing, first, the language name (followed by a semi-colon), second, the branch or subfamily, and, third, the name of the family or phylum.

The plus sign ⁺ stands for an extinct or ancient language, e.g. Latin⁺. Pidgin (P) and creole (C) examples are marked by adding abbreviated labels after the language name. For example, “CE” stands for “English-based creole”. Note that the classification underlying this usage is a crude one, since terms like “English-based”, “Portuguese-based”, and so on are discussed controversially, and the boundary between pidgins and creole languages is often fuzzy, if there is a boundary in the first place.

|Xam⁺; Tuu (“Southern Khoisan”)
!Xóǝ; Tuu (“Southern Khoisan”)
!Xun (!Kung, Zhu, Ju); Kx’a (“Northern Khoisan”)
!Ora (Korana); Khoekhoe, Khoe (“Central Khoisan”)
||Ani; Kalahari Khoe, Khoe (“Central Khoisan”)
Abaza; Northwest, North, Caucasian
Abipon; Guiaicuruan
Abkhaz (Abxaz); Northwest, North, Caucasian
Abma (Apma); Oceanic, Austronesian
Abruzzese; Romance, Indo-European
Accadian, *see* Akkadian
Acholi; Western Nilotic, Nilo-Saharan
Acoma Keresan; Keresiouan
Adang; Alor-Pantar, Timor-Alor-Pantar
Adhola (Jopadhola); Western Nilotic, Nilo-Saharan
Aldyge; Circassian, West Caucasian

Agul; Lezgi, East Caucasian
 Ainu; isolate
 Akan; Kwa, Niger-Congo (*see also* Twi)
 Akatek; Q'anjob'alan, Mayan
 Akha; Burmic, Tibeto-Burman, Sino-Tibetan
 Akie; Southern Nilotic, Nilotic, Nilo-Saharan
 Akkadian⁺ (Accadian); Semitic, Afroasiatic
 Alaaba; East Cushitic, Afroasiatic
 Alacatlalzala; Mixtecan, Oto-Manguean
 Alamlak; Sepik Hill
 Albanian; Albanian, Indo-European
 Algerian Arabic, *see* Arabic
 Altay-kiži; Siberian Turkic, Turkic
 Alur; Western Nilotic, Nilo-Saharan
 Alyawarra; Arandic, Pama-Nyungan
 Ambrym (Lonwolwol); Oceanic, Austronesian
 Ambulas, *see* Ambulas/Wosera
 Ambulas/Wosera; Ndu (East Sepik region of Papua New Guinea)
 American Sign Language (ASL)
 Amharic; Semitic, Afroasiatic
 Amoy Min, *see* Min
 Anatolian; Proto-Anatolian, Indo-European
 Ancient Egyptian, *see* Egyptian⁺
 Andean Spanish (Ecuadorian Highland Spanish)
 Anêm; isolate
 Anqing, dialect of Jianghuai Mandarin, *see* Jianghuai Mandarin
 Anren Gan, *see* Gan
 Anywa; Western Nilotic, Nilo-Saharan
 Apabhramsa⁺ (Apabhramśa); Indo-Aryan, Indo-European
 Apma, *see* Abma
 Arabian, Modern South; Semitic, Afroasiatic
 Arabic; Semitic, Afroasiatic
 Arabic, Algerian; Semitic, Afroasiatic
 Arabic, Chadian; Semitic, Afroasiatic
 Arabic, Egyptian; Semitic, Afroasiatic
 Arabic, Galilean; Semitic, Afroasiatic
 Arabic, Gulf; Semitic, Afroasiatic
 Arabic, Iraqi; Semitic, Afroasiatic
 Arabic, Iraqi Muslim Baghdadi; Semitic, Afroasiatic
 Arabic, Lebanese; Semitic, Afroasiatic
 Arabic, Moroccan; Semitic, Afroasiatic
 Arabic, Nigerian; Semitic, Afroasiatic

Arabic, Sudan; Semitic, Afroasiatic
 Arabic, Syrian; Semitic, Afroasiatic
 Arabic, Tunisian; Semitic, Afroasiatic
 Arabic, Yemeni; Semitic, Afroasiatic
 Aramaic; Semitic, Afroasiatic
 Aranda; Arandic, Pama-Nyungan
 Arawá; Arawan
 Arawak; Ta-Arawak, Arawak
 Archi; Lezgic, East Caucasian
 Argobba; Semitic, Afroasiatic
 Armenian; Indo-European
 Atayal, *see* Squliq
 Atchin; Oceanic, Austronesian
 Athpare; Kiranti, Sino-Tibetan
 Autu, *see* Awtuw
 Avar; North, Caucasian
 Awa Pit (Cuaiquer); Awan, Barbacoan
 Awtuw (Autu); isolate
 Awutu; Kwa, Niger-Congo
 Aztec (Nahuatl); Aztecan, Uto-Aztecan; *see also* Nahuatl
 Babylonian⁺; Semitic, Afroasiatic
 Bagirmi; Central Sudanic, Nilo-Saharan
 Bahamian CE; English-based creole
 Bahuana⁺; Arawak
 Bailongjiang region varieties of Chinese; Sinitic, Sino-Tibetan
 Baima; Tibeto-Burman, Sino-Tibetan
 Baka; Ubangian, Niger-Congo
 Bakwé; Kru, Niger-Congo
 Balawaia; Oceanic, Austronesian
 Balinese; Malayo-Polynesian, Austronesian
 Balti; Tibeto-Burman, Sino-Tibetan
 Baluchi; Indo-Iranian, Indo-European
 Bambara; Manding, Mande, Niger-Congo
 Banda; Austronesian, Austro-Tai
 Baninko Bambara; Manding, Mande, Niger-Congo
 Barasano (Southern); East Tucanoan
 Bardi; Western Nyulnyulan, Nyulnyulan (Non-Pama-Nyungan)
 Bari; Eastern Nilotic, Nilo-Saharan
 Bashkir; Northwestern, Turkic
 Baskeet; North Omotic, Afroasiatic
 Basque; isolate
 Bassa; Kru, Niger-Congo

Bavarian (German dialect); Germanic, Indo-European
 Beijing dialect of Chinese; Sinitic, Sino-Tibetan
 Belizean CE (Belize Kriol); English-based creole
 Bella Coola, *see* Nuxalk
 Belorussian; Slavic, Indo-European
 Bemba; Bantu, Niger-Congo
 Bench; North Omotic, Afroasiatic
 Bengali; Indo-Iranian, Indo-European
 Berta; unclassified (“Nilo-Saharan”)
 Bété; Kru, Niger-Congo
 Bhojpuri; Indo-Iranian, Indo-European
 Biak; Malayo-Polynesian, Austronesian
 Biansi; Tibeto-Burman, Sino-Tibetan
 Big Nambas; Oceanic, Austronesian
 Bihari; Indo-Iranian, Indo-European
 Bijie Yi, *see* Yi
 Bilinarra; Pama-Nyungan
 Biloxi; Siouan, Keresiouan
 Bininj Gun-Wok (Kunwinjku, Gunwinggu, Mayali, Kune);
 Gunwinyguan, Arnhem
 Bislama PE; English-based pidgin
 Blagar; Alor-Pantar, Timor-Alor-Pantar
 Bola; Malayo-Polynesian, Austronesian
 Bongo; Central Sudanic, Nilo-Saharan
 Boni; Cushitic, Afroasiatic
 Borobo; Kru, Niger-Congo
 Bozo; Mande, Niger-Congo
 Brahui; Dravidian
 Breton; Celtic, Indo-European
 Buang; Austronesian, Austro-Tai
 Bugeng (Bugan); Pakanic, Austroasiatic
 Bulgarian; Slavic, Indo-European
 Bulu; Bantu, Niger-Congo
 Bura; Chadic, Afroasiatic
 Burji; East Cushitic, Afroasiatic
 Burmese; Tibeto-Burman, Sino-Tibetan
 Buru; Central, Malayo-Polynesian, Austronesian
 Caddo; Southern Caddoan, Caddoan
 Cagaba; Aruak, Chibchan
 Cahuilla; Takic, Uto-Aztecan
 Cakchiquel; Mayan, Penutian

Calunga; unclear genetic affiliation¹
 Cambodian, *see* Khmer
 Cameroonian PE; English-based pidgin
 Canela-Krahô; Ge-Pano, Macro-Carib
 Cangluo Monpa, *see* Monpa
 Cantonese; Sinitic, Sino-Tibetan
 Cantonese, Guangzhou; Sinitic, Sino-Tibetan
 Cantonese, Lianjiang; Sinitic, Sino-Tibetan
 Catalan; Romance, Indo-European
 Cayapo; Ge-Pano, Ge-Pano-Carib
 Cayuga; Iroquoian, Keresiouan
 Cedepo; Kru, Niger-Congo
 Cèmuhî; Oceanic, Austronesian
 Chalcatongo Mixtec; Mixtecan, Oto-Manguean
 Chadian Arabic, *see* Arabic
 Chaghatay; Turkic
 Chaha; Semitic, Afroasiatic
 Chamling; Tibeto-Burman, Sino-Tibetan
 Chamorro (Chamoru); Malayo-Polynesian, Austronesian
 Chamus (Maa dialect); Eastern Nilotic, Nilo-Saharan
 Changsha dialect of Xiang, *see* Xiang
 Changting Hakka, *see* Hakka
 Chaozhou dialect of Min, *see* Min
 Chikasaw; Muskogean
 Chimwini (Chi-miini); Bantu, Niger-Congo
 Chinese (Mandarin); Sinitic, Sino-Tibetan
 Chinese PE; English-based pidgin
 Chinook; Penutian
 Chinook Jargon; Chinook-based pidgin
 Chhitkuli; Sino-Tibetan
 Chontal; Cholan, Mayan
 Chrau; Mon-Khmer, Austroasiatic
 Chukchi (Chukchee); Chukchi, Chukchi-Kamchatkan
 Chulym; Turkic
 Chuvash; Oghur, Turkic
 Ch'ol; Penutian
 Cimbrian; Romance, Indo-European
 Circassian, *see* Adyghe

¹ Calunga is an Afro-Brazilian language which arose in the course of the last centuries among African slaves in the state of Minas Gerais, being composed of material from Portuguese and southwest African Bantu languages (Byrd 2006).

Colloquial southern American English
 Colombian Spanish
 Copala Trique, *see* Trique
 Cora; Corachol, Uto-Aztecan
 Cree, *see* Plains Cree
 Cuaiquer, *see* Awa Pit
 Czech; Slavic, Indo-European
 Croatian; Slavic, Indo-European
 Dagaare; Gur, Niger-Congo
 Dagbane; Gur, Niger-Congo
 Dai; Tai, Tai-Kadai, Sino-Tibetan
 Dai, Dehong; Tai, Tai-Kadai, Sino-Tibetan
 Dai, Xishuangbanna; Tai, Tai-Kadai, Sino-Tibetan
 Danish; Germanic, Indo-European
 Dantila Maninka; Mande, Niger-Congo
 Darma; Sino-Tibetan
 Debao Zhuang, *see* Zhuang
 Dehong Dai, *see* Dai
 Dení; Arawá
 Derung, *see* Dulong
 Dewoin; Kru, Niger-Congo
 Dhimal; Tibeto-Burman, Sino-Tibetan
 Dholuo, *see* Luo
 Dida (Lakota Dida); Kru, Niger-Congo
 Didinga; Eastern Sudanic, Nilo-Saharan
 Diegueño; Hokan
 Diola Fogny (Diola); West Atlantic, Niger-Congo
 Dioula, *see* Julia (= Dyula); Mande, Niger-Congo
 Diuxi-Tilantongo; Mixtecan, Oto-Manguean
 Diyari; Karnic, Pama-Nyungan
 Djaru, *see* Jaru
 Djinang; Yuulngu, Pama-Nyungan
 Djinba; Yuulngu, Pama-Nyungan
 Djingili, *see* Jingulu
 Djuká, *see* Ndjuka
 Djwarli, *see* Jiwari
 Dogon; Gur, Niger-Congo
 Dolakha-Newari, *see* Newari
 Dong; Kam, Tai-Kadai, Sino-Tibetan
 Dongolese (Nile Nubian); Nubian, Nilo-Saharan
 Drehu; Oceanic, Austronesian
 Dschang; Benue-Congo, Niger-Congo

Duala; Bantu, Niger-Congo
 Dukhan; Northeastern, Turkic
 Dullay; Cushitic, Afroasiatic
 Dulong (Derung, Trung); Tibeto-Burman, Sino-Tibetan
 Duri; Malayo-Polynesian, Austronesian
 Dutch; Germanic, Indo-European
 Dyabo; Kru, Niger-Congo
 Dyula, *see* Julia
 East Uvean, *see* Uvean
 Easter Island, *see* Rapanui
 Eastern Australian PE; English-based pidgin
 Eastern Maroon Creole, *see* Ndjuka
 Eastern Min, *see* Min
 Eastern Tamang, *see* Tamang
 Ebira; Kwa, Niger-Congo
 Efate, South; Oceanic, Austronesian
 Efik; Benue-Congo, Niger-Congo
 Egyptian⁺; Afroasiatic
 Egyptian Arabic, *see* Arabic
 Emilian; Italic, Romance, Indo-European
 Engenni; Edo, Niger-Congo
 English; Germanic, Indo-European
 Epena Pedee; Chokó
 Ese'ejá (Ese Ejja); Tacanan
 Estonian; Finnic, Finno-Ugric
 Evenki; Tungusic
 Ewe; Kwa, Niger-Congo
 Fa d'Ambu CP; Portuguese-based creole
 Fagauvea; Oceanic, Austronesian
 Fali; Adamawan, Niger-Congo
 Faroese; Germanic, Indo-European
 Fataluku; Timor, Timor-Alor-Pantar
 Fijian; Oceanic, Austronesian
 Finnish; Finnic, Finno-Ugric
 Finno-Ugric, Common; Finno-Ugric
 Fon; Kwa, Niger-Congo
 Fore; Trans-New Guinean
 French; Romance, Indo-European
 Frisian; Germanic, Indo-European
 Fulfulde (Fula, Ful, Fulani, Peul); West Atlantic, Niger-Congo
 Futa Toro (Fulfulde dialect); West Atlantic, Niger-Congo
 Fuzhou dialect of Min (Fuzhouese, Foochow), *see* Min

G/ui; Kalahari Khoe, Khoe (“Central Khoisan”)
 Gllana; Kalahari Khoe, Khoe (“Central Khoisan”)
 Ga (Gã); Kwa, Niger-Congo
 Gaamo; North Omotic, Afroasiatic
 Gabu (Gobu); Adamawa-Ubangi, Niger-Congo
 Gadsup (Gadsup-Agarabi); Trans-New Guinean
 Gaelic, Scottish; Celtic, Indo-European
 Gafat⁺; Semitic, Afroasiatic
 Gahri; Sino-Tibetan
 Galilean Arabic, *see* Arabic
 Galo; Tani, Sino-Tibetan
 Gan; Sinitic, Sino-Tibetan
 Gan, Anren; Sinitic, Sino-Tibetan
 Gan, Nanchang; Sinitic, Sino-Tibetan
 Gan, Yuexi; Sinitic, Sino-Tibetan
 Ganda; Bantu, Niger-Congo
 Ganyu dialect of Zhongyuan Mandarin, *see* Zhongyuan Mandarin
 Garrwa (Karrwa); Garrwan, “Australian”
 Gayo; Austronesian
 Gbaya; Ubangian, Niger-Congo
 Gbuu; Kru, Niger-Congo
 Gə’əz⁺ (Ge’ez, Geez); Semitic, Afroasiatic
 Georgian; South, Caucasian
 German; Germanic, Indo-European
 German Sign Language (DGS)
 Germanic, Common; Germanic, Indo-European
 Ghale; Sino-Tibetan
 Ghanaian PE; English-based pidgin
 Gidar (Gidari); Chadic, Afroasiatic
 Gikuyu, *see* Kikuyu
 Gimira; Omotic, Afroasiatic
 Gisiga; Chadic, Afroasiatic
 Gobu, *see* Gabu
 Godié; Kru, Niger-Congo
 Goemai; Chadic, Afroasiatic
 Gojri, *see* Gujar
 Gokana; Benue-Congo, Niger-Congo
 Gola; West Atlantic, Niger-Congo
 Gorokan; Trans-New Guinean
 Gothic; Germanic, Indo-European
 Grand Bassa; Kru, Niger-Congo
 Grebo; Kru, Niger-Congo

Greek; Greek, Indo-European
 Greenlandic, West (Kalaallisut); Eskimo, Eskimo-Aleut
 Guahibo; Guahiban
 Guangdong Hakka, *see* Hakka
 Guangzhou Cantonese, *see* Cantonese
 Guaraní; Paraguayan-Guaraní, Tupi-Guaraní, Tupian
 Guarijío (Warihío); Sonoran Uto-Aztecan, Uto-Aztecan
 Guaymí; Chibchan
 Guipuzcoan (Basque dialect)
 Gujarati; Indo-Iranian, Indo-European
 Gujarí (Gojri); Indo-Iranian, Indo-European
 Gulf Arabic, *see* Arabic
 Gumer; Semitic, Afroasiatic
 Gunwinggu, *see* Bininj Gun-Wok, Kunwinjku
 Gurenne; Gur (= Voltaic), Niger-Congo
 Gurung; Tibeto-Burman, Sino-Tibetan
 Guugu-Yalandji; Pama-Nyungan
 Guyanese CE; English-based creole²
 Guyanese CF; French-based creole
 Guyu; Turkic
 Gwari; Central Niger, Niger-Congo
 Hadiyya; East Cushitic, Afroasiatic
 Haimen dialect of Wu, *see* Wu
 Hainan dialect of Min, *see* Min
 Haitian CF; French-based creole
 Hakha Lai; Tibeto-Burman, Sino-Tibetan
 Hakka; Sinitic, Sino-Tibetan
 Hakka, Changting; Sinitic, Sino-Tibetan
 Hakka, Guangdong; Sinitic, Sino-Tibetan
 Hakka, Liancheng; Sinitic, Sino-Tibetan
 Hakka, Luodai; Sinitic, Sino-Tibetan
 Hakka, Meixian; Sinitic, Sino-Tibetan
 Hakka, Yudu; Sinitic, Sino-Tibetan
 Halia; Oceanic, Austronesian
 Hamea (Haméa); Oceanic, Austronesian
 Hamar (Hamar); Omotic, Afroasiatic
 Hani; Tibeto-Burman, Sino-Tibetan
 Harari; Semitic, Afroasiatic
 Harsūsi; South Arabian, Semitic, Afroasiatic
 Hausa; Chadic, Afroasiatic

² Note that there are two different Guyanese creoles.

Hawaiian; Oceanic, Malayo-Polynesian, Austronesian
 Hebrew; Semitic, Afroasiatic
 Hebrew, Biblical⁺; Semitic, Afroasiatic
 Hengshan dialect of Xiang, *see* Xiang
 Herero; Bantu, Niger-Congo
 Hiligaynon; Oceanic, Malayo-Polynesian, Austronesian
 Hindi; Indo-Iranian, Indo-European
 Hinuq; Tsezic, Northeast, Caucasian
 Hittite⁺; Indo-European
 Hixkaryána (Hishkaryana); Southern, Carib
 Hlai, *see* Li
 Hmong; Hmongic, Hmong-Mien, Sino-Tibetan
 Hmong, White; Hmongic, Hmong-Mien, Sino-Tibetan
 Hokkien; Southern Min, Sinitic, Sino-Tibetan
 Hona; Chadic, Afroasiatic
 Hong Kong Cantonese, *see* Yue (Cantonese)
 Hoocąk (Winnebago); Siouan, Keresiouan
 Hua; Gorokan, Trans-New Guinean
 Huanggang dialect of Jianghuai Mandarin, *see* Jianghuai Mandarin
 Hui; Sinitic, Sino-Tibetan
 Hui, Qimen; Sinitic, Sino-Tibetan
 Hui'an dialect of Min, *see* Min
 Hunde; Bantu, Niger-Congo
 Hungarian; Ugric, Finno-Ugric
 Huojia dialect of Chinese; Sinitic, Sino-Tibetan
 Hup; Nadahup
 Ibibio; Kwa, Niger-Congo
 Icelandic; Germanic, Indo-European
 Idoma; Central Niger, Niger-Congo
 Igbo; Lower Niger, Niger-Congo
 Ijo; Ijo, Niger-Congo
 Ik; Kuliak, Nilo-Saharan
 Ila; Bantu, Niger-Congo
 Imbabura Quechua; Andean
 Imonda; Waris, Trans-New Guinean
 Indian Ocean CF; French-based creole
 Indonesian; Malayo-Polynesian, Austronesian
 Inor; Semitic, Afroasiatic
 Inuit; Eskimo, Eskimo-Aleut
 Inuktitut; Eskimo, Eskimo-Aleut
 Inuttitut (Labrador); Eskimo, Eskimo-Aleut
 Iraqi Arabic, *see* Arabic

Iraqi Muslim Baghdadi Arabic, *see* Arabic
 Iraqw; Southern Cushitic, Cushitic, Afroasiatic
 Irish (Gaelic); Celtic, Indo-European
 Israeli Sign Language
 Italian; Romance, Indo-European
 Italian Sign Language
 Itelmen; Kamchatkan, Chukotko-Kamchatkan
 Jad (Dzad); Tibetic, Sino-Tibetan
 Jamaican CE; English-based creole
 Jaminjung; Mirndi, Non-Pama-Nyungan
 Janjero, *see* Yemsa
 Japanese; Korean-Japanese, Altaic
 Jarawara; Madi, Arawá
 Jaru (Djaru); Pama-Nyungan
 Jeri (Jeli); Mande, Niger-Congo
 Jianghuai Mandarin; Sinitic, Sino-Tibetan
 Jianghuai Mandarin, Anqing; Sinitic, Sino-Tibetan
 Jianghuai Mandarin, Huanggang; Sinitic, Sino-Tibetan
 Jianghuai Mandarin, Zongyang; Sinitic, Sino-Tibetan
 Jiddu (Somali dialect); Cushitic, Afroasiatic
 Jimini (Dyimini); Gur (= Voltaic), Niger-Congo
 Jingpho; Tibeto-Burman, Sino-Tibetan
 Jingulu (Djingili); Mirndi, Non-Pama-Nyungan
 Jiwarli⁺ (Djiwarli); South-West, Pama-Nyungan
 Jopadhola, *see* Adhola
 Ju, *see* !Xun
 Julia (Dioula, Dyula); Manding, Mande, Niger-Congo
 Jur-Luwo; Eastern Sudanic, Nilotic, Nilo-Saharan
 Juang; Munda, Austroasiatic
 Kabardian, Besleney; Circassian, West Caucasian
 Kabba; Central Sudanic, Nilo-Saharan
 K'abeena; East Cushitic, Afroasiatic
 Kabiye (Kabre); Gur (= Voltaic), Niger-Congo
 Kabuverdiano (Cape Verde) CP; Portuguese-based creole
 Kagbo; Kru, Niger-Congo
 Kaera; Alor-Pantar, Timor-Alor-Pantar
 Kaike; Sino-Tibetan
 Kaititj; Arandic, Pama-Nyungan
 Kakataibo; Panoan
 Kala Lagau Ya (Mabuiag); Pama-Nyungan
 Kalaallisut, *see* West Greenlandic
 Kalam; East New Guinea Highlands, Indo-Pacific

Kamang; Alor-Pantar, Timor-Alor-Pantar
 Kamba; Bantu, Niger-Congo
 Kambaata; East Cushitic, Afroasiatic
 Kanakuru; Chadic, Afroasiatic
 Kannada; South, Dravidian
 Kannada, Kupwar; South, Dravidian
 Kanuri; Saharan, Nilo-Saharan
 Karachay; Turkic
 Karachay-Balkar; Northwestern, Turkic
 Karaim, Trakai; Northwestern, Turkic
 Karakhanid; Turkic
 Karok; Northern, Hoka
 Karrwa, *see* Garwa
 Kashmiri; Indo-Iranian, Indo-European
 Kathmandu Newari; Sino-Tibetan
 Kavalan; East Formosan, Austronesian
 Kayardild; Tangkic, Macro-Pama-Nyungan
 Kazakh (Kazak); Northwestern, Turkic
 Kedah Malay; Malayo-Polynesian, Austronesian
 Kemantney (Kemant); Central Cushitic, Afroasiatic
 Kenya PS; Swahili-based pidgin
 Kera; Chadic, Afroasiatic
 Ket; isolate
 Khakas; Northeastern, Turkic
 Khaling; Kiranti, Sino-Tibetan
 Kham; Tibetan, Tibeto-Burman, Sino-Tibetan
 Khanty; Ugric, Finno-Ugric
 Kharia; Munda, Austroasiatic
 Khasi; Mon-Khmer, Austroasiatic
 Khmer (Cambodian); Mon-Khmer, Austroasiatic
 Khwarshi; Dido, Northeast Caucasian
 Khwe (Kxoe); Kalahari Khoe, Khoe (“Central Khoisan”)
 Kikongo, *see* Kongo
 Kikuyu (Gikuyu); Bantu, Niger-Congo
 Kilivila; Oceanic, Austronesian
 Kimbundu; Bantu, Niger-Congo
 Kinnari; Tibeto-Burman, Sino-Tibetan
 Kiowa; Tanoan
 Kipchak, Middle; Northwestern, Turkic
 Kipsikiis (Kipsigis); Southern Nilotic, Nilo-Saharan
 Kiranti; Sino-Tibetan
 Kirghiz (Kirgiz); Turkic

Kisi; West Atlantic, Niger-Congo
 Kita Maninka; Manding, Mande, Niger-Congo
 Klao (Klau); Kru, Niger-Congo
 Klon; Alor-Pantar, Timor-Alor-Pantar
 Koasati; Eastern, Muskogean
 Kobon; Madang, Trans-New Guinean
 Kode (Baule dialect); Kwa, Niger-Congo
 Komi; Permic, Uralic
 Komi-Permyac, *see* Komi
 Komi-Zyrian, *see* Komi
 Konda; Dravidian
 Kongo (Kikongo); Bantu, Niger-Congo
 Kono; Mande, Niger-Congo
 Koorete; North Omotic, Afroasiatic
 Korana, *see* !Ora
 Koranko; Mande, Niger-Congo
 Korean; Korean-Japanese, Altaic³
 Korku; Munda, Austroasiatic
 Korogan; Manding, Mande, Niger-Congo
 Koromfe; Gur (= Voltaic), Niger-Congo
 Kosraean, *see* Kusaiean
 Koyaga; Manding, Mande, Niger-Congo
 Koyo; Kru, Niger-Congo
 Kpelle; Mande, Niger-Congo
 Krahn (Tchien Krahn); Kru, Niger-Congo
 Krio CE; English-based creole
 Krongo; Kordofanian, Kongo-Kordofanian
 Kuba; Bantu, Niger-Congo
 Kui; Telugu-Kui, Dravidian
 Kukama-Kukamiria; Tupían
 Kuki-Naga; Kukish, Sino-Tibetan
 Kuku-Yalanji; Yalandyik, Pama-NyunganKulina (Madija); Arawá
 Kumyk; Northwestern, Turkic
 Kune, *see* Bininj Gun-Wok
 Kunwinjku (Gunwinggu, Gunwinjgu, Bininj Gunwok, Mayali; *see also* Bininj Gun-Wok); Gunwinyguan, Arnhem
 Kupsapiny (Sebei); Southern Nilotic, Nilo-Saharan
 Kupto; Chadic, Afroasiatic

³ The classification of Korean is contested. Many linguists consider it a language isolate rather than an Altaic language (see Kim 1992; Song 2005b; Campbell and Mixco 2007, among others, for discussion of the issue).

Kupwar Kannada, *see* Kannada
 Kupwar Marathi, *see* Marathi
 Kupwar Urdu, *see* Urdu
 Kurdish; Indo-Iranian, Indo-European
 Kurmanji Kurdish; Indo-Iranian, Indo-European
 Kurux; Dravidian
 Kusaiean (Kosraean); Oceanic, Austronesian
 Kusasi (Kusal); Gur (= Voltaic), Niger-Congo
 Kusal, *see* Kusasi
 Kuuk Thaayorre (Thaayorre); Pama-Nyungan
 Kwaio; Oceanic, Austronesian
 Kwami; Chadic, Afroasiatic
 Kwara'ae; Oceanic, Austronesian
 Kwoma; Kwoma-Nukuma (Papua New Guinea)
 Kxoe, *see* Khwe
 Laala; West Atlantic, Niger-Congo
 Labwor; Western Nilotic, Nilo-Saharan
 Labrador, *see* Inuttitut
 Ladin (Rhaeto-Romance); Romance, Indo-European
 Lahu; Tibeto-Burman, Sino-Tibetan
 Lakota Dida, *see* Dida
 Lamang; Chadic, Afroasiatic
 Lambadi; Indo-Iranian, Indo-European
 Lango; Western Nilotic, Nilo-Saharan
 Lao; Tai, Tai-Kadai, Sino-Tibetan
 Latgalian; Balto-Slavic, Indo-European
 Latin⁺; Italic, Indo-European
Latin American Spanish
 Latvian; Balto-Slavic, Indo-European
 Laz; Kartvelian
 Lebanese Arabic, *see* Arabic
 Leizhou dialect of Min, *see* Min
 Lele; Chadic, Afroasiatic
 Lendu; East Sudanic, Nilo-Saharan
 Leti; Malayo-Polynesian, Austronesian
 Lewo; Oceanic, Austronesian
 Lezgian; Lezgie, East Caucasian
 Lhasa Tibetan (Lhasa), *see* Tibetan
 Lhao Vo; Tibeto-Burman, Sino-Tibetan
 Li (Hlai); Tai-Kadai, Sino-Tibetan
 Liancheng dialect of Hakka, *see* Hakka
 Lianjiang dialect of Cantonese, *see* Cantonese

Lianzhou (West Bank) dialect of Chinese; Sinitic, Sino-Tibetan
 Libido; East Cushitic, Afroasiatic
 Limbu; Tibeto-Burman, Sino-Tibetan
 Lingala; Bantu, Niger-Congo
 Lingxi dialect of Min, *see* Min
 Lithuanian; Balto-Slavic, Indo-European
 Livonian; Finnic, Finno-Ugric
 Logbara, *see* Lugbara
 Logo; Central Sudanic, Nilo-Saharan
 Logone; Chadic, Afroasiatic
 Lombard; Italic, Romance, Indo-European
 Lomwe; Bantu, Niger-Congo
 Londo; Bantu, Niger-Congo
 Longzhou Zhuang, *see* Zhuang
 Loni; Oceanic, Austronesian
 Lonwolwol, *see* Ambrym
 Lotuko (Lotuxo); Eastern Nilotic, Nilo-Saharan
 Louisiana CF; French-based creole
 Luba; Bantu, Niger-Congo
 Lugbara (Logbara); Central Sudanic, Nilo-Saharan
 Luo (Dholuo); Western Nilotic, Nilo-Saharan
 Luodai Hakka, *see* Hakka
 Lushai, *see* Mizo
 Luxembourgish; Germanic, Indo-European
 Maa; Eastern Nilotic, Nilo-Saharan
 Maale (Male); North Omotic, Afroasiatic
 Maasai (Maa dialect); Eastern Nilotic, Nilo-Saharan
 Mabiha; Bantu, Niger-Congo
 Mabuiag, *see* Kala Lagau Ya
 Macedonian; Slavic, Indo-European
 Machiguenga; Southern, Arawak
 Madi, *see* Ma'di
 Madija (Kulina); Arawá
 Madurese; Malayo-Polynesian, Austronesian
 Magahi; Indo-Iranian, Indo-European
 Maithili; Indo-Iranian, Indo-European
 Makalero; Timor, Timor-Alor-Pantar
 Makasae (Makasai); Timor, Timor-Alor-Pantar
 Mako; Sáliban⁴

⁴ Sáliban is a small language family consisting of the following languages spoken in Venezuela and Colombia: Sáliba, Piaroa, and Mako (Rosés Labrada 2015).

Makwe; Bantu, Niger-Congo
 Malagasy; Malayo-Polynesian, Austronesian
 Malay; Malayo-Polynesian, Austronesian
 Malayalam; South, Dravidian
 Male, *see* Maale
 Malinke; Mande, Niger-Congo
 Maltese (Malti); Semitic, Afroasiatic
 Malti, *see* Maltese
 Mamaindê; Northern, Nambikwaran
 Mamvu; Central Sudanic, Nilo-Saharan
 Manambu; Ndu
 Manangba; Sino-Tibetan
 Manda; Bantu, Niger-Congo
 Mandan; Siouan, Keresiouan
 Mandarin (Chinese); Sinitic, Sino-Tibetan
 Manding; Mande, Niger-Congo
 Mandinka; Manding, Mande, Niger-Congo
 Mangarrayi (Mangarayi; Northern Territory of Australia); isolate?
 Maninka; Manding, Mande, Niger-Congo
 Maninka-mori; Manding, Mande, Niger-Congo
 Mano; Mande, Niger-Congo
 Mansi; Ugric, Finno-Ugric
 Mantharta; Pama-Nyungan
 Maonan; Kam-Sui, Tai-Kadai, Sino-Tibetan
 Maori (Māori); Polynesian, Austronesian
 Mapuche (Mapudungu [= Araucanian]); Southern Andean
 Mapudungun; isolate
 Marathi; Indo-Iranian, Indo-European
 Marathi, Kupwar; Indo-Iranian, Indo-European
 Margi; Chadic, Afroasiatic
 Maricopa; Yuman, Hokan
 Marka; Manding, Mande, Niger-Congo
 Maukakan; Manding, Mande, Niger-Congo
 Mauritius CF; French-based creole
 Maya, Sipakapense; Mayan, Penutian
 Mayali, *see* Bininj Gun-Wok
 Mayo, *see* Yessan-Mayo
 Ma'di; Central Sudanic, Nilo-Saharan
 Mäsqän; Semitic, Afroasiatic
 Mehri; South Arabian, Semitic, Afroasiatic
 Meixian Hakka, *see* Hakka
 Mexican Spanish

Mezquital Otomi (Otomi); Otomian, Oto-Manguean
 Mien (Yao); Mienic; Hmong-Mien, Sino-Tibetan
 Min; Sinitic, Sino-Tibetan
 Min, Amoy (Xiamen); Southern Min, Sinitic, Sino-Tibetan
 Min, Chaozhou; Southern Min, Sinitic, Sino-Tibetan
 Min, Eastern; Sinitic, Sino-Tibetan
 Min, Fuzhou; Sinitic, Sino-Tibetan
 Min, Fuzhou (Fuzhouese, Foochow); Eastern Min, Sinitic, Sino-Tibetan
 Min, Hainan; Southern Min, Sinitic, Sino-Tibetan
 Min, Hui'an; Southern Min, Sinitic, Sino-Tibetan
 Min, Leizhou; Southern Min, Sinitic, Sino-Tibetan
 Min, Lingxi; Southern Min, Sinitic, Sino-Tibetan
 Min, Shantou; Southern Min, Sinitic, Sino-Tibetan
 Min, Southern; Sinitic, Sino-Tibetan
 Min, Taipei; Southern Min, Sinitic, Sino-Tibetan
 Min, Taiwan (Taiwanese); Southern Min, Sinitic, Sino-Tibetan
 Min, Tunchang; Southern Min, Sinitic, Sino-Tibetan
 Min, Xiamen (Amoy); Southern Min, Sinitic, Sino-Tibetan
 Mina; Chadic, Afroasiatic
 Mingrelian; South, Caucasian
 Mishmi; Sino-Tibetan
 Miwok; Penutian
 Mixe; Mexican, Penutian
 Mixe-Zoque; Mexican, Penutian
 Mixtec; Mixtecan, Oto-Manguean
 Mizo (Lushai); Tibeto-Burman, Sino-Tibetan
 Modern Beijing dialect of Chinese; Sinitic, Sino-Tibetan
 Modern South Arabian, *see* Arabian
 Mohawk; Iroquoian, Keresiouan
 Mokilese; Oceanic, Austronesian
 Molisean (Molise Slavic); Slavic, Indo-European
 Mon; Monic, Austroasiatic
 Mongghul; Mongolian-Tungus, Altaic
 Mongolian; Mongolian-Tungus, Altaic
 Mongsen Ao; Tibeto-Burman, Sino-Tibetan
 Monpa; Tibeto-Burman, Sino-Tibetan
 Monpa, Cangluo; Tibeto-Burman, Sino-Tibetan
 Monpa, Tawang; Tibeto-Burman, Sino-Tibetan
 Mopun, *see* Mupun
 Mordvin(ian); Finnic, Finno-Ugric
 Moré (More); Gur (= Voltaic), Niger-Congo

Moroccan Arabic, *see* Arabic
 Moru; Central Sudanic, Nilo-Saharan
 Moselle Franconian; Germanic, Indo-European
 Motu; Oceanic, Austronesian
 Muduug (Somali dialect); Cushitic, Afroasiatic
 Muher; Semitic, Afroasiatic
 Mundari; Munda, Austroasiatic
 Mundurukú; Tupian
 Mupun (Mopun); Chadic, Afroasiatic
 Mursi; Surma, Nilo-Saharan
 Muya (Munya); Qiangic, Tibeto-Burman
 N/uu, *see* N!ng
 N!ng (N/uu); !Ui, Tuu (Southern Khoisan)
 Naga; Tibeto-Burman, Sino-Tibetan
 Naga Pidgin, *see* Naga; Malayo-Polynesian
 Nahuatl; Aztecan, Uto-Aztecan; *see also* Aztec
 Naiki; Dravidian
 Nakanai; Oceanic, Austronesian
 Nama; Khoekhoe, Khoe (“Central Khoisan”)
 Namakura; Oceanic, Austronesian
 Nambas, *see* Big Nambas
 Nanay (Nanai, Nanaj, Gold); Tungusic
 Nanchang dialect of Gan, *see* Gan
 Nanning dialect of Yue, *see* Yue (Cantonese)
 Nanti; Kampa, Arawak
 Nar-Phu; Sino-Tibetan
 Naro; Kalahari Khoe, Khoe (“Central Khoisan”)
 Ndebele; Bantu, Niger-Congo
 Ndjuka (Djuká, Eastern Maroon Creole) CE; English-based creole
 Negerhollands CD; Dutch-based creole
 Nenets, Tundra; Samoyedic, Uralic
 Nengone; Oceanic, Austronesian
 Nepali; Indo-Iranian, Indo-European
 Névome⁺; Sonoran Uto-Aztecan, Uto-Aztecan
 Newari; Tibeto-Burman, Sino-Tibetan
 Neyo; Kru, Niger-Congo
 Ngalkan; Gunywinnguan, Australian
 Ngambay Moundou (Gambai); Central Sudanic, Nilo-Saharan
 Ngarinjin (Ngarinyin); Worrorran
 Ngarinyman; Pama-Nyungan
 Ngarluma; Ngayarda, Pama-Nyungan
 Ngbaka; Ubangian, Niger-Congo

Ngbaka Ma'Bo; Ubangian, Niger-Congo
 Ngbandi; Ubangian, Niger-Congo
 Ngiti; Central Sudanic, Nilo-Saharan
 Ngumpin; Pama-Nyungan
 Nigerian Arabic, *see* Arabic
 Nigerian PE; English-based pidgin
 Ningbo dialect of Wu, *see* Wu
 Niokolo Maninka; Manding, Mande, Niger-Congo
 Nkore-Kiga; Bantu, Niger-Congo
 Nobiin (Dongolese, Nile Nubian); Nubian, Nilo-Saharan
 Noghay; Northwestern, Turkic
 Norse, Old; Germanic, Indo-European
 Northern Wu, *see* Wu
 Norwegian; Germanic, Indo-European
 Nubi CA; Arabic-based creole
 Nubian, *see* Nobiin
 Nuer; Western Nilotic, Nilo-Saharan
 Nung; Tibeto-Burman, Sino-Tibetan
 Nupe; Central Niger, Niger-Congo
 Nuxalk (Bella Coola); Salish
 Nyabo; Kru, Niger-Congo
 Nyanja; Bantu, Niger-Congo
 Nyelâyu; Oceanic, Austronesian
 Nyikina; Eastern Nyulnyulan, Nyulnyulan (Non-Pama-Nyungan)
 Nyulnyul; Western Nyulnyulan, Nyulnyulan (Non-Pama-Nyungan)
 Nzakara; Zande, Niger-Congo
 Oksapmin; Trans-New Guinean
 Omaha-Ponca; Siouan, Keresiouan
 Omyene; Bantu, Niger-Congo
 Oneida; Iroquoian, Keresiouan
 Opata⁺; Sonoran Uto-Aztecan, Uto-Aztecan
 Oroch; Northern, Tungusic
 Oromo; East Cushitic, Afroasiatic
 Órón; Kwa, Niger-Congo
 Ossetic; Indo-Iranian, Indo-European
 Otomi, *see* Mezquital Otomi
 Ottoman (Turkish); Turkic
 Oyda; North Omotic, Afroasiatic
 Paamese; Oceanic, Austronesian
 Paiwan; Paiwanic, Austronesian
 Pakaas Novos, *see* Wari'
 Palaung (Rumai); Mon-Khmer, Austroasiatic
 Palenquero CS; Spanish-based creole

Palor; West Atlantic, Niger-Congo
 Palula; Indo-Iranian, Indo-European
 Panare; Venezuelan Carib, Cariban
 Panjabi; Indo-Iranian, Indo-European
 Pantar, Western; Alor-Pantar, Timor-Alor-Pantar
 Papapana; Oceanic, Austronesian
 Papantla Totonac, *see* Totonac
 Papia Kristang CP; Portuguese-based creole
 Papiamentu CS, CP; Spanish/Portuguese-based creole
 Pāri; Western Nilotic, Nilo-Saharan
 Pengo; Dravidian
 Permak, *see* Komi
 Pero; Chadic, Afroasiatic
 Persian (Farsi); Indo-Iranian, Indo-European
 Peul, *see* Fulfulde
 Piapoco; North Arawak, Arawak
 Piedmontese; Romance, Indo-European
 Pilara; Gur (= Voltaic), Niger-Congo
 Pinghua; Sinitic, Sino-Tibetan
 Pipil; Aztec, Uto-Aztecan
 Pirahã; Mura, Macro-Chibcha
 Piro; Pre-Andine Arawak
 Pitta-Pitta; Karnic, Pama-Nyungan
 Plains Cree; Algonquian, Almosan
 Pokomo; Bantu, Niger-Congo
 Polish; Slavic, Indo-European
 Pomattertitsch; Germanic, Indo-European
 Pomo, Central; Pomoan
 Ponapean; Oceanic, Austronesian
 Portuguese; Romance, Indo-European
 Primi; Tibeto-Burman, Sino-Tibetan
 Proto-Ao⁺
 Proto-Arawak⁺
 Proto-Bantu⁺
 Proto-Chadic⁺
 Proto-Germanic⁺
 Proto-Indo-European⁺
 Proto-Khoe⁺
 Proto-Khwe⁺
 Proto-Kuki-Naga⁺
 Proto-Mande⁺
 Proto-Oceanic⁺

Proto-Polynesian⁺
 Proto-Southern Lwoo⁺
 Proto-Tibeto-Burman⁺
 Proto-Timor-Alor-Pantar⁺
 Proto-West-Mande⁺
 Proto-!Xun⁺
 Punjabi; Indo-Iranian, Indo-European
 Purépecha (Tarascan); isolate
 Qiang; Tibeto-Burman, Sino-Tibetan
 Qimen dialect of Hui, *see* Hui
 Quechua (Quichua); Andean
 Quiché; Mayan, Penutian
 Rajasthani; Indo-Iranian, Indo-European
 Rama; Chibchan
 Rangkas; Sino-Tibetan
 Rangpo, *see* Rongpo
 Rapanui (Easter Island); Oceanic, Malayo-Polynesian, Austronesian
 Rawang; Nungish, Sino-Tibetan
 Rendille; East Cushitic, Afroasiatic
 Réunion CF; French-based creole
 Rhaeto-Romance, *see* Ladin
 River Cess Bassa; Kru, Niger-Congo
 Rodrigues CF; French-based creole
 Romani; Indo-Aryan, Indo-European
 Romanian; Romance, Indo-European
 Rongpo (Rangpo); Sino-Tibetan
 Rukai; Tsouic, Austronesian
 Russian; Slavic, Indo-European
 Rutul; West Lezgian, East Caucasian
 Saami (Sami, Lappic); Finnic, Finno-Ugric
 Saami, Skolt; Finnic, Finno-Ugric
 Saafi-Saafi; West Atlantic, Niger-Congo
 Sabaic; Semitic, Afroasiatic
 Saho; Cushitic, Afroasiatic
 Saliba; Oceanic, Austronesian
 Salinan; Hokan
 Sami, *see* Saami
 Samoan; Polynesian, Austronesian
 Sango; Ubangian, Niger-Congo
 Sanskrit⁺; Indo-Iranian, Indo-European
 Santali; Munda, Austroasiatic
 Sanuma; Yanomami

São Tomense CP; Portuguese-based creole
 Sapo; Kru, Niger-Congo
 Saramaccan (Surinam creole) CE; English-based creole
 Sarcee (Sarsi); Northern Athapaskan, Athapaskan
 Sardinian (Sardic); Romance, Indo-European
 Scottish Gaelic, *see* Gaelic
 Sebei, *see* Kupsapiny
 Selti; Semitic, Afroasiatic
 Senufo (Senari); Gur (= Voltaic), Niger-Congo
 Serbian; Slavic, Indo-European
 Seselwa, *see* Seychelles CF
 Sesotho, *see* Sotho, Southern
 Setswana, *see* Tswana
 Seychelles CF (Seselwa, Seselwa); French-based creole
 Shangaci; Bantu, Niger-Congo
 Shanghainese, *see* Wu
 Shanghai dialect of Wu, *see* Wu
 Shangshui dialect of Zhongyuan Mandarin, *see* Zhongyuan Mandarin
 Shantou dialect of Min, *see* Min
 Shibacha Lisu; Tibeto-Burman, Sino-Tibetan
 Shilluk; Western Nilotic, Nilo-Saharan
 Shiwilu; Kawapanan
 Shona; Bantu, Niger-Congo
 Shor; Turkic
 Shuswap; Salish
 Siamese, *see* Thai
 Sidaama; East Cushitic, Afroasiatic
 Sign Language of the Netherlands (NGT)
 Sikuani; Guahiban
 Silacayoapan; Mixtecan, Oto-Manguean
 Singapore Colloquial English (Singlish)
 Sinhala (Sinhalese); Indo-Iranian, Indo-European
 Sinto; Indo-Iranian, Indo-European
 Sipakapense Maya, *see* Maya
 Siroi; Mandang, Trans-New Guinea
 Skolt Saami, *see* Saami
 Slave; Athapaskan, Na-Dene
 Slavic, Common; Slavic, Indo-European
 Slovak; Slavic, Indo-European
 So; Kuliak, Nilo-Saharan
 Somali; East Cushitic, Afroasiatic
 Soninke; Mande, Niger-Congo

Sora; Munda, Austroasiatic
 Sorbian, Upper; Slavic, Indo-European
 Sotho, Northern; Bantu, Niger-Congo
 Sotho (Sesotho), Southern; Bantu, Niger-Congo
 Sotho-Tswana; Bantu, Niger-Congo
 Southern Barasano, *see* Barasano
 Southern Min, *see* Min
 Southern Zhuang; Tai, Tai-Kai
 Spanish; Romance, Indo-European
 Squliq; Atayalic, Austronesian
 Sranan CE (Surinam creole); English-based creole
 Sri Lanka CP; Portuguese-based creole
 Sudan Arabic, *see* Arabic
 Sui; Kam-Sui, Tai-Kadai, Sino-Tibetan
 Sumerian⁺; isolate
 Sundanese; Malayo-Polynesian, Austronesian
 Supyire (Suppire); Gur (= Voltaic), Niger-Congo
 Surgut (dialect of Khanty); Uralic
 Surselvan (Rhaeto-Romance); Romance, Indo-European
 Susu; Mande, Niger-Congo
 Suzhou dialect of Wu, *see* Wu
 Swahili; Bantu, Niger-Congo
 Swedish; Germanic, Indo-European
 Syer; Gur, Niger-Congo
 Syriac⁺; Semitic, Afroasiatic
 Syrian Arabic, *see* Arabic
 Taba; Malayo-Polynesian, Austronesian
 Tabassaran (Tabasaran); Lezgitic, East Caucasian
 Tagalog; Malayo-Polynesian, Austronesian
 Tagbana; Gur (= Voltaic), Niger-Congo
 Tahitian; Oceanic, Austronesian
 Tai Ya; Tai, Tai-Kadai
 Taipei Min, *see* Min
 Taiwan Min (Taiwanese) *see* Min
 Tajik; Indo-Iranian, Indo-European
 Takelma⁺; Penutian
 Takia; Western Oceanic, Austronesian
 Tamambo; Oceanic, Austronesian
 Tamang; Tibeto-Burman, Sino-Tibetan
 Tamang, Eastern; Tibeto-Burman, Sino-Tibetan
 Tamang, Western; Tibeto-Burman, Sino-Tibetan
 Tamazight; Berber, Afroasiatic

Tamil; Dravidian, Elamo-Dravidian
 Tarascan, *see* Purépecha
 Tarahumara; Sonoran Uto-Aztecan, Uto-Aztecan
 Tariana; North Arawak, Arawak
 Tatar; Turkic
 Tauya; Madang, Trans-New Guinean
 Tawang Monpa, *see* Monpa
 Tawala; Oceanic, Austronesian
 Tayo CF; French-based creole
 Tchien Krahn, *see* Krahn
 Teiwa; Alor-Pantar, Timor-Alor-Pantar
 Telugu; Dravidian, Elamo-Dravidian
 Tepehuan, Northern; Sonoran Uto-Aztecan, Uto-Aztecan
 Tepehuan, Southern; Sonoran Uto-Aztecan, Uto-Aztecan
 Tepo; Kru, Niger-Congo
 Teso; Eastern Nilotic, Nilo-Saharan
 Tetun; Malayo-Polynesian, Austronesian
 Thai (Siamese); Tai, Tai-Kadai, Sino-Tibetan
 Thakali; Tamangic, Sino-Tibetan
 Thompson; Salish, Almosan-Keresiouan
 Tibetan; Tibeto-Burman, Sino-Tibetan
 Tigre; Semitic, Afroasiatic
 Tigrinya; Semitic, Afroasiatic
 Tiri (Tîrî); Oceanic, Austronesian
 Tjwao; Kalahari Khoe, Khoe ("Central Khoisan")
 Tlingit; Na-Dene
 Tobati; Oceanic, Austronesian
 Tofan (Tovan); Northeastern, Turkic
 Tok Pisin PE (or CE); English-based creole
 Tondano; Celebes, Malayo-Polynesian, Austronesian
 Tonga; Bantu, Niger-Congo
 Tonga-Inhambane; Bantu, Niger-Congo
 Tongan; Oceanic, Austronesian
 Tonkawa (Central Texas); isolate
 Toqabaqita (To'aba'ita); Oceanic, Austronesian
 Totonac; Tonaquean
 Totonac, Papantla; Tonaquean
 Trakai Karaim, *see* Karaim
 Tovan; Northeastern, Turkic
 Trique; Oto-Manguean
 Trukese; Oceanic, Malayo-Polynesian, Austronesian
 Trung, *see* Dulong

Tsafiki (Tsáchila); Barbacoan
 Tsakhur; Lezgi, Northeast Caucasian
 Tsonga; Bantu, Niger-Congo
 Tsou; Tsouic, Austronesian
 Tswana (Setswana); Bantu, Niger-Congo
 Ts'ixa; Kalahari Khoe, Khoe ("Central Khoisan")
 Tuareg; Berber, Afroasiatic
 Tucano; East Tucanoan, Tucanoan
 Tukang Besi; Malayo-Polynesian, Austronesian
 Tulu; Dravidian
 Tunchang dialect of Min, *see* Min
 Tundra Nenets, *see* Nenets
 Tunica; Gulf, Penutian
 Tunisian Arabic, *see* Arabic
 Tunni (Somali dialect); East Cushitic, Afroasiatic
 Turkana; Eastern Nilotic, Nilo-Saharan
 Turkish; Southwestern (Oghuz), Turkic
 Turku PA; Arabic-based pidgin
 Turoyo; Aramaic, Semitic, Afroasiatic
 Tuvaluan; Oceanic, Austronesian
 Tuvan; Northeastern, Turkic
 Twi (Akan); Kwa, Niger-Congo
 Tyurama; Gur (= Voltaic), Niger-Congo
 Tzotzil; Mayan, Penutian
 Ubykh (Ubyx); Northwest, Caucasian
 Udmurt; Permic, Uralic
 Ugaritic⁺; Semitic, Afroasiatic
 Ukrainian; Slavic, Indo-European
 Ulithian; Oceanic, Austronesian
 Umbundu; Bantu, Niger-Congo
 Urdu; Indo-Iranian, Indo-European
 Urdu, Kupwar; Indo-Iranian, Indo-European
 Ûsàk Èdèt; Kwa, Niger-Congo
 Usan; Numagenan, Trans-New Guinean
 Ute; Numic, Uto-Aztecan
 Uvean, East; Oceanic, Austronesian
 Uyghur; Southeastern, Turkic
 Uyghur, Kashgar; Southeastern, Turkic
 Uzbek; Northwestern, Turkic
 Vagala; Gur (= Voltaic), Niger-Congo
 Vai; Mande, Niger-Congo
 Vangunu; Oceanic, Austronesian

Vata; Kru, Niger-Congo
 Venda; Bantu, Niger-Congo
 Venetian; Italic, Romance, Indo-European
 Veps; Finnic, Finno-Ugric
 Vietnamese; Mon-Khmer, Austroasiatic
 Virgin Islands Dutch Creole Votic (Votian); Finnic, Finno-Ugric
 Waata (Oromo dialect); Cushitic, Afroasiatic
 Wagaya; Pama-Nyungan
 Walman; Torricelli, Papua New Guinea
 Wan̄kumara; Karnic, Pama-Nyungan
 Wanrong dialect of Chinese; Sinitic, Sino-Tibetan
 Wapa (Jukun dialect); Jukunoid, Niger-Congo
 Warao; isolate
 Wardaman; Non-Pama Nuyngan
 Warekena (of Xié); North Arawak, Arawak
 Wari' (Pakaas Novos); Chapacuran
 Warihío, *see* Guarijío
 Warlpiri; Pama-Nyungan
 Waropen; Eastern, Austronesian
 Warrwa; Eastern Nyulnyulan, Nyulnyulan (Non-Pama-Nyungan)
 Waskia; Madang, Trans-New Guinean
 Welsh; Celtic, Indo-European
 Wersing; Alor-Pantar, Timor-Alor-Pantar
 West African PE; English-based pidgin
 Western Tamang, *see* Tamang
 White Hmong, *see* Hmong
 Wichita; Caddoan, Keresiouan
 Winnebago, *see* Hoocak
 Wintu; Wintun
 Wobé; Kru, Niger-Congo
 Wolaitta; North Omotic, Afroasiatic
 Wolane; Semitic, Afroasiatic
 Woleaian; Oceanic, Austronesian
 Wolof; West Atlantic, Niger-Congo
 Wu; Sinitic, Sino-Tibetan
 Wu, Haimen; Sinitic, Sino-Tibetan
 Wu, Ningbo; Sinitic, Sino-Tibetan
 Wu, Northern; Sinitic, Sino-Tibetan
 Wu, Shanghai (Shanghainese); Sinitic, Sino-Tibetan
 Wu, Suzhou; Sinitic, Sino-Tibetan
 Wuming Zhuang, *see* Zhuang
 Xamtanga; Central Cushitic, Afroasiatic

Xaracuu (Xârâcùù); Oceanic, Austronesian
 Xaragure (Xârâgurè); Oceanic, Austronesian
 Xasonga; Manding, Mande, Niger-Congo
 Xdi; Chadic, Afroasiatic
 Xhosa; Bantu, Niger-Congo
 Xiamen dialect of Min, *see* Min
 Xiang; Sinitic, Sino-Tibetan
 Xiang, Changsha; Sinitic, Sino-Tibetan
 Xiang, Hengshan; Sinitic, Sino-Tibetan
 Xianghua dialect of Chinese; Sinitic, Sino-Tibetan
 Xide Yi, *see* Yi
 Xining dialect of Chinese; Sinitic, Sino-Tibetan
 Xishuangbanna Dai, *see* Dai
 Xuzhou dialect of Zhongyuan Mandarin, *see* Zhongyuan Mandarin
 Yabem (Yaben); Madang-Adelbert Range, Trans-New Guinean
 Yagaria; Gorokan, Trans-New Guinean
 Yagua; Peba-Yaguan, isolate
 Yakkha; Kiranti, Sino-Tibetan
 Yankunytjatjara; Pama-Nyungan
 Yao Samsao; Sino-Tibetan
 Yaqui; Sonoran Uto-Aztecan, Uto-Aztecan
 Yawuru; Eastern Nyulnyulan, Nyulnyulan (Non-Pama-Nyungan)
 Yemeni Arabic, *see* Arabic
 Yemsa (Yem, Janjero); North Omotik, Afroasiatic
 Yessan-Mayo (Mayo); Tama
 Yi; Tibeto-Burman, Sino-Tibetan
 Yi, Bijie; Tibeto-Burman, Sino-Tibetan
 Yi, Xide; Tibeto-Burman, Sino-Tibetan
 Yidiny; Pama-Nyungan
 Yindjibarndi; South-West, Pama-Nyungan
 Yolngu; Pama-Nyungan
 Yongshou dialect of Zhongyuan Mandarin, *see* Zhongyuan Mandarin
 Yoruba; Kwa, Niger-Congo
 Yosondúa; Mixtecan, Oto-Manguean
 Yucatec; Mayan, Penutian
 Yudu dialect of Hakka, *see* Hakka
 Yue (Cantonese); Sinitic, Sino-Tibetan
 Yue (Cantonese), Guangzhou; Sinitic, Sino-Tibetan
 Yue (Cantonese), Hong Kong; Sinitic, Sino-Tibetan
 Yue (Cantonese), Lianjiang; Sinitic, Sino-Tibetan
 Yue (Cantonese), Nanning; Sinitic, Sino-Tibetan
 Yuexi dialect of Gan, *see* Gan

Yugur, Western; Turkic Yulu; Central Sudanic, Nilo-Saharan
 Yupik, Alaskan; Eskimo-Aleut
 Yupik, Siberian; Eskimo-Aleut
 Zaiwa; Burmish, Tibeto-Burman, Sino-Tibetan
 Zande; Ubangian, Niger-Congo
 Zapotec; Zapotecan, Oto-Manguean
 Zay (Zway); Semitic, Afroasiatic
 Zazaki; Indo-Iranian, Indo-European
 Zhu, *see* !Xun
 Zhaba; Qiangic, Sino-Tibetan
 Zhongyuan Mandarin; Sinitic, Sino-Tibetan
 Zhongyuan Mandarin, Ganyu; Sinitic, Sino-Tibetan
 Zhongyuan Mandarin, Shangshui; Sinitic, Sino-Tibetan
 Zhongyuan Mandarin, Xuzhou; Sinitic, Sino-Tibetan
 Zhongyuan Mandarin, Yongshou; Sinitic, Sino-Tibetan
 Zhuang; Tai, Tai-Kadai, Sino-Tibetan
 Zhuang, Debao; Tai, Tai-Kadai, Sino-Tibetan
 Zhuang, Longzhou; Tai, Tai-Kadai, Sino-Tibetan
 Zhuang, Southern; Tai, Tai-Kadai, Sino-Tibetan
 Zhuang, Wuming; Tai, Tai-Kadai, Sino-Tibetan
 Zongyang dialect of Jianghuai Mandarin, *see* Jianghuai Mandarin
 Zulu; Bantu, Niger-Congo
 Zway, *see* Zay
 Zyrian, *see* Komi

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This bibliographic list includes all those titles that have been found to be relevant in some way or other to the research leading to this work. Accordingly, it also contains titles of studies that are not strictly devoted to grammaticalization, in particular (a) studies that deal with but question the significance of grammaticalization as a theoretical concept, (b) studies that deal with processes of grammaticalization but use other theoretical frameworks to describe and/or account for these processes, and (c) grammars that do not use the term “grammaticalization” but provide data or observations that are immediately relevant to this work. No claim is made that the list below constitutes a comprehensive bibliography of grammaticalization.

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