

# TEN LECTURES ON COGNITIVE SOCIOLINGUISTICS

**DIRK GEERAERTS**



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**DISTINGUISHED LECTURES IN COGNITIVE LINGUISTICS**    **BRILL**

## Ten Lectures on Cognitive Sociolinguistics

# Distinguished Lectures in Cognitive Linguistics

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*by*

Dirk Geeraerts



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## Note on Supplementary Material

All original audio-recordings and other supplementary material such as any hand-outs and powerpoint presentations for the lecture series, have been made available online and are referenced via unique DOI-numbers on the website [www.figshare.com](http://www.figshare.com). They may be accessed via a QR code for the print version of this book, in the e-book both the QR code and dynamic links will be available which can be accessed by a mouse-click.

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The complete collection of lectures by Dirk Geeraerts can be accessed through scanning this QR code <https://doi.org/10.6084/m9.figshare.c.3784517>



# Preface

The present text is a transcribed version of the lectures given by Professor Dirk Geeraerts in 2009 as the forum speaker for *the 7th China International Forum on Cognitive Linguistics* (CIFCL7). The text is published, accompanied by its videodisc counterpart and Chinese guide, as one of the *Eminent Linguists Lecture Series*.

CIFCL provides a forum for eminent international CL scholars to interact with Chinese audiences. It is a continuing program organized by six prestigious universities in Beijing. The main organizing institution for CIFCL7 is Beihang University (BUAA); its co-sponsors include Tsinghua University, Peking University, Beijing Foreign Studies University, Beijing Language and Culture University, and Beijing Forestry University. Professor Geeraerts's lecture series was supported by *the Beihang Grant for International Outstanding Scientists* for 2009 (Project number: Z0959, Project organizer: Thomas Fuyin Li).

The transcription of the video, proofreading of the text, and publication of the work in its present book form, have involved many people's strenuous inputs. The initial drafts were done by the following: Weiwei Zhang, Yan Ding, Wenjuan Yuan, Shuying Yin, Yanan Hu, Jie Yang, Liqin Xiong, Lingyan Zheng, Sai Ma, and Lingmin Li. Then we editors did the word-by-word and line-by-line proofreading work. To improve the readability of the text, we deleted the false starts, repetitions, fillers etc. The published version is the final version approved by the speaker.

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## How to Use This Text

Two important points need to be kept in mind when using the following texts.

In the first place, the most important part of the book consists of the reproduction of the PowerPoint presentations. The presentations were crucial for the original lectures, and the transcripts of the lectures cannot easily be followed unless you keep an eye on the presentations. Many references in the transcripts (including deictic expressions like 'here' and 'this') relate directly to the presentation slides. In this respect, it's better to think of the text as elucidating the handouts than the other way round. To facilitate reading, the transcribed text is structured on the basis of the presentation slides. For instance, [3.5] indicates where the explanation of the fifth slide of the third lecture begins. The slides in the handouts are numbered accordingly.

In the second place, the transcripts are not pure transcripts. Although they still follow the narrative and rhetorical flow of the original oral delivery of the lectures, they have been adapted to facilitate reading: hesitations, mistakes, repetitions and occasional unclarities have been removed to ensure a higher readability.

## About the Author

Dirk Geeraerts (1955, PhD 1981) is professor of linguistics at the University of Leuven, where he founded the research unit Quantitative Lexicology and Variational Linguistics. His main research interests involve the overlapping fields of lexical semantics and lexicology, with a specific descriptive interest in variation and change, a strong methodological commitment to corpus analysis, and a theoretical allegiance to Cognitive Linguistics. As the founding editor of the journal *Cognitive Linguistics*, as co-editor of the *Oxford Handbook of Cognitive Linguistics*, and as managing editor of the book series *Cognitive Linguistics Research*, he played and plays a significant role in the international expansion of Cognitive Linguistics. His expertise extends beyond fundamental research in lexicology and lexical semantics to the practice of lexicography: he collaborated on the *Woordenboek der Nederlandsche Taal* (the Dutch counterpart of the OED) from 1977 to 1985, and was editor of the *Van Dale Groot Woordenboek van de Nederlandse Taal* (the main desk dictionary of contemporary Dutch) from 1995 to 2005. The following monographs are among his main publications:

*Paradigm and Paradox. Explorations into a Paradigmatic Theory of Meaning and its Epistemological Background.* 1985. Leuven: Universitaire Pers.

*Wat er in een woord zit. Facetten van de lexicale semantiek.* 1989. Leuven: Peeters.

*The Structure of Lexical Variation. Meaning, Naming, and Context.* 1994, with Stefan Grondelaers and Peter Bakema. Berlin/New York: Mouton de Gruyter.

*Diachronic Prototype Semantics. A Contribution to Historical Lexicology.* 1997. Oxford: Clarendon Press.

*Convergentie en divergentie in de Nederlandse woordenschat.* 1999, with Stefan Grondelaers and Dirk Speelman. Amsterdam: Meertens Instituut.

*Words and Other Wonders. Papers on Lexical and Semantic Topics.* 2006. Berlin/New York: Mouton de Gruyter.

*Theories of Lexical Semantics.* 2010. Oxford: Oxford University Press.





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## The Social Turn in Cognitive Linguistics

[1.1] Thank you very much for being present in such large numbers. It is an honour and a delight to lecture in a nation that traditionally attaches so much cultural importance to scholarship. What I would like to do in my talks is to go through a number of aspects of what I will be calling ‘Cognitive Sociolinguistics’. Basically that is going to be an introduction to variation studies, i.e. the study of language variation, within the framework of Cognitive Linguistics. We will be studying language internal variation from a social and a historical point of view with a specific focus, a specially cognitive linguistic focus, on meaning and categorization.

[1.2] To give you a rough overview of what the talks will include, there are ten talks that are basically structured in the following five sections. The first two talks, so today’s talks, are introductory ones, then the next two, tomorrow, will deal with what I will call ‘semasiological variation’; we will see later what that implies. Then the following two talks (or the following five talks, in a sense) are about onomasiological variation. Again, I will need to explain what exactly that includes, but note that we make the distinction between ‘conceptual onomasiological variation’ (lectures 5 and 6) and ‘formal onomasiological variation’ (lectures 7, 8, 9). Then the final talk is a conclusion.

[1.3] The introduction consists of, first, a historical overview of the social turn in Cognitive Linguistics, that is to say the growing importance of social, sociolinguistic, cultural studies within Cognitive Linguistics. Then the second talk introduces all this difficult terminology that I mentioned in the overview (things like ‘semasiological’ and ‘onomasiological’ variation).

[1.4] In the second two talks, first we’ll have a look at things from a diachronic, historical point of view: that is the ‘diachronical prototype semantics’ talk for tomorrow. Then we’ll have a look at things from the point view of linguistic norms: that will be the fourth talk on ‘stereotypes, prototypes and norms’.

[1.5] The next two then illustrate the concept of conceptual onomasiological variation by looking at the cultural history of metaphors and further by looking at cultural models of language variation.

[1.6] The next three talks illustrate formal onomasiological variation. I will be talking about lexical variation, about measuring lexical variation and then about multivariate models of linguistics variation: what does it mean when you bring all these issues back together into some kind of model of grammar? And of course we will have a conclusion in the final talk.

[1.7] It also needs to be pointed out that a lot of what I will be presenting is not my individual work but it is work that has been done by my research team in Leuven, the Quantitative Lexicology and Variational Linguistics team. A lot of what I will present has been developed firstly in PhD theses, for instance, that were represented in Leuven.

[1.8] Let's now really get started with the first talk on 'The Social Turn in Cognitive Linguistics'. Cognitive Linguistics as a theoretical approach in linguistics has a history of roughly thirty years. The question I want to introduce now is the following: is there a unifying factor behind the development of Cognitive Linguistics, and if we can identify such a factor in which direction could Cognitive Linguistics develop in the future? What I will try to make clear to you is that increasing attention for social factors in language is a part of the natural development, the spontaneous development of Cognitive Linguistics.

[1.9] In practice that means that I will first present a brief overview of the history of Cognitive Linguistics, situate Cognitive Linguistics in the context of the history of linguistics, then identify the major underlying trends in development of Cognitive Linguistics (and as you can imagine, the turn towards the social aspects of meaning in language is part of those underlying trends), and then I will draw some conclusions on the basis of that analysis.

[1.10] The steps in the talk for this morning, then, are as follows: first we will have a historical overview of 30 years of Cognitive Linguistics, then I sketch the wider context (that is going to be, in a sense, a highly simplified history of twentieth century linguistics). Then we will situate the specific position of Cognitive Linguistics against this background as what I will call a 'recontextualizing' approach. Basically, you may want to keep this in mind: what I will try to show is that in the history of linguistics in a larger sense, you have a tendency to ignore the context of language, to decontextualize language. But Cognitive Linguistics is one of the approaches that recontextualize the language—and as you already understand, looking at the social context of language is a crucial aspect of that recontextualizing tendency.

[1.11]–[1.12] If we think about the history of Cognitive Linguistics of the last thirty years, we can roughly indicate a number of landmarks, a number of important dates. If we take the period in the middle of 1970s, we can find the early beginnings of Cognitive Linguistics. Leonard Talmy's work on figure and ground dates from 1975, Ronald Langacker's work on cognitive grammar was first formulated in the middle of the 1970s, and George Lakoff's move towards what he then called 'gestalt' linguistics, also dates from that period. In the 1970s, more precisely in the middle of the 1970s, we can see the first seeds, so to speak, of what is now known as Cognitive Linguistics. That is the first step.

[1.13] Then if we move ten years on to the second half of 1980s, we get a very important step in the development of Cognitive Linguistics because that is the point when Cognitive Linguistics really enters the international scene. Specifically, we have a number of publications there that we still refer to today as foundational texts, and at the same time, some other things happened at that point that indicate we witnessed an international expansion of Cognitive Linguistics. For instance, we have Ronald Langacker's *Foundations of Cognitive Grammar* in 1987, George Lakoff's *Women, Fire and Dangerous Things* in the same year, and the very important collective volume of papers published in 1988 by Brygida Rudzka-Ostyn. In 1989 we have the first International Cognitive Linguistics Conference (which was still fairly small event at that time), and in 1989 I launched the journal *Cognitive Linguistics*. In that period, the second half of 1980s, you can see that Cognitive Linguistics becomes international.

[1.14]–[1.15] Then a further stage is reached, let's say, some ten years ago, when you see that Cognitive Linguistics has consolidated itself into a really international movement. When a theory, an approach comes consolidated like that, you see the emergence of publications, a number of textbooks and reference works that present the state of affairs in the theory; and on the sociological level, what you also see is that you have an expansion, a sociological expansion and consolidation of the framework. In this case, that takes the form of the foundation of a number of national affiliates of the International Cognitive Linguistics Association. To briefly go through a number of these: Spain was the first to set up a national Cognitive Linguistics Association in 1989 and one of the most recent ones is the Chinese one, which was founded in 2006. You see that apart from the already existing International Cognitive Linguistics Association, we get a number of regional ones or localized ones or national ones. With regard to the handbooks and the reference works, here's an overview just to show that we have a whole series of books that consolidate



the knowledge and the views that we have acquired in Cognitive Linguistics: Ungerer & Schmid's book of 1996, Dirven & Verspoor in 1998, Violi 2001, Croft & Cruse 2004, Evans & Green 2006, the volume of *Basic Readings* that I edited in 2006 plus an accompanying volume with chapters on the contemporary situation edited by Kristiansen et al., and then another voluminous handbook of Cognitive Linguistics published by myself and my colleague Hubert Cuyckens in 2007.

[1.16] Overall, if you summarize all that, what you can see is that we go from a pioneering stage in the first decade from 1977 to roughly 1987, to an expansion stage in the next decade and then to what I will call a consolidation stage—which of course still goes on. We have three major stages in the theoretical and sociological development of Cognitive Linguistics. But then the question is: what are the theoretical developments that accompany this sociological expansion in terms of contents? We've seen what happened in terms of practical activities, in terms of localization, in terms of international presence, but what happened in terms of theory?

[1.17]–[1.18] To see what has been happening, I first want to have a look at the evolution of linguistics in the larger sense. What happened in linguistics in the 20th century? And specifically, what happened before Cognitive Linguistics became a part of this evolution of 20th century linguistics? What I want to claim is that we can get a very good grip on linguistics in the 20th century if we see that there are three stages in the development of 20th century linguistics. We first get a decontextualization stage, then we get a period with initial reactions to the decontextualization movement, and then we get what I call the recontextualization movement. Then my claim will be that Cognitive Linguistics is the movement, or at least one of the movements, that embody and perhaps even epitomize that recontextualizing tendency.

[1.19] Let's start at the very beginning of 20th century linguistics. There is of course also the history of 19th century linguistics which is very important, and if you can stay with me until Lecture 10, then you will see that I will also at one point go back to 19th century linguistics. One of the things I will claim at the very end of this series of ten talks is that some of the things that are happening at this point in linguistics actually reflect to a large extent a number of things that were happening in the 19th century. For the moment, let's stick to the 20th century. What is usually recognized as the beginning of 20th century linguistics is the work by the Swiss linguist Ferdinand de Saussure. The crucial aspect of the teachings of Saussure is that you have to make a distinction between

two levels of language. On the one hand, there is the level of structure, 'langue' in French, which is language as a social system, as a collective set of coded conventions, a cultural thing if you wish, a cultural code. On the other hand, there is the level of linguistic usage which in Saussure's French terminology is known as 'parole'. That is the level where we have language as an individual, psychological activity. On the one hand, you have the code, the set of symbols that you can use if you wish, on the other hand you have the actual usage of those symbols by combining them, by putting them together, and then you'll have something like a sentence, or a message or whatever.

[1.20] In this system where you make the distinction between langue and parole, between structure and use, there is a missing link. There is a missing link because there is one question that the Saussure does not answer, namely where is the individual's knowledge of the system? On the one hand, you have the system which is described by the Saussure as something social, something collective; on the other hand, there is the individual activity of putting linguistic forms together to make a sentence. But implicitly if you have this second aspect, if you have the linguistic activity of the individual, there has to be something in-between, there has to be something between the collective code and the individual activity and that is the knowledge of the individual. The individual speaker can not use the linguistic code unless the individual has a knowledge of the code. There arises, in a sense, a cognitive gap in the Saussurean system: what is the cognitive bridge between the social code and the individual activity?

[1.21] If I express that graphically we can put it in this way. Note that this is a representation that I will be using a lot in the rest of this talk. The rest of this talk is, to some extent, a variation and an expansion, a modulation of this graphical representation. On the one hand, we have 'langue' as the social system, and on the other hand we have 'parole' as the individual activity. Then there is a question mark in the middle: where is the individual system, where is the knowledge that the individual has of the social system, in the sense that that knowledge enables the individual to use the social system? Now of course, up to a point, that is not a difficult question. If you ask the question 'where is knowledge of the individual', we can assume that the individual has the knowledge, because he's learned the language, because he's learned the social code. In itself, it is not a question that is so difficult to answer. The knowledge of the individual is something that the individual acquires by being a member of a social group, a social group that uses the language. Only from a theoretical point of view, as we will see, this question is very important for the evolution of

linguistics in the 20th century. In what sense? This becomes clearer if we shift towards what we can perhaps call the second major revolution in 20th century linguistics, if the emergence of Saussurean structuralist grammar is the first important step.

[1.22] The second step is the emergence of generative grammar, of the Chomskyan framework. What is very important in the Chomskyan approach is precisely that Chomsky focuses on this missing link, on the question mark in the initial system. If you think of the terminology that is used by Chomsky, you will immediately understand why we can say that, because one of the things Chomsky introduces was this notion of 'competence', and that is a crucial notion for the Chomskyan framework. What is 'competence'? 'Competence' as defined by Chomsky is precisely the individual's knowledge of the language, so precisely the thing where we have a question mark in the graphical representation a moment ago. Competence fills the gap. So far so good; this is precisely what we would expect. There is something missing in the overall picture and someone fills it in. Fine, but this is now where a specific problem in the evolution of 20th century linguistics emerges: Chomsky introduces another gap. In what sense? What we would expect, given our initial representation, is that we get a system with three parts, i.e. that we would have a model of the language that takes into account the social aspects of language, the individual cognitive aspects of language and then the individual activity as language usage. That is what we would expect. That is what we would like Chomsky to do. But that is not exactly what happened in the reality. In reality, Chomsky forgets about the social aspects of language, the code aspects of language. He not only forgets about them, in fact. He denies their importance quite explicitly. Instead of a system with three components, we are again left, in Chomskyan Grammar, with a system with only two components.

[1.23] The question mark or the gap, if you wish, shifts position. In the Chomskyan approach, it is only the individual's knowledge of the system and then the individual activity that get into the picture. But the social aspects of language are not included. In this representation, you see the two binary terminologies relate to each other. You have 'langue' and 'parole' in the case of De Saussure, the social aspects and the individual usage; in the Chomskyan approach, you get 'competence' and 'performance', again a binary distinction. The competence aspect of Chomsky fills the gap that was left in the Saussurean system. But in the Chomskyan system you see a new gap arising on the side of the social aspects, on the side of language as a social code.

[1.24] Now this overall situation, this overall model of what Chomskyan generative grammar does, has tremendous consequences, not least because generative grammar was so very popular from the 1960s onwards. What are the consequences? Let's ask a question now within Chomskyan framework. Where does the individual's knowledge of the language come from? In a Saussurean system you can say: if language is something that is essentially also a collective thing, a collective code, then the individual may learn the language by being immersed in a culture, by the interaction with other people. But if you forget about the social aspects of language, if you in a sense even deny their importance and at the same time focus on the individual knowledge of language, on competence, then of course the question is where does the competence come from? Or in other words, if the source of linguistics knowledge is not social, is not social interaction or whatever, what is it? That is of course where the generative focus on the innateness, on the inborn genetic aspects of language comes from: if the knowledge of language is not social, well, then it must be genetic. There is hardly any other option. It must be inborn if you don't learn it by interacting with other people. It must be there in some form or another from the very start.

[1.25] Once you see the connection between the gap in the overall model of grammar and the focus on individual competence, you can also see that there is a stepping-stone development in generative grammar which leads by an internal logic to an isolation of the grammar, an isolation of the grammar, in a sense, from everything that is in the context. Let me try to spell out how it goes in a logical way. We already understand that if language is not social, then the knowledge of individuals, or at least the prime source of the individual's knowledge of language, cannot be social either: it has to be genetic. But then the language will be, seen primarily as something that is inborn. But then again, if the crucial thing about language is its genetic origin, then it is not very likely that the lexical or the semantic aspects of language are very important. Because if we think of meaning in language, and if we think of the vocabulary of the language, then those are the aspects of language that we can most easily see as historically variable and culturally variable. The categories that we use in the language are specific to the language, specific to the culture, specific to the region so on. There is a lot of variability there that has a social background. If you focus on the genetic aspect of language, you are not likely to focus on the semantics or and certainly not on the vocabulary. That already restricts the scope of grammar. Now, if what is important in the grammar is not the semantics or the words, then language will be about formal rule

systems, syntactic rules that are conceived from a formal point of view. And if the study of language is, not about the formal rules in a language, then there arises another restriction, because then the application of the rules becomes very trivial. That is to say, even within the Chomskyan approach, the distinction between competence and performance is asymmetric, in the sense that competence is all important, rather than performance and language use. The neglect of the social aspects of language that we started off with thus leads to a decontextualisation of the grammar: the contextual aspects, perspectives, parts of language are in a sense thrown out. They are thrown out, because this focus on the genetic aspects of language makes them unimportant.

[1.26]–[1.27] I can represent this process graphically by going back the basic graphical representation that we have. We have the social code aspect of language and performance to the left to the right respectively. Then what is in the middle? In the middle we have the individual's knowledge of the language and we can now specify that in the Chomskyan way of thinking about things, the real grammar, the individual's knowledge of the grammar, that is what is in the middle. But if this is the full picture that we would like to see (language as a social thing, language as a individual's knowledge of the language, and language as using a language), then what is left of this, of this whole picture in a generative framework? Lots of things are being thrown out and cut off, in the following sense. First, we remove the social code, that was the first form of neglect that we had to note. Then we also saw a moment ago that performance becomes unimportant because the focus is on rule systems, not on how the rules are used. And then within the grammar itself, we cut off meaning and lexicon. In this Chomskyan approach to things, in other words, you get a restricted and isolated conception of grammar.

[1.28] The Chomskyan approach, in other words, embodies a restrictive strategy that separates an autonomous, genetically determined grammatical module from different forms of context, from social context, from discourse, the discursive context of actual use, and from the cognitive context of meaning and experience of the language. This restrictive movement is what I want to refer to as the decontextualizing tendency in mainstream linguistics of the second half of the 20th century. Maybe, when we look back on this in a couple more decades, we will say that this was dominant in just a very brief period from 1960 to 1980. Even so, it was really dominant then, and it still has an enormous impact on the evolution of linguistics precisely because linguistics was becoming very popular in that period.

[1.29] We now come to the next step in the evolution. When we ask ourselves what happens in reaction to this decontextualizing movement, I would say that in those reactions you get two stages. The first stage I would like to situate fairly roughly from 1960 to 1980. That is the stage when the discarded aspects of language, the things that were thrown out, as we saw a moment ago, are still not totally left out in the picture, but are being developed separately, that is to say they are being developed as disciplines that are more or less independent of theoretical grammar. The next stage will be the development in which those aspects of language are again been reincorporated into the grammar itself. What Chomskyan grammar does is to throw out a number of things from the grammar, and the things that it throws out do continue to exist, but not as a part of core linguistics, the part of linguistics where you study the grammar. In a second stage, you get movements that reincorporate those things into the study of grammar. So let's first look at this initial stage. Let's have a look at the various aspects of what was thrown out, what was discarded. Obviously, this is something that you can probably think of yourself, on the basis of your own knowledge of the recent history of linguistics.

[1.30] Where does the study of social code go to? More or less parallel with the emergence and the growth of generative linguistics, we see the emergence of sociolinguistics, sociolinguistics for instance in a sense of Labov, and we can see that it emerges as something that exists in parallel to theoretical grammar of the generative kind. It is studying language variation as a field in itself, not as a part of the study of the structure of the grammar for instance, but as a more or less separate approach. On the slide, these are just a few references to early work in sociolinguistics which you are probably familiar with. An important thing to remember is this: in the picture that I am drawing, sociolinguistics emerges as an answer to the generativists' neglect of the social aspects of language and the neglect of variation. But it emerges as a discipline in its own right, and not as part of a variationist view of what grammar is.

[1.31] Something similar happens to the other two grey boxes in slide 1.35. If we think of performance, of language use, we again see something happening in the period from 1960 to 1980, namely we see the emergence of pragmatics in its various forms: logical forms of pragmatics, text linguistics, discourse linguistics and so on. Pragmatics emerges as an answer to the Chomskyan neglect of performance and language use. On the slide, you again get a few fairly well-known references to important foundational works in pragmatics.

[1.32] Then, on the side of semantics, we see something happening in the same way: in the late 1960s, early 1970s, we witness the emergence of formal semantics. Formal semantics may also be seen as one of those streams in linguistics that pick up some of the strands of investigation that were abandoned by generative grammar. What formal semantics does is to stay within the formal framework (specifically, by developing the descriptive framework of formal logic) but to focus on semantics, rather than to say that syntax is all important. Cognitive linguistics, needless to say, is a form of meaning-oriented grammar that does not stay within the framework of a formal grammar.

[1.33] Overall, what we see in this first period, in the first stage of reacting against the restrictive approach of generative grammar, is the emergence of forms of linguistics that do focus on the neglected parts, on the discarded parts, but that do so by developing theories of their own. What makes the story a bit more complicated is that in some cases, of course, there are more interactions with generative grammar than in others. For instance, if you take logical pragmatics, there is some formal interaction with generative grammar, and also with formal semantics. A full history of late 20th century linguistics would have to fill in such details and nuances, but let's not go into those details here, let's keep the picture fairly simple for today.

[1.34] What we see happening now (I am taking a broad view here of what is 'now', so that is actually, let's say, from roughly 1980 up to now) is that we get a growing dissatisfaction with the modular view of linguistics. If you go back to a picture like 1.41, what you get is a very modular conception of the overall structure of linguistics. You get different forms of linguistics that focus on different aspects, but no integration of all that in one model of the language. You have one model of language for syntax and the grammar, and you have one model of language for linguistic variation, for instance, but the two don't meet. Now that's not a very satisfactory situation, and so what we can see happening in the last 30 years is that we again get integrational approaches. Such approaches try to bring back the aspects that were discarded into the very study of grammar, into the very study of linguistic structure. The peripheral aspects that were being developed largely separately and autonomously, are being linked up more narrowly with the grammar itself. Then of course you can no longer maintain that grammar is an autonomous grammar: it is a grammar that is integrated with all the rest.

[1.35] I should say quite explicitly that this integrational approach is not restricted to Cognitive Linguistics. If you think of the many forms of functional

linguistics for instance, they all represent this tendency to reintegrate the peripheral aspects of the language into the study of the very structure of language. At the same time, I think that the re-incorporating tendency is a probably most radically represented within Cognitive Linguistics. I think Cognitive Linguistics is the most radical instantiation, the most extreme instantiation of the recontextualizing trend in contemporary linguistics. We can show this by having a look at the way in which the various aspects of context structure the internal historical development of Cognitive Linguistics.

[1.36] You remember that I started by asking: we have three stages in the development of Cognitive Linguistics, but what happens theoretically, what happens in the theoretical expansion of Cognitive Linguistics? If we now look at the internal evolution of Cognitive Linguistics, we can see that the internal evolution is actually guided by the reincorporation of those peripheral aspects of the grammar that we have been talking about. Let's have a look at that. The question is: how does Cognitive Linguistics integrate the different facets of studying language that were discarded by the decontextualizing tendency in modern linguistics? We have identified various aspects: we have meaning, we have lexicon, we have performance, usage and we have the social aspects of language. So how do they play a role in Cognitive Linguistics?

[1.37]–[1.38] First, obviously, Cognitive Linguistics has a lot to do with recovering meaning for the grammar. How can we see this? Well, the basic vocabulary of Cognitive Linguistics involves a set of concepts that all have to do with meaning: concepts like prototype, schematic network, conceptual metaphor, metonymy, conceptual integration, idealized cognitive model, frame... all those concepts are semantic concepts, concepts that have to do with ways of describing meaning. At the very core of Cognitive Linguistics is an attention for meaning in language. This is probably where most of the attention of and for Cognitive Linguistics comes from: a new way of looking at meaning in language.

[1.39] Then we can also say that compared to generative grammar and many other forms of more formally oriented grammars, there is lots of attention in Cognitive Linguistics for the lexicon, and not just from the point view of meaning. From the point of view of meaning in language, the lexicon is obviously important: just think of prototype theory, for instance. I will be coming back to prototype theory in the talk this afternoon, but when you think of prototype theory, and you are interested in the categories that are available in a particular language, then clearly the lexicon is a focus of attention. But the interest in the



lexicon goes further than that. Specifically, there is a lot of attention for the lexicon in the study of the syntax of the language. At this point in the development of Cognitive Linguistics, we find that most explicitly in construction grammars. What are construction grammars, as they are being developed by people like Langacker, Goldberg, Croft and others? Without going deeply into the matter, let us say that construction grammars are in a sense a lexicalist approach to syntax. First, constructions are syntactic entities that may consist of abstract categories, like word classes, together with lexically specific aspects. Second, even when given constructions are totally schematic, they have to be studied together with their lexical realization. The words that would typically fill out a schematic pattern have to be studied to get a good idea of what the pattern means. And third, if one studies the meaning of constructions, all the semantic phenomena that play a role in the lexicon (like prototypicality, to name just one example) would also play a role in the description of syntactic meaning. So, briefly, even in the syntactic parts of Cognitive Linguistics there is a tendency to achieve a close alliance between syntax and the lexicon.

[1.40] Then very importantly in contemporary Cognitive Linguistics, there is a recovery of performance. In what sense? From the very beginning of Cognitive Linguistics, there has been an interest in pragmatic meaning, in semantic phenomena that are situated on the level of discourse and actual usage. But that interest remained fairly implicit until, since a number of years, the importance of performance and the level of usage for Cognitive Linguistics has become explicit by the introduction of this notion of a 'usage-based theory of grammar'. (There is also, but I won't go into that, a growing interest in Applied Cognitive Linguistics, which is another form of paying attention to language in actual use.). What do people mean when they talk about a usage-based theory? Up to a point, the idea is that the level of actual linguistics usage is essential for language, in various respects. First, if we think back of the question of acquisition, of learning a language, then it is crucial that we learn the language through using it, and specifically by using it in social interaction with other people. Second, when we look at the description of language, and specifically at the methodology that we use in describing the language, then we cannot describe the language without taking into account what people actually do when they use language. The usage-based model of language will start from an investigation into actual language use and from there try to determine the structures, the patterns, the rules of the language. I am insisting on this point, because this is a point that is important for the rest of the talks. It is a methodological point. A usage-based theory of language argues that you have to include the study of performance, of discourse, of actual usage into the study of language. But

once you take that step, there is a crucial methodological consequence, which is that you will really have to start looking at what happens at the usage level. Among other things, it will become very important to use corpus materials and to start doing corpus linguistics, because what is a linguistic corpus? A corpus is a collection of texts that constitute instances of actual language usage. If you claim that performance has to be incorporated into the model of language, then you should really study performance, and if you study the performance, then you have to do corpus linguistics or maybe also experimental linguistics, but at least corpus linguistics, because that is where you will find your data on the actual use of language.

[1.41] Then finally, with regard to the fourth aspect, we also see tendencies to recover the social context of language. There are two major tendencies that I want to mention here. The first one is perhaps a more theoretically oriented one. It is the approach where people talk about ‘situated embodiment’ and the sociocultural background of meaning. It’s an approach that I would like to summarize as ‘biocultural linguistics’. Chris Sinha, who was one of the previous speakers in this Forum, is a very good representative of that approach. The central idea is that if we look at the semantic categories of a language, then those semantic categories have to be seen in their cultural context. The biocultural linguistics approach links up closely with anthropology, anthropological linguistics, and some forms of psychology. There is another form of recovering the social context in Cognitive Linguistics which is a more variationist type where we look at different forms of lectal variation in the language. Now let me explain this term for a moment, because it is one I will be using a lot in the course of the talks. ‘Lectal variation’ is a term that I use to generalize over things like dialectal variation, regiolectal variation, sociolectal variation, and also register variation and stylistic variation. A ‘lect’ is any linguistic variety, any intra-linguistic variety you can think of, a dialect, a regiolect, a national variety of a language, a sociolectal, stylistic variety and so on. The variationist form of Cognitive Sociolinguistics links up closely with the sociolinguistic tradition. A good example of this trend is a volume that was edited by Gitte Kristiansen and Rene Dirven last year precisely with the title *Cognitive Sociolinguistics*. I am distinguishing these two approaches here, but I don’t want to imply that there is an incompatibility between the two, on the contrary, there is a lot of overlap. The following lectures will be situated specifically within the second approach, but there will be references to the other one as well.

[1.42] We can summarize the foregoing in the following way. Coming back to our graphical representation, what do we see? In the development of

Cognitive Linguistics, there is a reincorporation into the grammar of meaning through the basic concepts of Cognitive Linguistics. There is a reincorporation of the lexicon not just through the interest in categorization, but also in syntax, specifically in the family of construction grammars. There is a reintroduction of performance at the level of usage by thinking of Cognitive Linguistics as a usage-based theory of grammar. And then there is a reintroduction of the social aspect of language, of the social code through the development of social, biocultural form of Cognitive Linguistics, and through the development of variationist Cognitive Linguistics, so through Cognitive Sociolinguistics.

[1.43] If we look at this recontextualizing tendency within Cognitive Linguistics, we can certainly claim that in the context of contemporary linguistics, Cognitive Linguistics embodies in an extreme sense the gradual recovery of the 'peripheral' modules that were discarded by a decontextualizing approach to grammar. In the context of the internal development of Cognitive Linguistics, this recovery takes the form of a gradual broadening of the notion of context. It is a movement of recontextualization in various senses.

[1.44] From the very beginning, in its basic concepts, Cognitive Linguistics assumes a contextualized notion of meaning. Meaning in language (this is something Cognitive Linguistics has always been saying) is not an isolated phenomenon, as it is treated in most of formal semantics, for instance. In Cognitive Linguistics, meanings are not seen as isolated, but as integrated with other types of cognition. Just one or two examples. Think of the attention that has been going to the study of polysemy in Cognitive Linguistics. What does it mean? Polysemy emerges when one thing is seen in the context of something else, when one meaning arises as a modulation of an existing meaning: that is a form of contextualization. Or think of another example, the importance of encyclopedic knowledge of Cognitive Linguistics: again, encyclopedic meaning is by definition highly contextualized, and some of the basic concepts in Cognitive Linguistics (like the notion of 'frame') have to do with ways of structuring and describing the encyclopedic aspects of meaning. Already in its basic concepts, in other words, Cognitive Linguistics is a contextualizing approach.

[1.45] Further, according to the usage-based conception of Cognitive Linguistics, we add another aspect of context: we add the discursive context of language use in various forms. By looking at the interplay between structure and use, by looking at the discourse function of items and the discourse grammar of constructions, you broaden the context.

[1.46] And then of course, there is the point where we will be for the rest of the talks: in biocultural Cognitive Linguistics, in variationist Cognitive Linguistics, in other words in Cognitive Sociolinguistics, you add the social context of cultures and lectal variation. So, essentially the underlying drift of Cognitive Linguistics in terms of its theoretical development consists of a systematic stepwise recontextualization of the grammar.

[1.47] We can even, I would claim, map this contextual expansion onto the chronological evolution of Cognitive Linguistics, in the following sense. You remember that I distinguished between the pioneering stage, the consolidation stage, and the expansion stage of Cognitive Linguistics. While the pioneering stage and consolidation stage focused largely on the basic concepts, the expansion stage was devoted to the broadening of the relevant notion of context.

[1.48] Here are some landmarks to illustrate the point. Construction grammar emerged in the second half of 1990s. The terminology for talking about Cognitive Linguistics as a 'usage-based theory of language' was popularized in the first year of this millennium, and then the variationist approaches and the sociolinguistic approaches, as we've seen, are more recent additions; they have been coming to the fore in the last a few years basically. In short, the theoretical expansion of the notion of context which achieves a recontextualization of the grammar actually also seems to underlie the chronological steps in the evolution of Cognitive Linguistics.

[1.49] Let me now draw some conclusions from this first step that I wanted to present, i.e. from this historical overview of Cognitive Linguistics (and to some extent even of 20th century linguistics). We have now had a first 30 years in the evolution of Cognitive Linguistics. Is there a unifying factor behind the development of Cognitive Linguistics? My answer to that question is 'yes': if contemporary linguistics is indeed going through a phase of recontextualization after the Chomskyan decontextualization of the grammar, then Cognitive Linguistics represents that recontextualizing tendency more than any other contemporary approach in linguistics.

[1.50] If that is the case, we might ask in what direction Cognitive Linguistics could develop in the future. This is anticipating something that I want to develop in Lecture No. 9 and Lecture No. 10. If we assume that factors like meaning, structure, discourse and lectal variation, all co-determine grammatical phenomena (that is to say, you don't study them separately if you study them as a

part of grammar), then we will need a certain type of grammar to do this: the recontextualization in general, and specifically also the social turn of Cognitive Linguistics, has consequences for the type of linguistic description that we produce. In the course of the talks, I will roughly be moving to a model that I will call a ‘multifactorial model’ of the grammar—‘multifactorial’ in the sense that the various aspects of context that we went through may all be included as aspects of the description of individual grammatical phenomena. But that is the long-term perspective for these Ten Lectures. The first step, which we have now taken, was to situate Cognitive Sociolinguistics (which we will be the focus of the following talks) in the context of the evolution of Cognitive Linguistics and the evolution of 20th century linguistics at large. Thank you!

## Handout Lecture 1

### 1.1 Purpose of the lectures

an introduction to variationist studies within Cognitive Linguistics

i.e. studying language-internal variation from a sociohistorical point of view with a specifically cognitive linguistic focus on meaning and categorization

### 1.2 Rough overview

- 1–2 Introduction
- 3–4 Semasiological variation
- 5–6 Conceptual onomasiological variation
- 7–9 Formal onomasiological variation
- 10 Conclusion

### 1.3 Rough overview

- 1–2 ~~Introduction~~
- 3–4 ~~Semasiological variation~~
- 5–6 Conceptual onomasiological variation
- 7–9 Formal onomasiological variation
- 10 Conclusion

- 1 The social turn in Cognitive Linguistics
- 2 Types of semantic and categorial variation

### 1.4 Rough overview

- 1–2 Introduction
- 3–4 ~~Semasiological variation~~
- 5–6 Conceptual onomasiological variation
- 7–9 Formal onomasiological variation
- 10 Conclusion

- 3 Diachronic prototype semantics
- 4 Stereotypes, prototypes and norms

### 1.5 Rough overview

- 1–2 Introduction
- 3–4 Semasiological variation
- 5–6 ~~Conceptual onomasiological variation~~
- 7–9 Formal onomasiological variation
- 10 Conclusion

- 5 The cultural history of metaphors
- 6 Cultural models of language variation

## 1.6 Rough overview

- 1-2 Introduction
- 3-4 Semasiological variation
- 5-6 Conceptual onomasiological variation
- 7-9 ~~Formal~~ onomasiological variation
- 10 Conclusion

7 Lexical variation as a sociolinguistic variable

8 Measuring lexical variation and change

9 Multivariate models of linguistic variation

## 1.7 Background

the Quantitative Lexicology and Variational Linguistics research team:

see <http://wwwling.arts.kuleuven.be/qlvl/>

## 1.8 Questions

questions after 30 years of Cognitive Linguistics

- is there a unifying factor behind the development of Cognitive Linguistics?
- if so, in which direction could Cognitive Linguistics develop in the future?

## 1.9 Approach

- present a brief overview of the history of Cognitive Linguistics
- situate CL in the context of the history of linguistics, and thus identify major underlying trends in the development of CL
- draw methodological and theoretical conclusions from that analysis

## 1.10 TOC

Step I. Thirty Years of Cognitive Linguistics

Step II. The Wider Context

Step III. Cognitive Linguistics as a Recontextualizing Approach

Overall Conclusion

## 1.11 Step I Thirty Years of Cognitive Linguistics

### 1.12 Thirty years of CL

three landmarks in the history of CL

- **1975–1977**  
the early beginnings:

Talmy 1975 on figure/ground  
Langacker 1976 on Cognitive Grammar  
Lakoff 1977 on 'gestalt' models

### 1.13 **Thirty years of CL**

three landmarks in the history of CL

- **1987–1989**  
entering the international scene:

1987 Langacker: Foundations of Cognitive Grammar  
1987 Lakoff: Women, Fire & Dangerous Things  
1988 Rudzka-Ostyn (ed.), Topics in CL  
1989 1st Intl Cognitive Linguistics Conference  
1989 launching Cognitive Linguistics, the journal

### 1.14 **Thirty years of CL**

three landmarks in the history of CL

- **from 1996–1998 on**  
international consolidation:

publication of textbooks and reference works  
foundation of national ICLA affiliates

### 1.15 **Thirty years of CL**

three landmarks in the history of CL

- **from 1996–1998 on**  
international consolidation:

publication of textbooks and  
reference works  
foundation of national ICLA affiliates



Spain 1998, Finland 2001,  
Poland 2001, Russia 2004,  
Germany 2005, France 2005,  
Japan 2005, Korea 2005,  
UK 2006, China 2006



**1.16 Thirty years of CL**

simplifying in three decades:

- 1977–1987: the pioneering stage
- 1987–1997: the expansion stage
- 1997–2007: the consolidation stage

→ what are the theoretical developments accompanying this sociological expansion?

**1.17 Step II The Wider Context****1.18 Overview**

an overview of the development of linguistic theory in the 20th century:

- decontextualization
- initial reactions
- recontextualization

claim: CL epitomizes the recontextualizing tendency

**1.19 Saussurean Grammar**

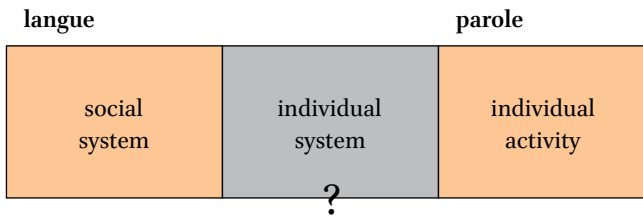
- **langue:**  
a social system  
a collective set of coded conventions
- **parole:**  
an individual, psychological activity  
a set of combinations from the code

**1.20 Saussurean Grammar**

- **a missing link:**  
where is the locus of an individual's knowledge of the social system?  
what is the bridge between the social code and the individual activity?

graphically:

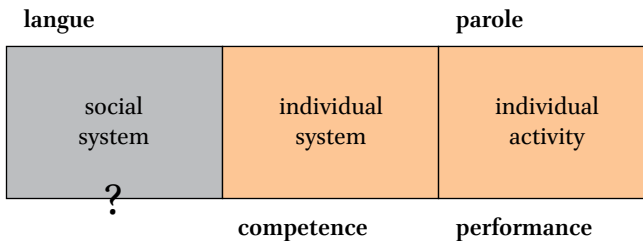
### 1.21 Saussurean Grammar



### 1.22 Chomskyan Grammar

- **competence:**  
filling in the gap  
an individual's knowledge of the language
- but creating a new hiatus:  
the social nature of the system remains out of sight  
again a binary instead of a ternary division

### 1.23 Chomskyan Grammar

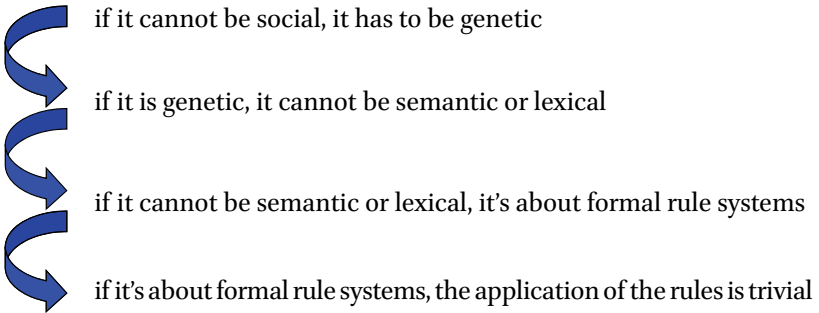


### 1.24 Chomskyan Grammar

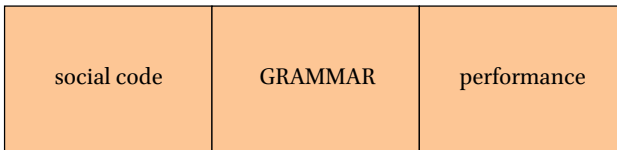
consequences of the Chomskyan position:

- where does the individual knowledge of the language come from? if the source of linguistic knowledge is not social, what is it?  
⇒ innateness, a genetic conception of language
- hence: a stepping-stone development, leading by an internal logic to an isolation of grammar:

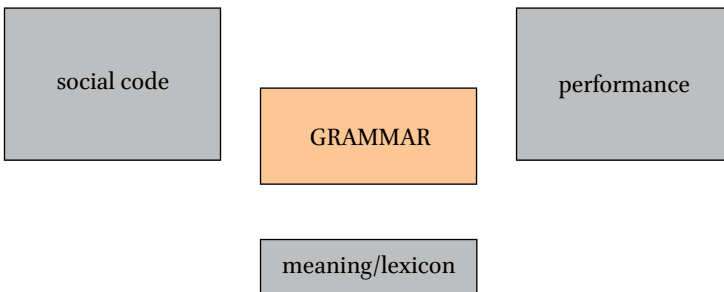
1.25



## 1.26 Chomskyan Grammar



## 1.27 Chomskyan Grammar



## 1.28 Chomskyan Grammar

in other words: a restrictive strategy that separates the autonomous grammatical module from different forms of context:

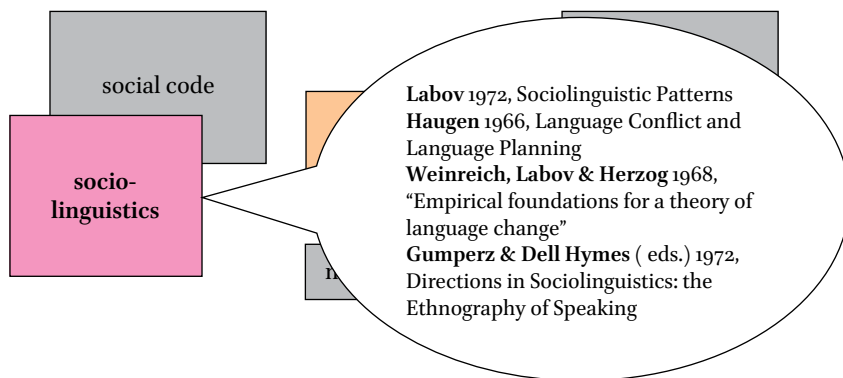
- the **social** context
- the **discursive** context of actual language use
- the **cognitive** context of meaning and experience

↳ decontextualisation

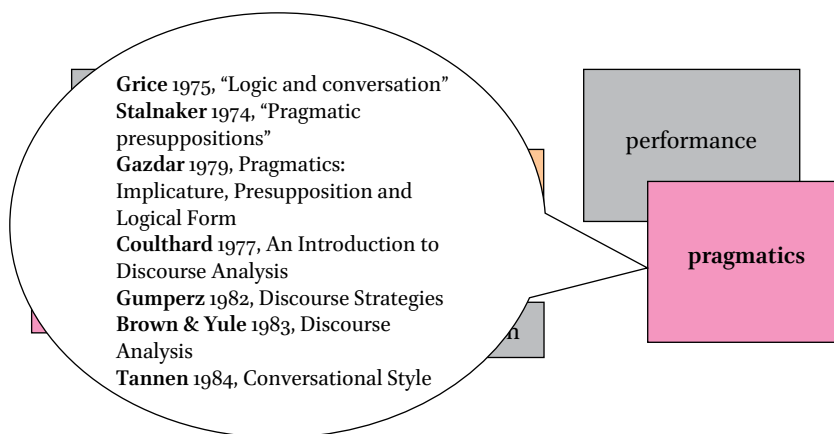
### 1.29 Initial reactions

- 1960–1980:
- the discarded aspects of language are developed separately, as disciplines more or less independent from theoretical grammar

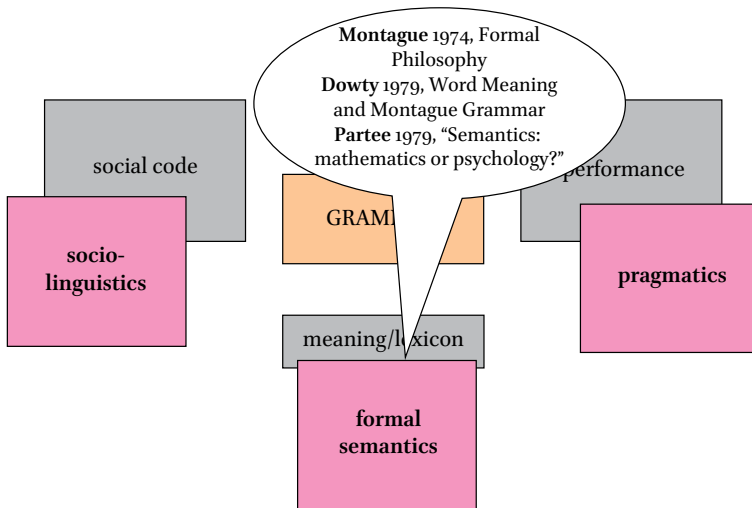
### 1.30 Initial reactions



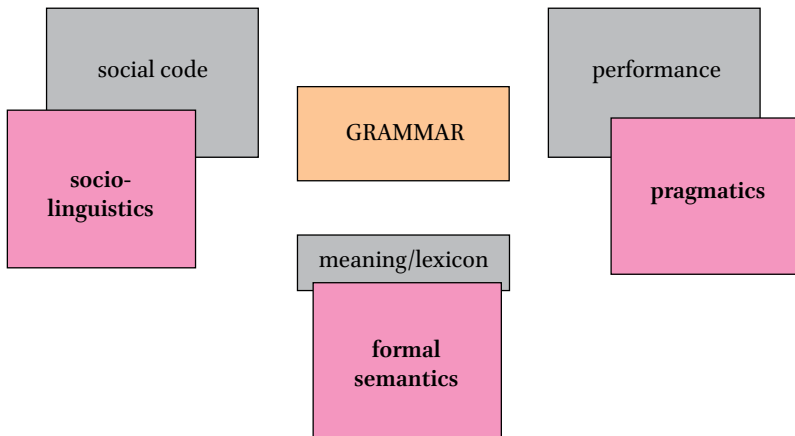
### 1.31 Initial reactions



### 1.32 Initial reactions



### 1.33 Initial reactions



### 1.34 Contemporary trends

general (or at least growing) tendency of dissatisfaction with the **modular** view of linguistics, in favor of an **integrated** approach:

the peripheral aspects that were being developed largely separately and autonomously, are being linked up more narrowly with the grammar itself (which can then no longer be autonomous)

**1.35 Contemporary trends**

although this re-incorporating tendency is far from being unique for CL,  
 a) CL is probably the most radical instantiation of the recontextualising trend in contemporary linguistics

b) this shows up in the fact that the recovery of the various aspects of context structures the internal historical development of CL

focus here is on b)

a) asks for a systematic comparison of theories

**1.36 Contemporary trends**

↳ how does this work in CL ?

i.e. how does CL integrate the different facets that were discarded by the decontextualizing approach ?

- meaning
- the lexicon
- the performance level
- the social side of language

**1.37 Step III Cognitive Linguistics as a Recontextualizing Approach****1.38 Recovering meaning**

the **basic vocabulary** of CL involves a set of semantic concepts:  
 prototype, schematic network, conceptual metaphor, metonymy, conceptual integration, idealized cognitive models, frames  
 and all sorts of construal mechanisms

**1.39 Recovering the lexicon**

the family of **construction grammars** constitute a lexicalist approach in various respects

- constructions may consist of abstract entities together with lexically specific elements
- constructions, even if abstract, have to be studied together with their lexical realization
- semantically, constructions exhibit the same structural features as lexical categories

#### 1.40 Recovering performance

from the beginning of CL, there is an interest in pragmatic meaning (cp. grammaticalization research), but the tendency becomes outspoken with

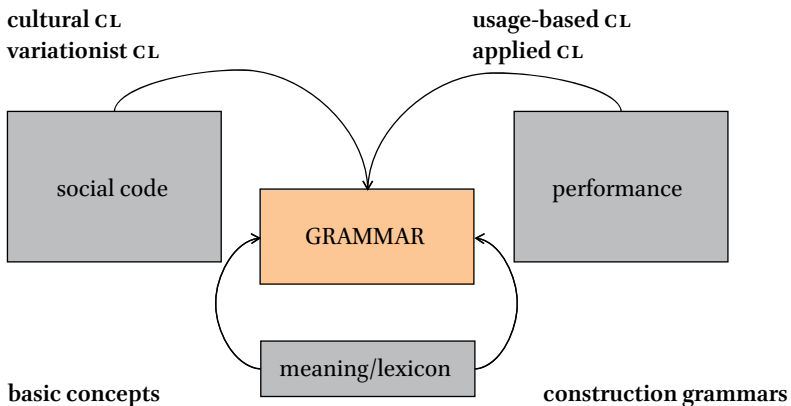
- the definition CL as a **usage-based** theory of grammar
- the growing interest in **applied CL** (acquisition, poetics, language learning, critical discourse analysis and framing)

#### 1.41 Recovering the social context

two major tendencies:

- situated embodiment and the sociocultural background of meaning: **biocultural linguistics**  
(Sinha, Zlatev, Harder ...)
- variationist CL: **cognitive sociolinguistics**  
CL from the point of view of lectal variation (dialectal, regiolectal, sociolectal, stylistic variation)  
Kristiansen & Dirven (eds.) 2008

#### 1.42 Summary



#### 1.43 Recontextualization

in the context of contemporary linguistics, CL epitomizes the gradual recovery of the peripheral modules that were discarded by a decontextualizing approach to grammar

in the context of the internal development of CL, this recovery takes the form of a gradual broadening of the notion of context:

#### 1.44 **Recontextualization**

- from the beginning, in its basic concepts, CL assumes a **contextualized notion of meaning**:  
meaning in language is not isolated, but is integrated with other types of cognition

existing categories → polysemy

encyclopedic knowledge → frames and ICMs

general cognitive capacities → construal

#### 1.45 **Recontextualization**

- usage-based approaches add the **discursive** context of actual language use;  
some focal points of investigation:
  - the dialectic interplay between structure and use  
(e.g. Exemplar-base Phonology, Invited Inferencing Theory of Semantic Change)
  - the discourse function of items and the discursive grounding of constructions  
(Current Discourse Space)

#### 1.46 **Recontextualization**

- biocultural CL and variationist CL add the **social** context of cultures and lectal variation  
  
→ the underlying drift of CL consists of a systematic recontextualization of the grammar

#### 1.47 **Chronology**

can we map this contextual expansion onto the chronological evolution of CL?

- the **pioneering stage** and the **consolidation stage** focused largely on the basic concepts



- the **expansion stage** was devoted to the broadening of the relevant notion of context;  
some chronological landmarks:

#### 1.48 Chronology

- construction grammar:  
Goldberg 1995 *Constructions*  
Croft 1999 *Radical Construction Grammar*
- usage-based approaches:  
Barlow & Kemmer 2000 *Usage-based Models of Language*; Tomasello 2003 *Constructing a Language*
- variationist approaches:  
Kristiansen & Dirven 2008 *Cognitive Sociolinguistics*

#### 1.49 The first 30 years

- is there a unifying factor behind the development of Cognitive Linguistics?
- if contemporary linguistics is indeed going through a phase of **recontextualisation** after the Chomskyan decontextualisation of the grammar, then CL represents that recontextualizing tendency more than any other contemporary approach in linguistics

#### 1.50 And beyond

- if so, in which direction could Cognitive Linguistics develop in the future?
- if we assume that factors like meaning, structure, discourse and lectal variation co-determine grammatical phenomena, then a **multifactorial model of the grammar** is a perfect embodiment of a recontextualized grammar





All original audio-recordings and other supplementary material, such as any hand-outs and powerpoint presentations for the lecture series, have been made available online and are referenced via unique DOI numbers on the website [www.figshare.com](http://www.figshare.com). They may be accessed via this QR code and the following dynamic link: <https://doi.org/10.6084/m9.figshare.4980488>

## Types of Semantic and Categorical Variation

[2.1] Let's first see where we were, what the overall structure of the talks is. As I mentioned this morning, we have this set-up with five parts for the lectures. Here of course we're still with the introduction. This morning I explained that we need a certain type of terminology to structure various forms of cognitive sociolinguistics. And that's precisely what I want to do in this talk: I want to introduce a number of concepts that will then provide the architecture of the talks. What you see there, the reference to semasiological variation and onomasiological variation, that's the type of concepts and terminology that I will explain in this talk.

[2.2] The background of the talk, if you would like to read more, is a book that I published together with two of my research assistants in 1994, which is called *The Structure of Lexical Variation*. And that's basically what we will be talking about: different ways of looking at lexical variation. (The concept of 'lexical variation' here also implies semantic and categorical variation.)

[2.3] The more specific questions for the talk are like this: given the importance of the social perspective for cognitive linguistics (this is assumed, since this is what I dealt with this morning), what are the specific ways in which cognitive linguistics deals with social factors? And more specifically, given that cognitive linguistics has a basic interest in meaning, in semantics, in categorization, how can you translate that into variational research?

[2.4] I will be taking three steps in this talk. The third step is only a minor one. The first step is a general overview of what the scope of cognitive sociolinguistics could be. In this overview, you will get the two aspects that we have also mentioned in one of the questions after this morning's question session: there will be a social perspective, and there is a cognitive psychological perspective. The question then is: how do the two fit together? What kind of model do you need to see the two aspects, the social one and the cognitive psychological one, fit together, what do they have to do with each other? Then we will move to the terminology part, which deals with different types of meaning, and then finally we briefly consider the question what all of this means for the rest of the talks.

[2.5] So let us take the first step, and consider the scope of cognitive sociolinguistics.

[2.6] If we accept that Cognitive Linguistics needs to be expanded into the direction of variationist socio-historical research, what, in a very general way, are the domains of research we are going to address? If you try to answer that question, what does that mean for our notion of linguistic system? We already said in this morning's session that Cognitive Linguistics takes a usage-based approach: language use is the foundation of studying language and language variation. If you look at language from a usage-based perspective, you have a problem in a sense. And that's a problem that we can relate to what we said this morning about the Saussurean system. Remember that I started off by comparing *langue* and *parole*, structure and use, in the Saussurean sense, and in the course of the talk we moved to a usage-based position: if you see the current evolution of linguistics, the usage aspect is becoming more and more important. Now we can go back to the other part of the dichotomy and ask the following question: if you have a usage-based approach to linguistics, what is left of the system, what is the idea you can have of the linguistic system within a usage-based conception of language? More or less in the same way as I did this morning, I will be using a lot of graphical representations to present the argument.

[2.7] When I directly ask that question—‘what is the system in a usage-based conception of language?’—we should perhaps address another question first: why is this a question at all? It is a question that arises like this. At the usage level, you get variation, you get all sorts of probabilities, people say all sorts of things. But on the other hand, we have this traditional way of thinking about the language as a system, as a structure. What's the relation between the two? And isn't it perhaps the case that when we take a usage-based approach, that the system evaporates, that nothing is left? That there is only *variation* and no structure? That's not what we really want, but how do the two fit together, or in other words, what is the system in a usage-based conception of language?

[2.8] *This* then is the system in the usage-based approach to language. This picture does not make sense to you at this point, but let me try to explain what you see in this picture. It is a graphical representation of different aspects of the different types of phenomena that you get when you look at language from the point of view of usage. What I will be doing now is to highlight different aspects of that picture, and by highlighting various aspects, you'll see how the picture is built up and how in a sense, everything that you might possibly want

to say about a language from a usage-based perspective somehow fits one of the portions or positions in that picture.

[2.9] As a first step, usage. We have a usage-based approach, so where is usage in the picture? The primary fact of linguistics is the behavior of language users. That is, if you work within the methodological context of a usage-based approach, the primary fact of linguistics is the behavior (the linguistic behavior, of course) of language users. What you get in the picture are a number of language users, and they talk. That's the basic fact. If you look at it from that point, you don't have a system. You only have individual users. Still, as part of the Saussurean legacy, we do have the idea that there is some structure behind what people do. They couldn't communicate with each other if the language did not have some sort of structure, if there is no commonality between what the language users do. Where is the commonality and where is the system?

[2.10] Basically, the system is metaphorically up in the air. In the graphical representation, the entities labeled 'system' are represented by bundles of linguistic signs. The 'systems' appear on two levels: each individual has his own internal linguistic system (his knowledge of the language), but the systems also exist at a higher level, as something shared by different language users. That's how we usually think about the linguistic system, as something that is abstract, and that in one way or another relates to what people are doing at the level of usage. So, question: what's the relation between the two? Does the linguistic system, as an abstract thing, exist on its own? In the picture, you might be tempted to think so, but we have to see that what we, as linguists, as analysts, call 'the linguistic system', is basically a secondary abstraction. We don't access, we don't investigate, we don't see, we don't observe 'the linguistic system' as such. You couldn't tell me where the linguistic system is, you couldn't go there and have a look at the linguistic system. That's not the way it works. What we call 'the linguistic system' is an abstraction that we define on the basis of actual usage. We see people talk in a certain way and then we can deduce that so-and-so is the structure of the language. That's what you would do if you go to a language that is totally unknown to you: when you are an anthropological linguist, and you do field work, you try to write a grammar of the language on the basis of your observations. Your grammar, your linguistic system is a secondary abstraction that you base on your observation of usage. That's why, in the picture, I'm putting the linguistic system up in the air. It is represented in a grey shade because its level of reality, if you wish, is secondary with regard to the level of reality that is in the actual use of language. To summarize the second step in our exploration of the picture: what we call the linguistic system

is a secondary abstraction over the regularities in the primary behavior of language users.

[2.11] What else do we find in the picture? The question of acquisition is a question that I also touched on this morning. Language users have an idea of the commonalities in the language. If language users don't know what is common in language use, they wouldn't have a common ground for talking with each other. That's what language acquisition is about, it's about the learning of the commonalities. But how do we learn them? Do we learn them by direct access to the system? No, because we already agreed that the system as such is not directly accessible. What we *can* say is that for language users just as well as for linguists, acquiring knowledge of the system is done through abstraction, is done through the observation of what other people do. Of course there might be a genetic basis, there might be a basis of sensitivity to certain aspects of common behavior and so on, but basically we learn the language by interacting with other people. So the question here is: how is this possible if the linguistic system is a secondary abstraction? How is it possible that people *learn* the system if the system is not directly accessible? People learn linguistic systems by aligning to each other: to put it very simply, they learn by imitation, and imitation happens at the interaction level. The level that is highlighted here in the picture is the level of interaction, and you can see then, if you follow the arrows, that one person's usage influences the other people and the other persons' system. That's what mutual alignment is about. My behavior, as a speaker here today, might possibly influence your idea of what it is to talk in an academic environment in a certain kind of English, and perhaps you would be tempted to follow this example implicitly or explicitly. And when we learn a language as a child, we do the same. We get examples, we try to make sense of the examples of what other people do with language, and that's how we form our own linguistic system. Where is our own individual linguistic system? In the picture, it's in the head: that's the psychological side of things; we have knowledge of certain linguistic rules and that knowledge is situated in our heads. In the graphical representation, you have something that is like a thought cloud, represented by a dotted line, and the individual's linguistic knowledge is in the head in the sense of being in the thought cloud. That's an internal aspect of the language. The external aspect is the observable usage and one person's usage influences the other persons' system.

[2.12] We have already seen that in a usage-based model, we have to think of the system as something that is not directly accessible and has only a secondary reality. That secondary reality for the individual language user is accessible

through his interaction with other speakers. Now, very importantly for the overall picture that we have drawn, the interaction is by definition a social thing. It is a social interaction, it's interacting with other people. That's, for instance, what Michael Tomasello is investigating in his study of language acquisition, i.e. the importance of social interactions in the way people acquire language.

But there are some more steps to take. If we agree that we can see the process of alignment and acquisition in which we adapt our own language to other people's language and linguistic behavior as a social phenomenon, then we are also ready to accept that this social interaction is never complete. In what sense? Think of a linguistic community. Think of all the speakers of a given language. When would we possibly know a complete language, given that there is variation in the language? We'll probably never know the entire language because we don't interact with all the other speakers of the language. Our scope of interaction is limited, and our scope of interaction is limited by social aspects. From a linguistic point of view, that is not so remarkable, but we have to mention it here because it forms part of the picture that we are drawing of what linguistic system is. How is the incompleteness indicated in the figure? If you look carefully at the people in the picture, you'll see that they are represented in two overlapping social classes, so to speak. Two of them wear skirts, and the other one doesn't. And there's another distinction, because two have a color that is shaded and the other one doesn't. So there is a social structure there, there is a social structure of groups of people. Those groups are indicated as sets, by the ellipses at the bottom: you have a group of skirt-wearing speakers and you have a group of shaded speakers. In the overall picture that we get, we thus have social structure. Social structure is important for the type of alignment that we can get in the acquisition process. Notice by the way that when I say 'acquisition', that seems to be focusing only on learning language as a child, but actually it's of course also important for language change, because what is language change? Language change happens when people adapt their linguistic behavior at a later stage of their life when various people, also from a social point of view, change their linguistic habits.

[2.13] So the alignments that we have are necessarily incomplete, because we don't interact with all the speakers of the language. Further, the incomplete alignments have a social structure. As a consequence, if now we try to connect the bottom of the picture with the top of the picture, we'll have to conclude that lectal variation (remember that 'lectal' is the term I use as a cover term for all types of intra-linguistic variation of dialects, sociolects, and so on) is an integral part of the usage-based conception of the linguistic system. Lectal variation would be reflected, for instance, when you see that on the top level where



we talk about the linguistic system as an abstraction, we take into account the social structure of the interactions between the speakers of the language. On the top level, there is a reflection of that social structure: the elliptical sets that we defined at the bottom are reflected at the top. In this sense, we can talk about the language as a set, as a cluster perhaps, of different language varieties. (You will hear more about this tomorrow in Gitte Kristiansen's talk.) Lactal variation, in short, is an integral part of a usage-based conception of linguistic system.

[2.14] I hope you now more or less understand what I want to express with this picture. There is usage, there is the interaction between people, the interaction is socially structured, and the linguistic system is an abstraction over that social structure. Given this model of usage-based language variation, what are the domains of research for cognitive sociolinguistics? Here we have two perspectives. There is the *social* perspective, and then we will study variation in language production, for instance. There is also a *cognitive* perspective, which is when we are going to study variation in perception and attitude. Let's refer back to the picture to illustrate these two domains.

[2.15] So the social perspective focuses on the question, how do social factors correlate with variation in language use? Let's say that in this case we take an external perspective: we take an external perspective by looking at language usage and then determining how it correlates with the group structure in the language community. And this is of course, if you wish, classical sociolinguistics. At least if you look at the production at the aggregate level: what I mean by that is, looking at language production and language use at the level of groups, not just one individual, but groups. That's the traditional Labovian correlational form of sociolinguistics: what's the difference in language behavior between that ethnic group and another ethnic group and so on, between young people and old people, etc. That's certainly one thing that has to go in the picture, but this is not so new from a sociolinguistic point of view.

[2.16] But remember that what we are trying to do is to find a model that brings together the study of language as a structure and the study of language as a variational thing. There is another perspective which is a slightly more recent form of sociolinguistics research, and that's when you look at the variation in production at discourse level, not at aggregate level: not 'what is the average behavior of the group?', but 'what is the specific behavior within one conversation, for instance, within one stretch of discourse?'. How do people adapt to each other, not just on average, but in specific circumstances, in the

evolution of a certain stretch of speech? That's when you do what is known as interactional sociolinguistics, when you look at the way in which people, for instance, accommodate to each other when they are talking. And in both cases, as you see, you have a place for that in the picture, because it's at the horizontal level that you have the study of actual interactions.

[2.17] Then if we move to the cognitive perspective, then you get the question: how does the interaction between language users influence their knowledge of the language? That's when you get things like the study of acquisition. We've already mentioned that. But also, importantly, you get things like perception and attitudes: attitudes in the sense of thinking in a certain way about the linguistic patterns or linguistic behaviors of other people. We normally recognize other people as exhibiting a certain kind of linguistic behavior and we can classify them on the basis of that, and we often evaluate them on the basis of their linguistic behavior. That's also a traditional topic within certain forms of sociolinguistics. But from our perspective here, that belongs rather to the cognitive part of things because that's where our implicit or explicit knowledge of language behavior comes in.

[2.18] All in all, if we go through this, we can see that we have these major forms of doing cognitive sociolinguistics. There is a social perspective where you look at variation and production either at an aggregate level, at the group level, or in specific contexts, in a discourse context, for instance. Then there is the more cognitive perspective when you look at acquisition, perception, attitude: how do the alignments actually occur in the speakers' head? So automatically, to come back to the question we had this morning, automatically you get the combination of psychological perspectives and sociological perspectives.

Given all of this (and this is a lot), you can set up twenty thousand research programs on the basis of this, probably, so it's a bit too much for this set of talks. So how will I zoom in on this domain? I'll present a number of studies along the first dimension, the dimension of the variation of production, correlating them with sociohistorical factors. And I'll have a specific focus on what is the original core business of cognitive linguistics, that is to say, meaning and categorization.

[2.19] That brings me to the second part of this second introductory talk, namely, what kinds of meanings should we distinguish? If we want to study these types of meaning from any of these perspectives, if we want to do that, what kinds of meaning should we distinguish? So that is step two.

[2.20] How do I try to answer that question, what are the steps to be taken here? I will introduce some recent, at least relatively recent developments in lexicological theory, then briefly apply them to a case study. The case study involves the question: what are the things happening to a neologism? ('Neologism' in this case means a new lexical concept that enters the language.) The case study will serve purposes of illustration. First, I'm going to present a number of concepts from a more theoretical point of view, and then we'll get a brief illustration.

[2.21] If we think then of what has been happening in lexicological and lexical research in a period of about two decades, maybe, then we can see two important movements. I'm calling them 'phases' here, which seems to suggest there is a straightforward chronology between them, but that's not really true, that's a simplification. From a theoretical point of view, what is happening consists of the following two shifts. You get a shift from a traditional interest in the lexical study of structures to an interest in salience. What is that traditional interest in structures? For instance, thinking about lexical fields, or thinking about taxonomies. Those are typical structures that were introduced in lexical research by the tradition of structural linguistics, by structuralism. You think of the lexicon of a language as being built up, as being structured in certain forms like semantic fields, taxonomies, maybe others like specific lexical relations like antonymy, synonymy and so on. That's an interest in structures. What we see happening in the last twenty years is a shift from that interest in structure to an interest in salience in structure. What does salience mean? Salience in this perspective means that some aspects of the structure are more important than others. To relate this back immediately to what we said a moment ago, what does this mean in a general perspective? Where does the salience come from? That could be, for instance, in a taxonomical structure, i.e. in a hierarchically organized structure of concepts, the recognition that one part of the taxonomy is more important than another part. For instance (this is a concept that you may know, but I'm coming back to it later), that you have basic levels. The basic level is salient within the taxonomy. Why? What does that mean? That is a reflection of usage in the structure. Salience, to put it very simplistically, is where structure and usage meet. Salience is the reflection of frequency of usage: very simplistically, it is the reflection of frequency of usage in the structure. It means that some part of the structure is more important than others. Why? Because it is used more. When we see this shift of interest from structure simple and pure to salience of structures, that's basically a reflection of the shift of interest from system to use, or from system to the interaction of system and use. Probably the best known approach to this interest

in salience is prototypicality. I'll say something more about prototypicality in a moment.

Then we see another shift. So the first important shift is the shift from structure to salience, from structure to salience as the interaction of use and system. The other shift is from semasiology to onomasiology. You know by now that's a fairly important shift for what I'm talking about. Let me just ask the question: who in this audience is not familiar with the distinction between semasiology and onomasiology? OK, there is a sufficient number of you who are not familiar with it, so I have to explain. But I have to explain it gradually, I'm not doing it now, but in a few slides.

And then of course combining the two shifts you get an interest in onomasiological salience. Prototypicality is a form of semasiological salience: next to semasiological, you can distinguish onomasiological salience.

[2.22] To illustrate that further, what are the steps to take now? I'll first present prototypicality and semasiological salience, then I'll explain the shift from semasiology to onomasiology, and then I'll talk about types of onomasiological salience.

[2.23] What's prototype theory? You're probably familiar with that, so let's go through this very quickly. Prototype theory is an approach to the structure of individual categories. Let's think of lexical categories, but that could also be syntactic categories, for instance. But in this case, think of lexical categories. It's an approach to categorization in language that highlights two features, salience effects (I'm coming back to that), and demarcation problems. First something about salience effect. If you think of prototypicality, or if you think of categories, you can think of them in two ways. You can think of the things that go into the category. If I take, say, the category 'cup', I can consider what goes into the category of 'cups': all types of cups, cups with handles and cups without handles, and so on, small ones, big ones, etc., cups of coffee, cups of tea, etc. That's what we call an extensional approach to looking at categories, looking at the things (with 'things' taken very broadly) that go into the category, that belong to the category. And if you think of salience in an extensional perspective, then you can say that some members or some instances of the lexical categories are more prominent, are more salient than others.

There's another way to think about categories, that is, a more descriptive or more definitional way. Again, take 'cup': how would you define a cup? A cup is a vessel, or a receptacle for certain liquids that you will drink, etc; when you say things like that, then you describe cups. When you think of salience effects on that descriptive level, then you get salience when the features used

for describing, or in general, when certain features under description are more important than others. But then you can link that to the extensional salience effects, because you would then say (or you expect, at least) that the descriptive features that are important on the extensional level are precisely the ones that you need to describe the more prototypical cases of the category.

So extensional salience effects means there are typical cases for a category, intensional salience effects means the features that describe the typical cases are more important than others. Again, an example will follow.

[2.24] Demarcation problems have to do with the fact that the boundaries of a category are not always clear-cut—in fact, are mostly not clear-cut. And again you can use that concept, you can apply that concept on an extensional level or on an intensional level. On an extensional level, you'll have to say that in some cases membership in a category is not always so clear. A typical question would be like: is a coconut a fruit or not? Usually when you ask a question like that, some people would say 'yes, it's a fruit', and others say 'no, of course it's not'. So apparently it's somewhere on the borderline between a category like nuts and a category like fruit. You probably use it like a fruit, but from another perspective, it's a like nut. And you can find borderline cases like that for in fact most categories. That's extensional fuzziness, if you wish, in the categories. Where the category ends is not always so clear. And to the extent that a coconut is a fruit, it's certainly not a typical fruit. If we back to the intensional salience or rather to the extensional salience, then a coconut is not a salience type of fruit, if it is a type of fruit at all. And intensionally you get similar problems. If you define categories, it's not always clear, it's not always possible in fact to give what we call a classical definition of a category, that is, a definition that is maximally general and minimally distinctive. This requires a bit of explanation, but I am not going into that at the moment; we will see presently what involves.

[2.25] Let's go to an example now, of the prototype-theoretical characteristics. First, as a background, think of the question what is the traditional ideal of defining things, like defining cups, or defining fruits. In a traditional view, an ideal definition is one that conforms to certain criteria, and specifically, to the criterion that you get a single unique set of common characteristics for all the things that go into the extension of the category. If you want to define cups, you first think of (or you do observational research on) all the things that can be called cups, and then you look for all the common characteristics of cups. And when you have the set of common characteristics, then you check whether that set of common characteristics is distinctive with regard to other

things. Why is distinctiveness important? Suppose that if I look at all the possible cups I have, the only common characteristics of cups that I'm left with is that they are objects used for drinking. That's not a distinctive definition of cup, because it does not make a distinction between cups and glasses. That's the distinctiveness; we need to check for distinctiveness. We first need to check for commonality of the features: do we have features that are common to all the members of the category. When we have the common features, are they distinctive enough?

[2.26] Let's now take 'fruit' as an example, to see if fruit is a classical definable category. Let's take the following steps. First, list as many types of fruit as we can think of, that is to say, everything to which the term applies, and list common characteristics, and then you can check whether your resulting definition conforms to the ideal. You can do this exercise, and given more time, we might do the exercise as such, but let me now just go through it and see what you can find when you do it.

[2.27] First, of course, there is the demarcation problem. We've already seen that. Is the coconut a fruit or not? Is a tomato a fruit or not? Now I want to see your view on that. Is a tomato a fruit? Who says yes? And who says no? There are many of you who don't know, because you don't say anything. There are various things involved here. First, we have to see that there are different meanings of 'fruit' involved. There is the technical sense of fruit, which is the seed-bearing part of a plant. In that sense, a tomato is certainly a fruit. But that is not really the category that we are talking about. I want to talk about fruit in the everyday sense of a certain collection of things that you eat in certain ways. From that perspective, is the tomato a fruit? Mostly not. But at least in this culture, you have the very small tomato, the cherry tomato, and that definitely is a fruit in China. It is not in Western Europe. If you go to a shop here, you'll find the small tomatoes together with the apples, the bananas and the rest. That is not the case in Europe. That's interesting because it's a clear example of a cultural difference in categorization. Things are categorized differently according to specific cultures. The boundaries of the 'fruit' category, even when you have a clear idea of the categorization of the tomato, could be subject to demarcational problems. There would be a number of things we don't know exactly where to place, like the coconut. Are we going to place the coconut in the category of fruit or in that of nuts? It could be debatable. But let's restrict the extensional boundaries to relatively clear cases. Apples, and oranges, and bananas, and things like that. We won't argue about the fruitiness of apples and oranges and bananas. We agree that they are fruit. But do we

have a definition for that category that conforms to the classical criteria? Let's apply the classical methodology and then we'll see that the category doesn't appear to be classically definable. Let's try to make a definition of a fruit. Now we think about apples, oranges, and so on.

[2.28] A fruit is the edible seed-bearing part of a plant. No, because this erroneously includes nuts and grains, for instance. Nuts and grains are edible seed-bearing parts of plants, but they are not fruit. And it excludes (although this is debatable), the rhubarb, if you consider it to be a fruit. In some cultures at least it is eaten like a fruit.

[2.29] Let's try to refine. Let's say a fruit is the edible seed-bearing part of wood plants rather than herbaceous plants, because herbaceous plants typically produce vegetables, not fruits. So in the case of fruits, you think of trees and shrubs. But again, the nuts will be included, and we want to exclude the nuts from the definition. And at the same time, you would exclude strawberries (and all kinds of berries, actually) because they are also grown on herbaceous plants, not on trees or things like that. So, this does not work very well.

[2.30] We can try to refine more. We can say it's the edible seed-bearing part of a plant to the extent that it is juicy and sweet. That's what we use fruit for; that's why we like it. Yes, but some vegetables, maybe eggplants, maybe tomatoes, if you include them in the vegetable category, are also juicy and to some extent sweet. And lemons, of course, are not exactly sweet, but they are definitely fruit. So again we get the same difficulties.

[2.31] A further attempt. Fruit is the edible seed-bearing part of a plant to the extent that it is eaten as dessert. Yes, but you don't only eat fruits as dessert, and again what about nuts and lemons? Do we eat lemons in the same way in which we eat apples? Not exactly.

[2.32] So again and again, when we try to find a definition, we see that it is difficult to find a definition that is classical in the sense that you refer only to features that are common to all types of fruit, and that is distinctive with regard to non-fruits. That's difficult. Instead what we find is some vagueness at the boundaries, multiple sets of definitional criteria, and central cases. And that's what prototypicality is about.

[2.33] Now we also represent that in a specific way. What I'm doing here is that I'm drawing a chart with, on the one hand, along the horizontal dimension,

four indisputable cases of fruit: apple, strawberry, banana and lemon, and then along the vertical dimension, some of the features of fruit: fruit is an edible seed-bearing part of a plant, specially of a wood plant, which is sweet, which is juicy, and which is used for dessert.

We can now put pluses and minuses to see if the features fit the members of the category. You can check it yourself if you want to, but on the basis of what we discussed earlier, you get this type of picture. The picture is important because it shows, if you look along the vertical dimension, at the configuration of the pluses and minuses, that there is no single combination that applies to all the cases. That's absence of a classical definition.

Also, the apple has most of the relevant features, which probably means that the apple, if we do psycho-linguistic experiments, would rank highly as a typical fruit, because it combines lots and lots of the features that are relevant for fruit.

[2.34] We can also represent this in another way (notice that this is a representation that I'll also be using tomorrow) by bringing together the sets of members, or if you wish the subparts of the extensional category, and then have a look at how they combine into the features. What I'm doing here is to combine an extensional and an intensional representation.

[2.35] We now plot the various fruits in the chart, and we're asking ourselves the question: if we look at the things that are juicy, which types of fruit do we find there? If we look at the things that are sweet, which types of fruit do we find there, and so on. Where does the apple go? The apple goes in the middle. What's next? The strawberry would go there. It shares many many features with the apple except the wood plant feature. The banana also shares many many features with the apple except the juicy feature. The lemon goes there, because it is neither sweet nor used for dessert. This is a typical prototype structure. This is a structure that shows both on the extensional and the intensional level the importance of salience effects in describing categories.

[2.36] This next slide actually is a combination of the two representations that I use, one with just pluses and minuses, and then the graphical one with the types of fruit put into this set based representation.

[2.37] This discussion of prototypicality gives us one important thing. This gives us what contemporary lexicology has to say about the structure of individual meanings. But now that we had a look at just one meaning—the everyday meaning of *fruit*—you could ask yourself (or you could ask me), what



about polysemy? What if we have different meanings for one word? Do we get similar effects? Yes. We get similar effects, but I won't illustrate that now. That's something for the first talk tomorrow morning. Then we will have a look at polysemy, but we'll see that we get the same structural effects there as what we have here.

[2.38] Now, however, I want to do something else. I want to move from the semasiological perspective to the onomasiological perspective. The background here is two ways of looking at the combination of forms and meanings. When we think of a lexical category like 'cup', we have a form, the word *cup*, and we have a meaning, an object that is used for drinking. Let's not try to find the definition, because we've already seen that it may be difficult to find such a definition. Let's just assume that we have a definition. We have a form and a meaning, the form of the word and then the definitional meaning of the word. Normally what we do is to start from the form and then look at the meanings. That's what we did a moment ago. We took the form *fruit*, and then we will say something like: how is the meaning of *fruit* structured, intensionally and extensionally? So that's one way of looking at things, that's looking from the category to its meanings, or from the category to the things that the category applies to. That's what we call a semasiological perspective, starting with the word or the category and then looking at the meaning, at the meaning or the use, the ways the meaning is applied to things in reality.

Now that we have that perspective, it's easy to see that we can also turn it around. We can also say: but what if we ask other questions? What if we ask the question: if you present people with the things like this, how would they name it? What category will they use to refer to this thing or to categorize this thing? That's the other aspect, that's the other perspective of categorization. That is starting from something that needs to be categorized, or that may be categorized, and then asking the question: how exactly is it going to be categorized? I have a quote by the Swiss linguist Baldinger who at one point said 'Semasiology... considers the isolated word and the way its meanings are manifested, while onomasiology looks at the designations of a particular concept, that is, at a multiplicity of expressions which form a whole'. If in the case of cups, you would say, this is a drinking vessel, what other possibilities there would be to talk about drinking vessels? You have cups, and glasses, and mugs and other things. How do people choose? How do people choose this is a cup, and not a glass, for instance? That's the onomasiological perspective.

[2.39]–[2.41] If we represent that in Saussurean terms again, in terms of this well-known distinction that Saussure made between the formal aspect of

language and the meaningful aspect, the ‘signifiant’ and the ‘signifié’, then one perspective, the semasiological one, is looking in this way, and the other one, the onomasiological one, is looking in the other direction.

[2.42] But there is a complication, in the sense that we would also want to look outside of language. Structuralists wouldn’t do that, but we, as scholars of Cognitive Linguistics, would. We would want to ask the question, given a certain referent, given a certain kind of thing that we want to talk about, how we choose our categories. Onomasiology is about choosing categories. Semasiology is about: when we have a category, what is its meaning? If you consider this for a moment, you will realize that the onomasiological perspective is in a sense perhaps even more important for a cognitive linguistic approach than a semasiological one, because where does the actual process of the categorization happen? What does actual categorization imply? It primarily implies making onomasiological choices, it is saying ‘I have this thing. How am I going to present it? What category will I use to talk about this thing?’ I have this thing that I can eat, I have this coconut, am I categorizing it as a fruit, or as a nut, or as a category on its own right? Could be anything. From the point of view of categorization and cognitive process, the onomasiological perspective is in a sense more important than the other one. Traditionally, however (and that’s an important thing to keep in mind), there is the tradition of thinking about meaning from the other perspective. When we study meaning, it’s mostly: ok, let’s study the linguistic form and see what we can do. That is of course indirectly the reflection of onomasiological choices. If we see what a certain category can mean, it’s because people have been using the category in an onomasiological way. It might be interesting, from that point of view, to devote a bit more attention to onomasiological questions than tradition used to do. That’s also what I’ll be doing in course of the talks that you’ve seen from the overview. There are quite a number of talks on onomasiological choices.

[2.43] Now we need to introduce one more distinction, namely, there are types of onomasiology. You can see the difference, I hope, quite clearly if you compare these two slides, this one (2.43) and that one (2.44). Take this one (2.44). This is the one that applies to the coconut case, or the tomato case, where you could debate whether it’s a fruit or a vegetable, or the coconut where you can debate whether it’s a fruit or a nut. What is involved there? If you call a certain thing a fruit, then obviously you express something else than when you say it is a vegetable. In that case, the onomasiological choice is a choice that has semantic implications, a choice that categorizes things

differently. That's clear enough. Then there is another possibility of thinking about lexical choices. Let's think about differences between American English and British English. There are lexical differences between American English and British English, like the difference between *subway* and *underground*. It's the same category according to this perspective (2.44); it's the same type of thing: it's the underground train, to put it simplistically. It's the same category semantically, but there is a different onomasiological choice. There is a different lexical choice involved and that of course belongs to this picture (2.43). The signifié, the meaning is the same, but the purely formal aspect, the signifiant, is different. By contrast, in the other case, what you choose, the onomasiological choice, like distinguishing between fruit and vegetable, involves both formal differences and semantic differences. That distinction is the distinction that I want to refer to by talking about on the one hand, formal onomasiology, and on the other hand, conceptual onomasiology. *Conceptual onomasiology* is about different categories for designating a given thing, something in the world and then different forms of semantic construal, if you wish. And then on the other hand, *formal onomasiology* is about different forms of expressions for a given meaning. When you deal with formal onomasiology, you are dealing with things like synonymy.

One important point that I'll be making is that in both cases, social factors are important, social and cultural factors are important. In fact, we've already seen that. For instance, I talked about the categorization of the cherry tomato, or the small tomatoes, and we saw there are cultural differences in the categorization of the cherry tomato. Now we can say yes, social factors play a role in conceptual onomasiology. We've also seen in the example that I gave a moment ago that if you compare *subway* and *underground* as terms for an underground train, then again social factors, lexical factors play a role. In this case, it's the difference between British English and American English. If we make that distinction, if we make that distinction between formal onomasiological variation and conceptual onomasiological variation, it will be interesting and relevant to have a look at the social variation and the cultural variation that you can get on the two levels.

[2.44] There is another thing that I briefly want to say something about (but I've implicitly already introduced that): we can think about onomasiology in a static way when we simply say: what other possibilities do people have to use? That's what structuralism did in lexicology. That's thinking about lexical fields. What's a lexical field, like the field of cups, and mugs, and glasses? That's a field of onomasiological possibilities for talking about things. That's what you can choose from. On the other hand, if you take a more usage-based or pragmatic

perspective, then you'll have to look at what people actually do. How are certain choices made and other ones are not?

[2.45] Once we have the concept of onomasiology, we can now also see that we'll get onomasiological salience effects. What would conceptual onomasiological salience mean? Conceptual onomasiological salience will occur when you have different conceptual categories for naming something, and some choices would be more obvious than others. If you think of the pair of jeans that you might wear, how would you name it? You would probably call it a pair of jeans, but that's not the only choice you have. You could call it a pair of trousers or you could call it more specifically, perhaps by referring to the brand (like your *Armani jeans*) or whatever. You have possibilities for onomasiological choices, but very often there would be a preferred possibility. That would be onomasiological salience. If you think back of what we said a few minutes ago about basic levels as the preferred level where you talk about things, basic levels are a form of onomasiological salience. Basic levels imply that when you talk about certain things or experiences, there is a level of specificity that is the preferred one to talk about things.

[2.46] There are some details here in this slide, but let me not go into that at this point. This slide is an illustration of basic levels, but I assume that you may be familiar with the examples.

[2.47] As far as formal onomasiological choices are concerned, do we have salience effects there too? Yes, we do. In what sense? If we think of lectal variation, like the traditional sociolinguistic type of variation in the lexicon, ask yourself the question whether there is always a situation in which you have a hundred percent difference between one lect and the other. Maybe if you have the example with *underground* and *subway*, maybe you can say, well, in British English it's always one term and in American English it's always the other. Then you have a difference of one hundred percent, a strict separation between the two. But that's not usually the case when we think of dialects within a language. There would be preferences within one dialect, so that the terms that compete would have maybe in one case eighty percent of the usages cases and then another twenty percent for the other term. Even in the case of one hundred percent difference, we can talk about salience, but then it is the extreme of salience, while the other alternative does not show up. But in most cases, all the alternatives do show up and that's where you can say, one choice is more obvious apparently in one lect than the other. So that's onomasiological salience, differences of preferential choices. Now given these concepts (by

the way, I still owe you an example of all of this, but we'll do that tomorrow morning), what do we have now? We have our terminology. We have semasiology, taking a given category and then looking at what it can express. Then we have the other perspective, onomasiology. That is either taking something to talk about and see how it is expressed, conceptual onomasiology, or taking a certain category and looking at the forms it has, looking at synonymy and the distribution of synonymy over different lects and dialects.

[2.48] Given that terminology, and given specifically, not just the terms, but the way in which we have concepts relating to that classification of phenomena, how does all of this appear in the following talks?

[2.49] The next two talks, tomorrow's talks, deal with semasiological variation, specifically with prototypicality and polysemy. Of course (perhaps I should say this first), in all of the talks, in all of the lectures, the question will be: when we have these three broad classes of phenomena, what is the role of social, and cultural, and historical phenomena in the variation that we find there? We have semasiology as a perspective, and then we have semasiological variation, different meanings occurring with the same word or the same category. We have onomasiological variation, different forms expressing the same thing or different categories being used to refer to a certain thing. Given the variation on the semasiological and onomasiological level, what is the role of social factors, cultural factors, and historical factors in these three phenomena? That's going to be the basic question. The next two talks deal with semasiological variation, and we'll give examples of prototypicality, and we'll move on to the level of polysemy as I promised already. Then we have two talks on onomasiological variation, so that's lecture 3 and 4. We'll have a look at differences of categorical construal of things, for instance, differences of construal through time. That's lecture 5 and 6. Then we will have three talks, not two, but three talks on formal onomasiological variation, so that will be the onomasiological variation that comes closest to what you study from a traditional sociolinguistic point of view where we look at lectal variation of synonyms and near-synonyms. That's going to be lecture 7, 8, and 9. The tenth lecture will be a concluding one, as I announced earlier.

## Handout Lecture 2

### 2.1 Situating the talk

- 1–2 Introduction
- 3–4 Semasiological variation
- 5–6 Conceptual onomasiological variation
- 7–9 Formal onomasiological variation
- 10 Conclusion

### 2.2 Background

- D. Geeraerts, S. Grondelaers & P. Bakema 1994
- **The Structure of Lexical Variation. Meaning, Naming and Context**
- Berlin: Mouton de Gruyter

### 2.3 Questions

- given the importance of a social perspective for Cognitive Linguistics,
- what are the specific ways in which Cognitive Linguistics deals with social factors?
- in particular, how can Cognitive Linguistics translate its basic interest in semantics and categorization into variationist research?

### 2.4 TOC

- Step I. The Scope of Cognitive Sociolinguistics
- Step II. Types of Meaning
- Step III. The Architecture of the Lecture Series

### 2.5 Step I The Scope of Cognitive Sociolinguistics

### 2.6 Question

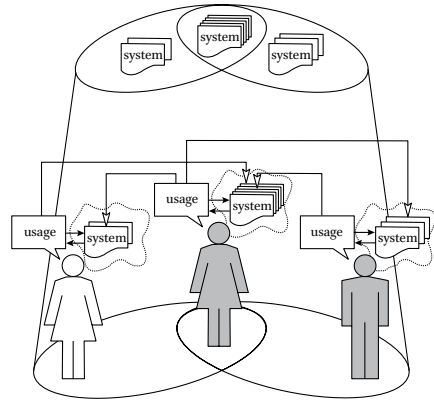
- if we accept that Cognitive Linguistics needs to be expanded in the direction of variationist, sociohistorical research, what are the domains of research to be addressed?
- let us try to answer the question by thinking about the notion of 'linguistic system' in a usage-based conception of language

### 2.7 A usage-based model

- what is 'the system' in a usage-based conception of language?

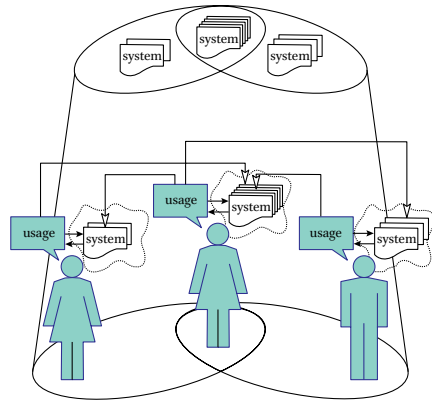
### 2.8 A usage-based model

what is 'the system'  
in a usage-based  
conception of  
language?



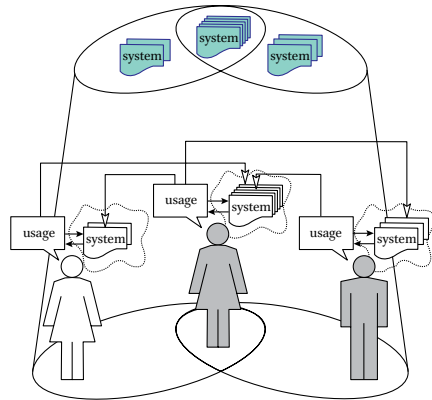
### 2.9 A usage-based model

1  
the primary fact of  
linguistics is the  
behavior of the  
language users



### 2.10 A usage-based model

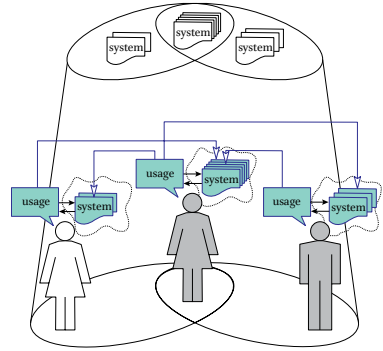
2  
what we call 'the system'  
is a secondary  
abstraction over  
regularities in the  
primary behavior



**2.11 A usage-based model**

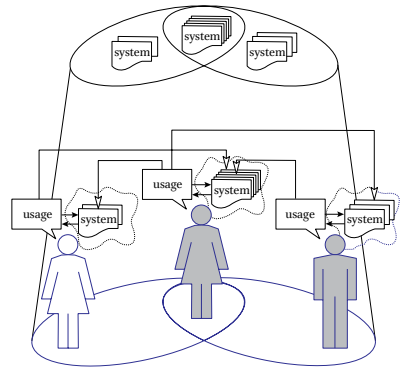
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language users do  
not learn a language  
by aligning with  
'the system', they align  
with each other in a  
process of social  
interaction

**2.12 A usage-based model**

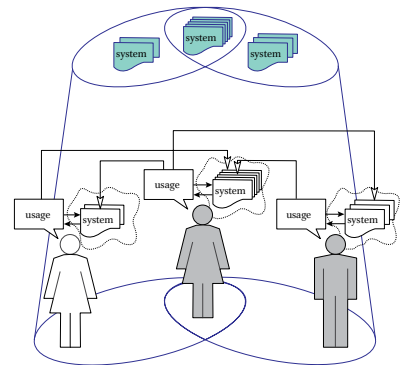
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these alignments are  
necessarily incomplete;  
the incomplete  
alignments have a  
social structure

**2.13 A usage-based model**

5

hence, lectal variation  
is an integral part of  
a usage-based  
conception of the  
linguistic system

**2.14 A usage-based model**

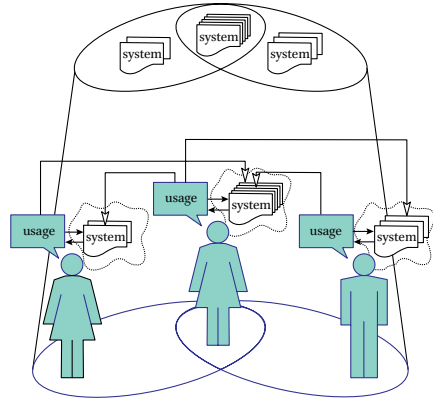
- given this model of usage-based language variation, what are the domains of research for Cognitive Sociolinguistics?
- the social perspective: variation in production
- the cognitive perspective: variation in perception and attitude



### 2.15 The social perspective

how do social factors  
correlate with  
variation in  
language use?

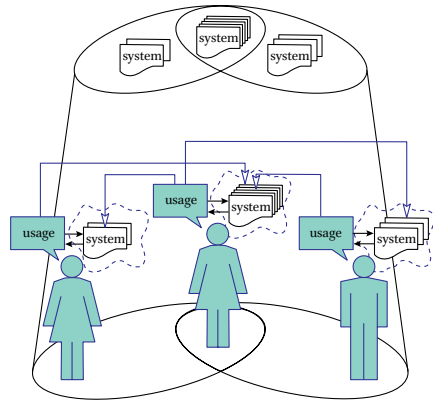
> variation in  
**production at  
aggregate level**  
(cp. traditional  
correlational  
sociolinguistics)



### 2.16 The social perspective

how do social factors  
correlate with  
variation in  
language use?

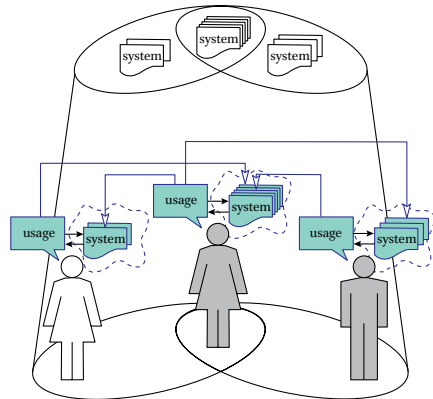
> variation in  
**production at  
discourse level**  
(cp. interactional  
sociolinguistics)



### 2.17 The cognitive perspective

how does the  
interaction between  
language users  
influence their  
knowledge?

> **acquisition,  
perception, attitude**



**2.18 Our perspective**

- studies along the first dimension:  
variation of production,  
correlated with sociohistoric factors
  - with a specific focus on the core business of Cognitive Linguistics,  
i.e. meaning and categorization
- what kinds of meaning should we distinguish?

**2.19 Step II Types of Meaning****2.20 Approach**

- introduce some of the recent developments in lexicological theory  
(recent = +/- twenty years)
- apply them to a case study:  
what are the things happening to a neologism?  
(neologism = a new lexical concept entering the language)

**2.21 Recent trends in lexicology**

- **phase 1**  
from a traditional interest in structures (like lexical fields and taxonomies)  
to an interest in salience  
→ prototypicality effects
- **phase 2**  
extrapolating salience effects from semasiology to onomasiology  
→ onomasiological salience

**2.22 Recent trends in lexicology**

- steps to take:
- prototypicality and semasiological salience
  - from semasiology to onomasiology
  - types of onomasiological salience

### 2.23 Prototypicality

- **salience effects**

extensionally:

some members / instances of a lexical category are more prominent instances than others

intensionally:

the features describing those central cases have more structural weight than others

### 2.24 Prototypicality

- **demarcation problems**

extensionally:

the membership boundaries of a lexical category need not be clear

intensionally:

it is not always possible to give a 'classical' definition of meanings (i.e. a maximally general, minimally distinctive definition)

### 2.25 An exercise

- what is the traditional ideal of definition ?

a definition that conforms to the criteria (and specifically, the criterion of applicability) consists of a single, unique set of common characteristics

### 2.26 An exercise

- check whether **fruit** is a classically definable category
- steps to take:  
list as many types of fruit that you know ("everything to which the defined term applies")  
list common characteristic features of those things  
check whether your resulting definition conforms to the ideal

### 2.27 An exercise

- **the demarcational problem**  
the membership status of some items is not clear:  
coconut? tomato? rhubarb?

- **the definitional problem**

if you apply the definitional methodology, the category does not appear to be classically definable

**2.28 A fruit is ...**

- “the edible seed-bearing part of a plant”

- **erroneously includes**

nuts and grains

some spices

some vegetables (like eggplants)

- **erroneously excludes**

rhubarb (if you consider it to be fruit)

**2.29 A fruit is ...**

- “the edible seed-bearing part of wood-plants rather than herbaceous plants (which produce vegetables)”

- **erroneously includes**

nuts etc.

- **erroneously excludes**

strawberries

raspberries

**2.30 A fruit is ...**

- “the edible seed-bearing part of a plant to the extent that it is juicy and sweet”

- **erroneously includes**

some vegetables (like eggplants, and tomatoes if you consider them to be vegetables)

- **erroneously excludes**

lemons (sweet?)

bananas (juicy?)

2.31 A fruit is . . .

- “the edible seed-bearing part of a plant to the extent that it is eaten as dessert”
- erroneously includes  
nuts
- erroneously excludes  
lemons

2.32 Conclusion

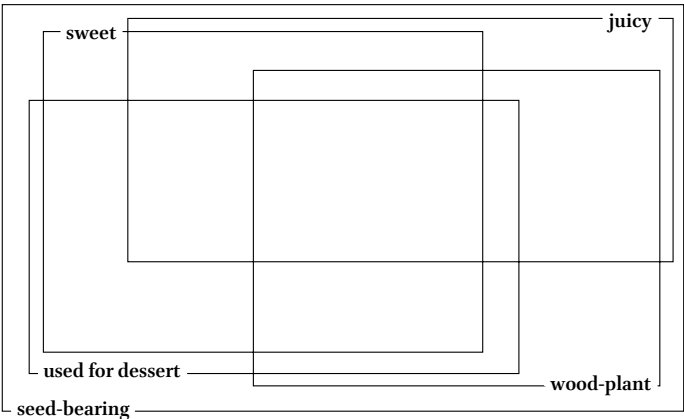
a classical definition for fruit is not feasible  
instead, we find

- vagueness at the boundaries
- multiple sets of definitional criteria
- central cases

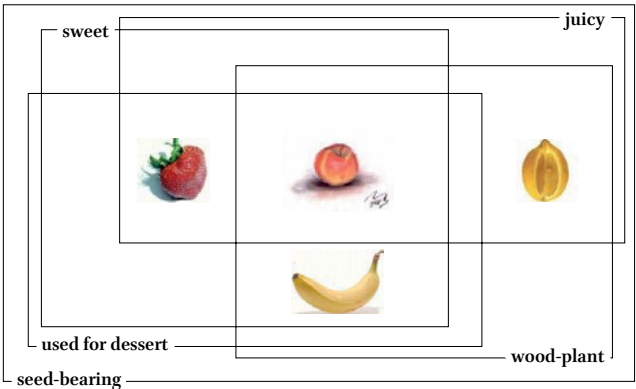
2.33 Representation

	apple	strawberry	banana	lemon
edible seed-bearing part of plant				
of wood-plant				
sweet				
juicy				
used for dessert				

2.34 Representation

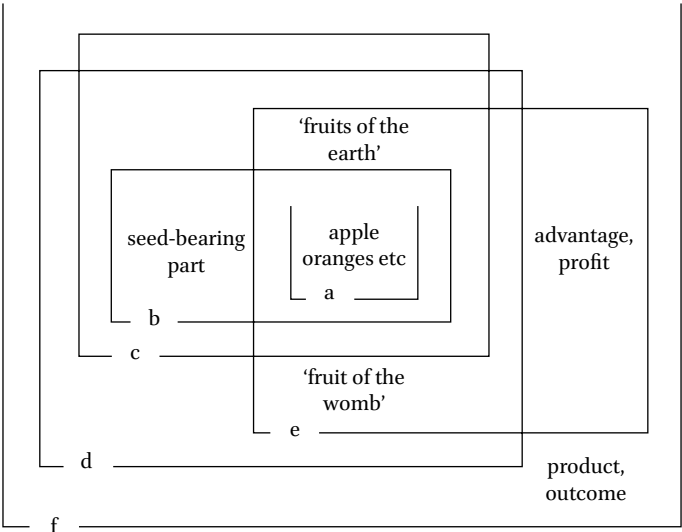


2.35 Representation



2.36 Representation

	a	b	c	d	e	f
apple, oranges etc.	+	+	+	+	+	+
‘fruits of the earth’	–	–	+	+	+	+
seed-bearing part	–	+	+	+	–	+
‘fruit of the womb’	–	–	–	+	+	+
advantage, profit	–	–	–	–	+	+
product, outcome	–	–	–	–	–	+

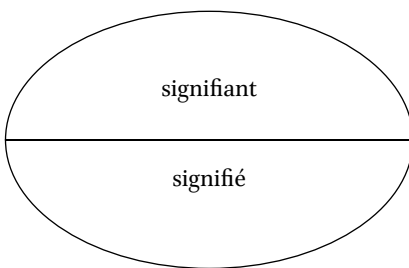
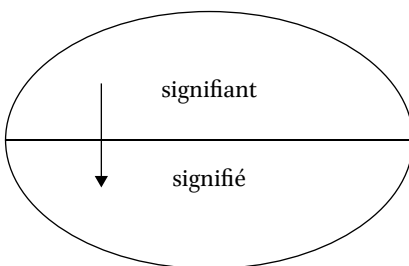


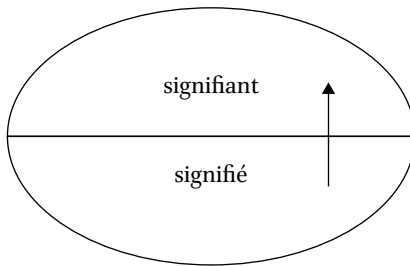
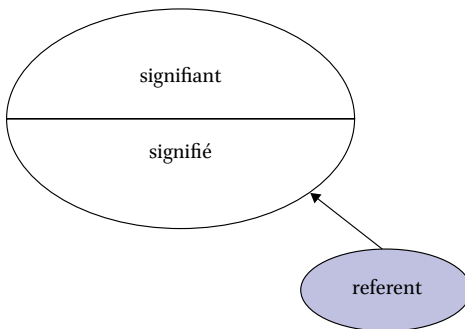
**2.37 A note on polysemy**

- this introduction to prototype effects focused on a single meaning, but contemporary semantics suggests that the structure of polysemous items is largely the same (salience and fuzziness)
- however, the relevant relations are to some extent different (metaphor, metonymy next to similarity)  
cp. lecture 3

**2.38 Semasiology / Onomasiology**

- ‘Semasiology ... considers the isolated word and the way its meanings are manifested, while onomasiology looks at the designations of a particular concept, that is, at a multiplicity of expressions which form a whole’  
(Baldinger 1982)

**2.39 Semasiology / Onomasiology****2.40 Semasiology / Onomasiology**

**2.41 Semasiology / Onomasiology****2.42 Semasiology / Onomasiology****2.43 Types of onomasiology**  
two relevant distinctions

- a **formal** conception of onomasiology:  
different formal expressions for a given meaning,  
i.e. synonymy and near-synonymy
- a **conceptual** conception:  
different categories for designating a given thing

**2.44 Types of onomasiology**  
two relevant distinctions

- a **static** conception of onomasiology:  
different possibilities as forming a structure in the lexicon (semantic  
fields, taxonomies etc.)



- a **pragmatic** conception:  
the choice between those possibilities, made in actual usage →  
salience of different choices

#### 2.45 Onomasiological salience

- **conceptual onomasiological salience**  
different conceptual categories for naming a referent  
e.g. taxonomical choices: **trousers / jeans**  
but also choices among co-hyponyms:  
**mini-skirt / wrap-around skirt**
- conceptual onomasiological salience is a generalisation of the salience  
of taxonomical levels that is embodied in the basic level hypothesis

#### 2.46 Onomasiological salience

	ethnobiological examples		clothing terms
kingdom	animal	plant	garment
life form	tree	fish	outer garment
intermediate	evergreen	freshwater fish	—
generic	pine	bass	trousers
specific	whitepine	black bass	ski pants
varietal	western whitepine	large-mouthed bass	stretch ski pants

#### 2.47 Onomasiological salience

- **formal onomasiological salience**  
different names for expressing an identical conceptual category  
e.g. **underground / subway**
- formal onomasiological salience may be used to investigate stylistic,  
geographical, sociolinguistic (i.e. **lectal**) variation

**2.48 Step III The Architecture of the Lecture Series****2.49 Refreshing your memory**

- **semasiological** variation:  
prototypicality and polysemy
- **conceptual onomasiological** variation:  
differences of categorial construal
- **formal onomasiological** variation:  
(lectal distribution of) synonymy



All original audio-recordings and other supplementary material, such as any hand-outs and powerpoint presentations for the lecture series, have been made available online and are referenced via unique DOI numbers on the website [www.figshare.com](http://www.figshare.com). They may be accessed via this QR code and the following dynamic link: <https://doi.org/10.6084/m9.figshare.4980500>

## Diachronic Prototype Semantics

[3.1] As you remember from yesterday, I have this architecture of the talks where we now start dealing with various forms of variation in meaning. Yesterday, we distinguished between a number of different forms of meaning that we will start having a look at: semasiological, conceptual onomasiological and formal onomasiological variation. What I am presenting today at least in this first lecture is a number of case studies on semasiological variation.

[3.2] The studies are basically taken from this book, which was published in 1997 under the title: *Diachronic Prototype Semantics*.

[3.3] The question for today or at least for this lecture is the following: if it is the case, as we suggested yesterday when we had a look at prototype theory, that variability is almost built in into contemporary conceptions of linguistic meaning and categorization, then the question arises whether we can indeed demonstrate that variability when we look at the evolution of lexical categories. So we'll take a diachronic perspective and try to see what the effect is of the prototype structure of meaning that we introduced yesterday.

[3.4] And to refresh your memory, semasiological variation has to do with prototypicality and polysemy. Conceptual onomasiological variation has to do with differences of construal of choosing categories and formal onomasiological variation has to do with synonymy. Now we are dealing with prototypicality and polysemy.

[3.5] I will present two case studies. One on semasiological variation in a single meaning (and in which there will already be some onomasiology too). Then a second case study on semasiological variation in a polysemous lexical item, i.e. when we deal with different meanings. And then there will be some conclusions. I would also want to point out that in general, in the talks today and further talks in the following days, I will basically be presenting case studies; I will not be presenting an overall theoretical framework. Maybe in the talk this afternoon there will be some theory, but in general it's more about description: how to describe the phenomena that interest us from a cognitive sociolinguistic point of view?

[3.6] The first case study has to do with the evolution of a neologism. We are going to have a look at the way in which a word, a new word when it enters the language evolves: what can we expect; what hypothesis can we formulate when we think of new words entering the language; and specifically, what kinds of hypotheses can we think of when we start from the idea that the internal semantic structure, i.e. the semasiological structure of the word, takes a prototype theoretical form?

[3.7] What we should do then is to formulate our expectations for each of the different types of meaning that we have. We have semasiological, conceptual onomasiological and formal onomasiological meaning. What can we expect? What are the hypotheses and expectations that we can formulate? Let's first take semasiology. That's the aspect of meaning that we know best. We had good examples yesterday when we looked at the 'fruit' category. Remember what we said about the 'fruit' category. We saw that you have a core area, a central area that is the basis of the category and then you have more peripheral areas, margins, if you wish, where the semantic features of the core area are not all at the same time present. If that's what we find when we look at a lexical category at one point in time, synchronically, what exactly can we expect from the diachronic point of view? Probably, from a diachronic point of view, what we can expect is that we first find the central area of the category and that that central area then develops into the peripheral areas. What we saw yesterday from a synchronic point of view (one slice of time, one point in time), we are now transforming that, translating it into a hypothesis about the evolution of the category. To put it more formally, if prototypicality is a good model of the semasiological structure of categories, the semantic development of a new concept will take the form of growing variations, growing modulations on the initial prototypical core. And we will try to prove that. We will have a look at a case study to see whether this is indeed what happens, when we follow the evolution of a word.

[3.8] What can we expect with regard to conceptual onomasiology? Conceptual onomasiology, remember, that's the phenomenon in which we deal with categorical choices. What we can expect is that if a new concept that enters a language or a culture or whatever is successful, then the success of that category (the fact that people want to use it more and more), will become apparent in what we will call the entrenchment of the category. What do I mean by entrenchment? I will give you a more formal definition in a few moments. What I mean by entrenchment is the salience of the category. We talked about salience earlier; salience is a frequency effect. Salience is the recognition

that in the structure of the categories, some elements are more important than others. And from a semasiological point of view, that's easy. If we think of prototype theory, we can say the core area is more important. How does that show up? If we ask people to name certain types of fruit, for instance, then the kinds of fruit that are in the middle of the category, in the center of the category will be named more easily than the peripheral ones, like perhaps the coconut, one of our peripheral examples yesterday. Semasiological salience has to do with this prototype effect, but what is onomasiological salience? Onomasiological salience is the preference for a certain choice of category. In onomasiological variation, among the onomasiological alternatives that you have, the growing conceptual onomasiological salience of a category will mean that the category becomes, to put it simply, fashionable. If you have the choice between categories A, B, and C, then the most salient one is the one that is the preferred choice. Again, we will try to show how we can measure that, how we can establish that kind of conceptual salience. And then we have formal onomasiology. That's where we deal with synonymy, but specifically also, we've said that, with synonymy that has a lectal background, i.e. where the synonymy links up with the variation between different dialects or regiolects, or sociolinguistic registers or whatever. From that point of view, from the formal onomasiological point of view, we want to have a look at the question if there are any synonymous expressions for this new category, this neologism that we look at, and whether the choice between those formal synonymies is determined by lectal factors, by factors that have to do with sociolinguistic variation in the language.

[3.9]–[3.10] What's the example going to be? The example is a clothing term, namely, the term *legging*. You all know about leggings, probably. If you don't, I will give you a picture in a moment, but you probably know what leggings are. Leggings were quite fashionable in the first half of the 1990s, and then it sort of disappeared, became less fashionable, and now it seems to come back in vogue. What we did in this study of *legging* is to have a look at the evolution of the concept 'legging' during five years from 1988 to 1992, which was the period when it was first introduced in at least Western fashion. It became very fashionable in those days. And how did we study our leggings? We had a look at magazines, fashion magazines in particular. Why? Because you have pictures in those magazines. You don't only have the name but you also have pictures and you can use the pictures to get a description of the objects that you see, the items of clothing that you see, because what we are interested in when we do this from a prototype theoretical point of view, is things like: how much variation is there in the concept 'legging'? What evidence do we have that a legging needs to have or maybe does not need to have a certain length? Is it

important for a legging to be long or not? That's the kind of empirical approach to the determination of the features, the descriptive features of our leggings or any object that you want to study from a prototype theoretical point of view. That's one thing. That's where the material comes from. We look at articles and magazines. And on top of that, because we are also interested in sociolinguistic variation, we chose the magazines in such a way that we had magazines both from Netherlandic Dutch and Belgian Dutch. A bit of background here (I will have to say some more about the background later on). Dutch is spoken in Holland, i.e. the Netherlands, and that's the main country where Dutch is spoken, but Dutch is also spoken in the north of Belgium, in the northern part of Belgium. The southern part of Belgium speaks French. The northern part of Belgium speaks Dutch or as it is sometimes called 'Flemish'. Basically, making a distinction between Dutch and Flemish (as if they were different languages) is not very insightful. It's better to talk about two varieties of Dutch. That's what I am doing here. I am distinguishing Netherlandic Dutch, that's the Dutch that is spoken in Holland, and Belgian Dutch, that's the Dutch that you find in Belgium. There are some differences between the two, and I may have time later on to say more about those differences. The question here, from a sociolinguistic point of view, is whether there are any differences in the way the word *legging* is used in Holland and the Netherlands, compared to the way it is used in Dutch speaking Belgium? And how did we go about this?

[3.11] For each of the pictures that we found in the magazines we built up a referential description, a description with features, if you wish, so we translated the picture into features. I will tell you in a moment how that works. Then we have a database, and then we started analyzing the database from a quantitative perspective. We used six dimensions to describe all the items of leggings that we found. I should also mention that the material is not restricted to 'legging'. This was a study in which we looked at various items of clothing. We looked at jackets, trousers in general and shirts and T-shirts and so on. It's not restricted to leggings. But I am going to show you only the result that we got for 'legging'. What's this featural description? How do we describe items like this? This description is similar to what we did yesterday for a category like 'fruit'. Remember that we thought of features as characteristics that might be useful for determining and describing types of fruit. In this case, you can think of these characteristics as features that might be interesting for describing trousers in general: different types of trousers, legging types of trousers, jeans and so on. What we do here is that we have featural dimensions and then we have values on those dimensions. The dimensions are the length of the trousers, the width, whether they have a crease or not, the material that they are

made of, the function, and the function in this case means whether it is worn as a final layer of clothing or not. (As a final layer, there is nothing on top of it. For instance, these days when you wear leggings, very often you might want to wear skirts on top of the leggings. That's at least what they do in the West these days. In the 1990s, that was not the case, leggings were then simply worn as trousers, nothing else on top of the leggings.) And then sex obviously has to do with the question whether it's worn by a man or a woman. So those are the dimensions. And then you have the values on the dimensions. For instance, for length, the value 3 would be as long as the ankles, 2 would be slightly shorter, and 1 would be just under the knee. Then you get different types of length. And width, with value 1 means 'tight-fitting'. For crease, value 1 means 'no crease', value 0 would be 'with crease', and so on. Then there is the typical legging: the typical legging has the featural description 3,1,1,1,1,F, which then means 'it's long, it's tight-fitting, it doesn't have a crease, it's made of finely woven, elastic material, it's worn as an upper garment and it's worn by a woman'. Those are the descriptive features that we will have a look at. Actually, I will leave out the reference to crease, because if I include that into the picture the representation gets too complicated.

[3.13]–[3.17] What can we do with these features? We can do exactly the same thing as what we did yesterday with categories like 'fruit': remember that we drew boxes to see how the various features co-occur and then we can put items in there according to the features they have. That's also what we will do here. We will have a representation of the semasiological range of category as a cluster of overlapping subsets. That is, if you wish, from a more theoretical point of view, you could call this a family resemblance representation. 'Family resemblance' is one of the terms that we use to describe prototype effects, because the various instances of a category have a family resemblance. They don't all share the same features, but they share, like the members of a family, subsets of features. We build up, like we did yesterday for 'fruit', a family resemblance representation of the semasiological range of application of the category. And then, and that's what's new for today compared to yesterday, then we have a look at the evolution of the category over the five years that we studied and what we expect is to see a gradual expansion of the prototypical core. So, you will go from minimal to maximal variation away from the prototype.

[3.13] This is what the representation looks like for the first year, i.e. for 1988. You can see that it works the same way as what we did for 'fruit'. You have boxes that represent a certain feature, and where the boxes overlap, that simply means that the features co-occur. What is different here from what we did



yesterday is that we have numbers. Yesterday we used pictures for the apple and so on with types of fruit. Here we are using numbers; what do the numbers represent? The numbers mention the frequency with which we found a certain type of legging. Clearly, the central type of legging, the 3,1,1,1,1,F case, that's the one in the middle. And in 1988, we found 14 cases of that central application. We found three cases of a type of legging that is slightly different, specifically in the sense that it is slightly wider because it does not have the feature  $W=1$ . We found three cases with that feature missing, and we found one case with another feature missing, the length feature. Already in this case, in the very first year, you see that there is a prototype structure—but it is a minimal one. You have a core case which is the most frequent one, and you have variations which are less frequent. So, we have semasiological salience, but what interests us is how this category will develop. What we expect then is basically two things. What we expect is, first, growing variation: the category will expand and other peripheral areas in the picture will be filled up. That's part of the flexibility that we expect in the prototype concept. On the other hand, what we also expect is (in a sense to counterbalance the flexibility) that the core area will remain the same. What we expect for each successive year is more variation but at the same time stability in the center, so a combination of flexibility and stability. That's typical for prototype concept, right? It's typical for prototype concepts that on the one hand, they are intrinsically flexible, because they don't have very strict definitions, for instance, but at the same time, they are also stable because they have this central area that remains the same and that gives you the basis of the category.

You can look at this as a kind of short film. This is the first year, second year, third year, fourth year, fifth year. What you see in this final year is that the picture is filled up. You see much more variation than in the initial years. But at the same time, the core area is still the most frequent one. And if you look at the frequencies here, what you get is almost like an onion, right? You have the center of the onion and that's where you have the highest frequencies, then you go to the following layer and you still have high frequency but less than in the center and then you go one step further and there you get really peripheral cases that appear only incidentally or only once. Let me go back again, back in time and then you can see how the category shrinks to its original size.

This is a very nice illustration of what we expect to see. We said, if you look at semasiological variation from a synchronic point of view, what you see is this sort of thing, a center and the center is the most salient part and then you have peripheral areas. What we expect diachronically, when we look at evolution in time, is stability in the center and variation in the periphery, again, like here.

[3.18] What we can conclude then is that on the one hand, we can find some sort of definition for *legging*. We can say that legging is ‘a tight-fitting, elastic, long kind of trousers for women’. That’s the definition of the center of *legging*, of the prototype of *legging*, but the word is used loosely and sometimes leggings are less tight-fitting, and sometimes they are a bit shorter and so on.

[3.19] The way in which the word is used loosely has the following two features. First, new applications take the form of co-variation along different dimensions. That is to say, you have this set of features and it’s by picking out subsets of the basic set of features that you get your variation. (I also want to point out a more technical thing that I don’t want to say too much about. Some of the dimensions are continuous rather than binary categorial ones. That is to say, if you think of the ‘length’ category, we use 3 or 4 values, but of course, length is something continuous. If you measure it in centimeters, you can get lots of categories. So the descriptive dimensions sometimes have to be simplified to get a kind of representation that we have. But that’s just a technical footnote, if you wish.) And second, there’s the most important thing for this lecture: if we consider these applications in time, we can see that novelties, innovations take the form of the gradual expansion of the prototypical core. The variability that we saw from a synchronic point of view has diachronic consequences, and it’s corroborated, it’s confirmed when we look at evolutions.

[3.20] But then of course, what we have seen so far is only the semasiological thing, the semasiological perspective. There’s one more thing I want to say. What we obviously also see in these pictures is the success of the category. We see that it is a fashionable thing. It grows in five years’ time. The frequency of *legging* increases from a hundred and twenty to some three hundred or more cases. That is the cultural aspect of things, or the evolution of fashion, if you want to put it that way. We see that the category in question is successful, and that’s important for our conceptual onomasiological point of view. We now have this idea of semasiological salience. That’s the existence of central cases in the structure of category. But what’s the onomasiological salience? Onomasiological salience has to do with choices and preferred choices. If we extrapolate the semasiological notion of salience or prototypicality to the onomasiological domain, what can we have a look at? We want to have a look at a cognitive preference for choosing one category rather than another as the name of a given referent or a set of referents. How could you measure that? Let’s do a very simple thought experiment. Imagine that you are standing in front of your wardrobe, and you have a pair of jeans hanging there, how would

you name them? If you are going to ask someone ‘what shall I wear’, what would you say? You would probably talk about a pair of *jeans*. But that’s not the only choice you have. You could also simply talk about a pair of *trousers*. You have onomasiological choices, but the result, the preferred choice, in this case, would be for *jeans*. For other kinds of trousers, more regular trousers perhaps, or less specific trousers, you would simply say *trousers*. That’s onomasiological salience. That’s choosing one category rather than the other or choosing one category more frequently rather than the other. If you have that intuition, if you see that informally, then you understand the way in which onomasiological salience works. You have something that you can categorize but there is a preferred form of categorization.

[3.21] If you keep that in mind, then we can give a slightly more technical definition of onomasiological salience or entrenchment. Namely, as follows, technically speaking, onomasiological salience is the proportion of the frequency of the category name or names, over the frequency of the category referents. What does this mean?

We can do a thought experiment. Let’s suppose now we are a hundred people here and I am showing you a pair of jeans. And I am asking you to write down the name. I’m not saying or using the name, I’m not saying what this is. I am showing you a pair of jeans. You can see that, and I am asking you what this is. You are writing down your answer, and probably 85 % of you will write down *a pair of jeans*. And maybe 15% of you will write down *a pair of trousers*. I am just making this up, but you can imagine how it goes. We have frequencies then. We have a frequency of a category of referents. That is to say, I have shown a hundred times, so to speak, *a pair of jeans*. I have shown an object to you a hundred times, to each of you individually. That’s the frequency of the category referents. There were a hundred objects to be named, well, each of you separately named one object but you are a hundred, so I am saying a hundred objects were to be named. That’s the frequency of the category referents. Then you named the thing with a certain category, i.e. you chose a certain category and if you chose ‘jeans’, that gave us the frequency, so 85% among you chose ‘jeans’ in this fictitious experiment. The 85% of you who chose ‘jeans’, that gives us the frequency of category names. To put it more simplistically, it’s about comparing one category of choice to the alternatives for the same thing. Is that clear?

[3.22] As you can understand, with the type of materials that we had for the clothing study, we can do this calculation. We can perform the calculation, not on the basis of fictitious experiments, but on the basis of real data. And what

do we expect? We know that *legging* was a fashionable category. People started wearing it more and more, and therefore, you can imagine that the category became more salient in people's minds. We expect that such a growing salience will be reflected in a growing entrenchment value. If we perform this calculation for each successive year of this five-year period, we expect the entrenchment of *legging* to rise. You could also ask yourself, but what about the other names, you've only given us the material for *legging*? Where do you get the other names? There of course it is important, as I said a few moments ago, that we did not only study *legging* but we studied the whole field of clothing terms and specifically also all trousers. If we have a thing that is a kind of trousers and that is not called *legging* but that might have been called *legging*, we would know. So if we have something that has the 3,1,1,1,1, F feature or featural description and it's not called *legging*, then we can retrieve that from the database. It's easy to find in the database in that case when it was not called *legging*, but would be called *trousers* or whatever, or *elastic trousers* or something like that.

That's how we get the frequency of the category referents and that's how we can get the alternative names of the category. Let's have a look at the slide: this is just applying the principle. What are the names for the category 'legging', the names that specifically talk about 'legging' and not about trousers in general and so on? We have *legging* in the singular; we have *leggings* in the plural, but we also have a term of French origin. *Legging* in Dutch was a loan from English. That is clear. But we also have a loan from French, *caleçon*. If we look at the names that identify leggings specifically, we get *legging*, *leggings*, *caleçon*. We take the frequency of those together: that's the frequency with which the concept 'legging' is identified by a name that is specific for the concept of 'legging'. Of course there are other terms, so that's where we have a look at the frequency of all referents of *legging*, *leggings*, *caleçon*, even when they are not named by the specific names. Think of it simply as cases in which they are called *trousers* rather than just *leggings*. And then we do the calculations.

[3.23] So here you get results. Let's have a look at the first column. For the 1988 column, we find 52 cases of things that might have been called *legging*, but only 18 of them are actually called *legging*. And those 18 obviously are the ones that we saw before, as in slide 3.13. As 18 cases out of a possible total of 52 are called *legging*, the entrenchment value is simply 18 divided by 52. That's 34%. What we can see then, if we follow the evolution over these five years, is that the entrenchment value as we predicted or as we expected, grows from 34% to

roughly 80%. Again, we get an indication of the growing success and fashionability of the category 'legging'.

[3.24] Then there's another thing that we want to have a look at: formal onomasiology. If we look at the various names for the specific category 'legging', we already know what the names are, *legging*, *leggings*, *caleçon*. Do we find any lectal differences? Do we find sociolinguistic variation in the names of leggings? We do. To keep it fairly simple, I will compare the term of French origin *caleçon* with the two variants of the English *legging*, singular, and then *leggings*, plural.

[3.25] We compare them for the B column in the table, that is Belgian Dutch and the NL column, that's Netherlandic Dutch. And again we compare them for five years. First we begin with two columns for each of the two countries, national varieties of Dutch. We get two columns and we calculate the percentage of the two forms (the French one and the English one in the two countries). If we take for instance 1990 in the Belgian material, you can see that almost 97% is represented by the French term and only 3% is taken up by the English term. If you take the Dutch materials for 1990, you can see that 100% is taken up by the English term or English terms. You can also see, if you look at the first row, that we don't have any material yet for Holland, from the Netherlands, in the first year, which might jokingly inspire the conclusion that the Dutch are not as fashionable as the Belgians. It could also simply be the effect of the way we collect materials. More importantly, if you look at the right hand side of the figure, you will see that there is hardly any variation in the Netherlands. It's almost always *leggings*, except for one case in 1991. It's always the English term. On the other hand, if you look at the Belgian materials, you see a very interesting pattern, because what you see is that it starts off with the French term *caleçon*, a hundred percent. But then you see a growing presence of the English alternatives, so there is competition in Belgian Dutch. There is no competition in Netherlandic Dutch. Can we explain that? This is clearly a case of formal onomasiological variation. We compare the frequencies of synonymies of *caleçon*, *leggings*. And we see that the distribution, the frequency of distribution of the synonymies is influenced by lectal factors, by sociolinguistic factors—in this case, the difference between Netherlandic Dutch and Belgium Dutch.

[3.26] The question is also if we can explain the differences. Why would this specific pattern occur? How could it be that the presence of English in Belgian Dutch is less (and initially even much less) than the presence in English in Netherlandic Dutch? And could it be that at the same time there is a growing

influence of English? This is fairly easy to explain, but you need to know something about the background of Dutch in Belgium, in the following (simplified) way. The language of culture and government in Belgium used to be French. We had Dutch dialects, but the language of culture and government, at least in the 19th century and in the first part of 20th century used to be French all over Belgium, not just in the French speaking part of Belgium but also in the northern Dutch speaking part of Belgium. In the course of 20th century, Dutch developed into the standard language of the northern part of Belgium. But the influence of French is still there, so you get a double characteristic in the make-up of Belgian Dutch. On the one hand, it's influenced by the presence of French in the Belgian context. On the other hand, it has an orientation towards Netherlandic Dutch, because when people started using Dutch in Flanders, i.e. in the northern part of Belgium, as the standard language, they took over the existing standard Dutch language from the Netherlands. So you get two tendencies, two conflicting tendencies. And this is the way you see how they conflict: you get a tendency to follow the Netherlands and that leads in this case to a growing influence of English, but on the other hand, you still have the cultural presence of French and that leads to the initial choice for *caleçon*.

[3.27] What we've seen so far is an example of semasiological variation in time, semasiological variation with already some illustration of onomasiological effects. But as I said yesterday, we've so far restricted our discussion to semasiological variation within a single concept, within a single meaning. There's only one kind of legging; there's only one concept 'legging'. Most lexical concepts do not have a single meaning. They have various meanings. They are polysemous. So we should also ask the question: what happens when we look at polysemy? Do we get the same effects? When we look at a polysemous category, do we get the same structures? Do we get things like prototypicality when we look at semasiological variation in a polysemous category? And when we look at the polysemous category through time, do we get the same type of expansion that we saw in our leggings example? We do.

[3.28] To give you an example, I will have a brief look (I am not going into the details, because that would mean telling you too much about the history of Dutch) at the historic evolution of one Dutch verb, the verb *tuimelen*, basically 'to tumble'. (The word has the same root as English *to tumble*.) Instead of looking at five years, we will now have a look at four centuries from the 16th to the 19th century. And instead of looking at one meaning, we will have a look at nine different meanings or senses. What I am going to do now first is to give you a very brief overview of the nine senses, the nine meanings. I will

do that by giving a definition or at least a semantic gloss, and by presenting an example. Also, for each of the nine senses, I will indicate during which period we can find it in the materials. I could explain a lot to you about the question of where the materials come from: this is from a historic corpus of Dutch, to keep it very simple.

[3.29] The first meaning is what you would describe in English as ‘to make somersaults, to go head over heels’. So, basically, this thing. What children might do, for instance, or what people in gymnastics might do, or what you also do when you swim, and you dive, and you do it like that. That’s also this movement. When you see 16a there, that means the first half of the 16th century. That’s when we first find (in this material at least) the examples. We find them in this case up to the second half of the 19th century, so that’s 19b. This is the meaning if you see something like ‘16a-19b’: it basically means that this particular meaning is represented over the entire timeline that we are looking at in this case. The meaning on this slide is the central meaning of the word. Let me not give you the Dutch example but briefly read the English translation. *Uilenspiegel*, that’s a personal name, *was very adventurous as a child, so when he was a baby lying in the cradle, he tumbled on the pillow and the blanket, and put his behind in the air.*

[3.30] Then you get another reading, ‘to fall down’, 16b-19b. The example is about the besiegers of a city. *As soon as the besiegers heard a noise, they immediately thought that the inhabitants of Ghent rushed out to smite them. That is why they sometimes ran away, tumbled one over the other, fell into ditches like flabbergasted people do.* That’s not deliberate play like in the previous example, but it’s falling, falling one over the other, falling in the ditches and so on.

[3.31] Then you get a meaning ‘to whirl down, to fall with a whirling movement’. In the example, it’s someone tumbling from a ship. *The sailor, holding his hand imprudently before the mouth of a canon, got wounded so severely that he tumbled down from the ship.* You can see the similarities: it’s a kind of turning movement. But in this case, it’s a combination of turning and going down.

[3.32] Then you also have this ‘rolling’ meaning but without the notion of falling. In the example, this is used to talk about the movement of dolphins; dolphins that tumble in the water make this whirling movement. *Well then, if you like, we will sing taking turns, so that even the local river god in his streaming palace will be disturbed and will rise from the waves with his courtiers on tumbling dolphins.*

[3.33] And then there are the figurative readings, like, *so various passions toss, tumble and burn*. It's not an animate being that tumbles here, but passions. This is what you will recognize as a metaphor. The whirling movement that we have in the literal readings is now used metaphorically to talk about emotions. Notice that this is a type of meaning that we only find in a fairly restricted period; we have a few examples in the second half of the 18th century, but we have no more materials than that.

[3.34] Another figurative meaning is 'to fall down (figuratively speaking)': *The Government would have tumbled, but in actual fact* and so on.

[3.35] Another literal meaning, referring not to animate beings but to objects, is where the word means 'to pivot, to turn round one's axis', like some windows might do. So, *the use of cast-iron window frames has increased greatly in recent times . . . Usually they are used as fixed windows with a part that swings or tumbles open*.

[3.36] The next one has a meaning that we will recognize as metonymical. Let me first read the example. *Hiccupping, vomiting, tumbling over its hind legs, reestablishing its balance on its front legs, the bull staggers on*. This is describing a bullfight, actually. The bull is about to fall, is not yet falling but is about to fall. He is staggering, swinging but not yet falling. This is metonymical in the sense that it is the beginning of falling but not yet the falling itself, it is 'to almost fall down'.

[3.37] And then here's the final one. This is another rather infrequent figurative instance where you have the notion of 'involuntarily reaching a certain position'. *Ever again, I tumbled from one subject into the other*. In contemporary English, we probably say *I stumbled from one subject into the other*.

[3.38] You would need to familiarize yourself more with these meanings to get a real feeling for the category. But let's not do that. That will take too much time. Let's rather state the question: how can we represent the evolution of this category and do we find effects that are similar to what we found when we looked at 'legging', i.e. when we look at a single concept? Here you have different readings instead of just one: is the structure the same? Well, we have a central case (the 'to make somersaults' case), and then you get different extensions. You get different extensions based on literal similarity, 'to fall down', 'to whirl down', 'to pivot'. You get metaphorical extensions based on metaphorical similarity (falling down figuratively etc.), and you get metonymic extensions.



That is the type of thing that you really expect in categories, in polysemous lexical categories. Central cases that are expanded by means of the traditional mechanisms of semantic change, metaphor, metonymy and some others, but in this case specifically metaphor and metonymy.

[3.39] But if we try to represent that in a graphic way, what do we get? One immediate step to be taken is that when we represent these readings, we might also want to use a featural description to analyze the meanings in terms of components, in the way did with 'leggings' and 'fruit'. If we do that here, this is an example. To the left in this table, you get various readings, 'somersaults', 'fall down', 'whirl down', 'whirl freely' and 'pivot'. Further, you get features like the following: rolling round one's axis, touching the ground or not, with downward movement or without necessarily downward movement, and doing it deliberately or not. We can then indeed give a componential description of the senses, just as when we did for 'fruit' and 'legging'.

But there is a restriction: if you use these features, they would apply only to the literal senses. If you add the metaphorical senses or the metonymical senses, you could not include them in the same table, because this table has to do with the features that determine the structure of the literal similarity between a subset of senses, but not all the senses. For other senses, like metaphorical ones and metonymical ones, you need other things. You need precisely to identify them as metaphors and metonymies. But if you try to bring the metonymical sense 'to sway, to stagger' in the set of features, you will notice that it will not give you a good definition of that metonymic reading. The best thing there is to identify the metonymy as such. So importantly, that's a major difference between the analysis of single meanings and the analysis of polysemy. When you do the analysis of single meanings, you could probably do with just a family resemblance analysis, either with features or with overlapping senses. But once you go for a really polysemous category, it's like getting into another dimension, because you get all the mechanisms of extension that you have on top of family resemblances: you get things like metaphor and metonymy. And obviously, your representational methods will have to be adapted to that. On top of the family resemblance that we can represent with these tables or with the overlapping sets representation, we will need to add something else. We will need to add lines saying, from this meaning to that, you get a metaphorical link or from that meaning to that, you get a metonymical link. The representation will become slightly more complicated, because we have to add another level of representation.

[3.40] There's another thing that we might want to add here and that we need to represent, that's the timeline: let's try to represent the evolution of the category. I will show you that you can do this in various ways. I will do this in three ways, just briefly, in three different ways. Well, they all have advantages and disadvantages, but I won't deal with that. The first simple representation is what we will call a 'radial set representation'. You take the central meaning and then you simply draw lines to other meanings. Then we have the 'family resemblance' approach, the type we already saw. But as we mentioned a moment ago, we will have to expand that with a representation of metaphor and metonymy. Then, there is a third approach, a global linear approach that gives us a very good idea of how a category involves through time.

[3.41] Let's begin with the central case 'to make somersaults'.

[3.42] That develops into 'fall down'. By the way, the succession of steps I am taking here are the steps that are in the diachrony of the material. We see that certain things happen to the category in different periods. So I am following the periods.

[3.43] Then further in the 18th century, two more meanings are added.

[3.44] In the second half of the 18th century, one more.

[3.45]–[3.46] And then in the 19th century, we get this. If we go through the series from 3.42 to 3.47 and build up the lines diachronically, you can see how the category expands. That's of course what we want to see. We ask ourselves the question if the kind of semasiological evolution that you get in the polysemous category is of the same expansive type as what you got in a single meaning. Well, it is: we begin in the center and then chronologically we see the expansions of category. This is of the same type as what we saw before: to begin with a core application and the core application expands.

[3.47] Notice that we could add things to the representation, we can label the links, we can mention what kind of semantic extensions we have there. For instance, from the initial one, from 'make somersaults' to 'fall down', that's a link of similarity and I mean they are literal similarities. And then I have red links which are metaphorical extensions and there is one blue link for metonymy. If we have this type of representation, we can add information by labeling the

links, by identifying the type of semantic extension, by identifying the process that leads from one meaning to the other.

This is one kind of representation, but it's a representation that has a certain disadvantage, because if you have a look at the literal meanings, the ones that are not metaphorical or metonymic, you don't get a real insight into the relation between the literal readings, because what you don't get is information about family resemblances that would be included in an overlapping set representation. Once we are here, when we have this radial set representation, we can ask ourselves whether we can transform this into a family resemblance representation.

[3.48] When we do that, we will get something even more similar to what we had with 'fruit' and 'leggings', specifically with 'leggings', because we will get something like this, right? The table I have shown you a moment ago can be transformed into this kind of picture.

[3.49]–[3.50] Then for the literal readings, not for the metaphorical or metonymical ones, the family resemblance structure will be filled out chronologically, like this and then so on.

[3.51]–[3.53] But then we will of course also want to add the metonymies and metaphors and then we will have to use different representations, like with lines, like this. You might ask yourself the following question if you go over the series from 3.49 to 3.54: we start with 'make somersaults' and then 'fall down' etc. and then we get this 'whirl figuratively' reading, but it disappears again. Why does it disappear? This is a representation that builds up century after century and we know that certain meanings don't subsist. They crop up and disappear again. That's what you see in this type of representation. A meaning may appear and then it may disappear again; notice that this is a difference with the representation we had a moment ago, in 3.42–3.48.

Let me briefly go back. The representation in 3.48 is pan-chronic: this is a representation of all chronological layers on top of each other. By contrast, the type of structuring that I have here, in 3.49–3.52, takes a different representation for each chronological period. Let's go back to the second half of the 19th century, the first half of 19th century, the second half of 18th, the first half of 18th and so on. Here we have a different representation for each half century. And you can of course ask yourself the question: would it not be nice if we could bring all those chronological periods together in one representation, so that we would not have six or eight or whatever different

representations, but just one in which we could see the evolution of the category over time?

[3.54]–[3.61] Well, that's the final representation that I want to show to you. What we do here is this: we have the meanings to the right and we have the centuries along the horizontal dimension. What we will now do is to indicate with dots which meaning appears in which period. By drawing lines along the time axis, we can see how the category develops and we can also see how certain meanings disappear again. In the first half of the 16th century, we have this (3.55) and in the second half of the 16th century, we get this (3.56). Notice that the horizontal line simply means 'this meaning continues', the diagonal lines means that 'there's an evolution, a new meaning arises as an extension, as an expansion of an existing one'. We get one meaning that continues and a new meaning that emerges in the second half of the 16th century and then it goes on. Going over the series of slides, you can see how the category evolves. You can also see clearly in this representation that certain meanings do not subsist in time. They occur only peripherally, i.e. occur once or a few times in a certain period and then disappear again. Let us go over the series once more to see how this builds up. We begin with the prototypical sense, with the central case and we can see how the category expands in various directions.

We can certainly conclude from this example that what we saw in our analysis of 'legging' (the gradual expansion of a category), is the same thing as what we have here. It's the same structure, the same picture that we find when we look at polysemous categories. It's not essentially different. The evolution of meaning within a single sense or the evolution of the meanings among different readings has the same structural characteristics. One difference (we've mentioned that) is that when you stay within one reading it is basically family resemblances that structure the evolution; when you go to different meanings, all the mechanisms of extension are added, specifically metaphor and metonymy.

[3.62]–[3.63] To conclude, contemporary models of semantic structure incorporate variability into the architecture of the categories, into the architecture of the semantics of the categories. When we do diachronic analysis of the type that I have illustrated with two case studies, either of the short range or the long range, we have an example of both. When we do diachronic analysis, we can really corroborate the importance of that variability and we can even do that both semasiologically and onomasiologically.

[3.64] A second conclusion is, as I said a moment ago, that the characteristics of the variation are largely similar from a monosemic and a polysemic perspective, because in both cases, we find gradual expansions of dominant readings and a multidimensional network of relations among the readings.

[3.65] And then, what interests us specifically from the cognitive sociolinguistic point of view, we get clear indications in our examples that social factors play an important role in this multidimensional structure of variation. For instance, a quite clear example of that is that when we looked at the evolution of 'legging', the evolution that we find is clearly related to the evolution of fashion, to the fashionable success of leggings in the period that we considered. That's a social factor. What we will be doing in the talk this afternoon is to try to be a bit more theoretical about those social factors in the evolution of such categories and in the structure of variability. Thank you!

## Handout Lecture 3

### 3.1 Situating the talk

- 1–2 Introduction
- 3–4 Semasiological variation
- 5–6 Conceptual onomasiological variation
- 7–9 Formal onomasiological variation
- 10 Conclusion

### 3.2 Background

D. Geeraerts 1997 **Diachronic Prototype Semantics. A Contribution to Historical Lexicology**[Oxford: Oxford University Press]

### 3.3 Question

given the fact that variability is so to speak wired-in in contemporary conceptions of linguistic meaning and categorization, can we indeed demonstrate that variability when we look at the evolution of lexical categories?

### 3.4 Refreshing your memory

- **semasiological** variation:  
prototypicality and polysemy
- **conceptual onomasiological** variation:  
differences of categorial construal
- **formal onomasiological** variation:  
synonymy

### 3.5 TOC

Case study I. Semasiological variation in a single meaning (and some onomasiology too)

Case study II. Semasiological variation in a polysemic cluster

Conclusions

### 3.6 Case study I Semasiological variation in a single meaning (and some onomasiology too)

### 3.7 Predictions

the evolution of a neologism

1. **semasiology:**

if prototypicality is indeed a good model of the semasiological structure of categories, the semantic development of a new concept will take the form of growing variations and modulations of the initial prototypical core

3.8 **Predictions**

2. **conceptual onomasiology:**

if a new concept is succesful, this will become apparent in the growing entrenchment (onomasiological salience of that concept)

3. **formal onomasiology:**

competition between sociolinguistically marked alternatives

3.9 **Case study: *legging***

- evolution from 1988 to 1992
- corpus of magazines, representative for the distinction between Netherlandic Dutch and Belgian Dutch
- referential description in componential format (six dimensions)  
e.g. <31111f>

3.10 **Case study: *legging***

- evolution from 1988 to 1992
- corpus of magazines, representative for the distinction between Netherlandic Dutch and Belgian Dutch
- referential description in componential format (six dimensions)  
e.g. <31111f>



3.11 **The componential system**

L	length	3/2	as long as the calves or ankles
W	width	1	tight-fitting
C	crease	1	no crease

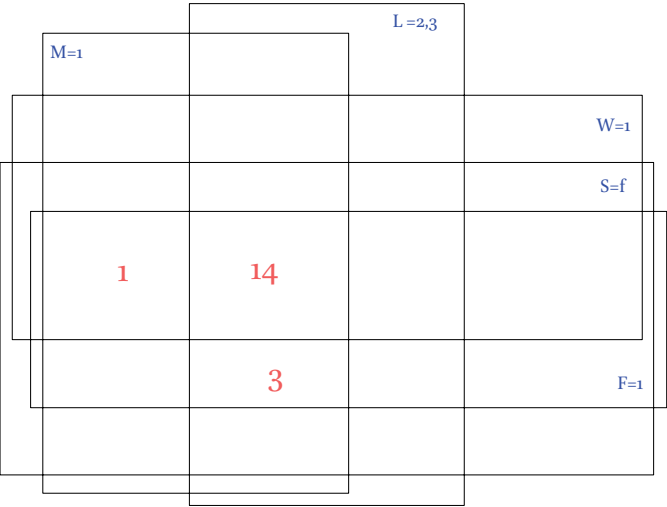
M	material	1	finely woven, elastic material
F	function	1	worn as an upper garment
S	sex	f	worn by a woman

3.12 The representation

- representation of the semasiological range of the category “legging” as a cluster of overlapping subsets
- following the evolution during five years

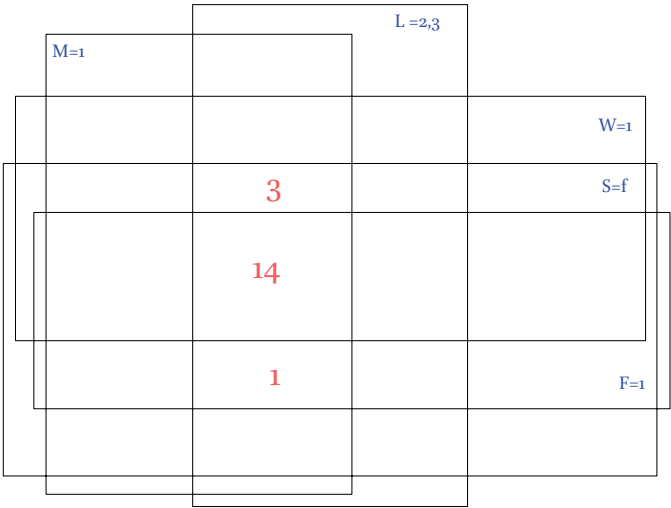
↪ gradual expansion of the prototypical core: from minimal to maximal deviance from the prototype

3.13

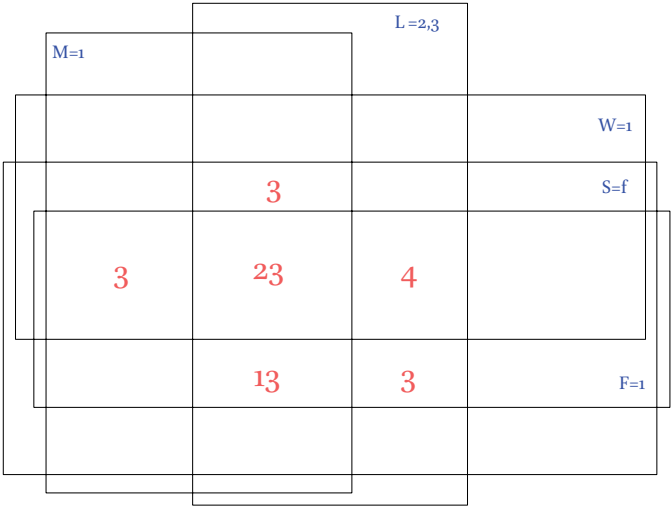




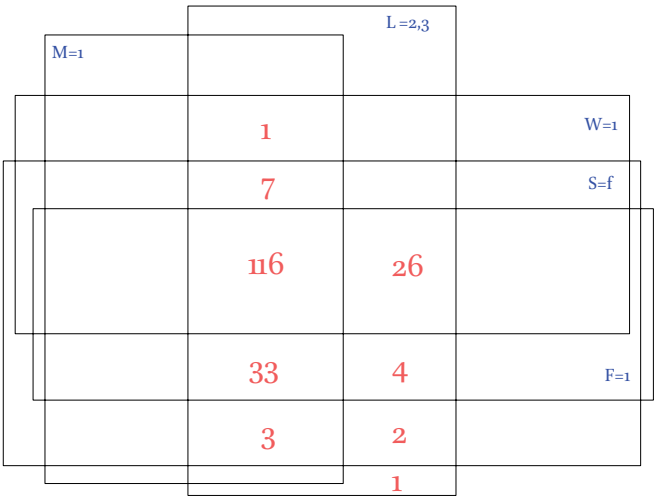
3.14



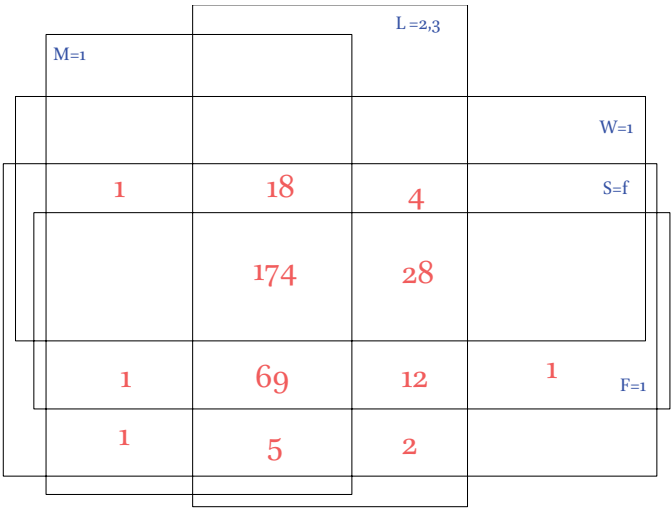
3.15



3.16



3.17



### 3.18 To recapitulate

- **legging** is “a tight-fitting, elastic, long kind of trousers for women”

but the word is used loosely:

sometimes leggings are less tight-fitting,  
sometimes a bit shorter etc.

- the way in which the word is used loosely is characterized by two features:

### 3.19 To recapitulate

1. the novel applications take the form of  
**co-variation along different dimensions**,  
many of them continuous rather than binary ones
2. considered in time, the novel applications take the form of a **gradual expansion** of the prototypical core cases

### 3.20 Conceptual onomasiology

- extrapolating the semasiological notion of salience (= prototypicality) to the onomasiological domain:

a cognitive preference for choosing one category rather than another  
as the name for a given referent or set of referents

- an operational definition of onomasiological **entrenchment** in a given corpus:

### 3.21 Defining entrenchment

frequency of category name(s)

---

frequency of category referents

### 3.22 Applying entrenchment

applying the operational definition:

overall frequency of **legging-leggings-caleçon**

---

overall frequency of all referents of **legging-leggings-caleçon**, even  
where not named by those items

3.23 Growing entrenchment

	1988	1989	1990	1991	1992
frequency of names	18	21	47	185	318
frequency of referents	52	57	83	231	404
entrenchment	0.34	0.36	0.56	0.80	0.78

3.24 Formal onomasiology

- choices between denotational synonyms, revealing the relationship between language varieties
- in this case: reflecting the normative relations between Netherlandic Dutch and Belgian Dutch (Flemish)

3.25 A converging shift

	B		NL	
	caleçon	legging(s)	caleçon	legging(s)
1988	100%	–	–	–
1989	100%	–	–	100%
1990	96.9%	3.1%	–	100%
1991	55.5%	44.5%	0.9%	99.1%
1992	66.5%	33.5%	–	100%

3.26 A converging shift

- more internal variation in B than in NL
- more influence from French in B than in NL
- B seems to converge normatively with NL

(historical interpretative background)

3.27 Case study II Semasiological variation in a polysemic cluster

3.28 An example

- Dutch tuimelen, ‘to tumble’
- classified into 9 senses
- with material for 4 centuries (16–19)

to be presented:

- definition / semantic gloss
- an example
- timeline

### 3.29 Introducing Tuimelen

- “to make somersaults, go head over heels”
- 16a–19b
- (*Uilenspiegel*) was seer auontuerlijck als hi inder wieghen lach, want hi **tumelde** op dat cussen ende bedde ende stack den eers om hooge [1520].
- Uilenspiegel was very adventurous when he was a baby lying in the cradle, because he **tumbled** on the pillow and the blanket, and put his behind in the air.

### 3.30 Introducing Tuimelen

- “to fall down”
- 16b–19b
- Zoo zaen als zij eenich gheruchte hoorden, meenden terstont dat die van Ghendt uut quamen om haer doot te smijten, waeromme zij somtijts liepen ende **tumelden** over hoop, vielen in grachten als verbaesde meinschen [1566]
- As soon as the besiegers heard a noise, they immediately thought that the inhabitants of Ghent rushed out to smite them. That is why they sometimes ran away, **tumbled** one over the other, fell into ditches like flabbergasted people do

### 3.31 Introducing Tuimelen

- “to whirl down, fall with a whirling movement”
- 18a–19b
- Dees (*een matroos*) uit onvoorzichtigheit zyne hant houdende voor den mont van een stuk geschut, wert zoo jammerlyk gequetst, dat hy los van boven neêr naer beneden **tuimelde** [1714]
- This sailor, holding his hand imprudently before the mouth of a canon, got wounded so severely that he **tumbled** down from the ship.

### 3.32 Introducing Tuimelen

- “to whirl (freely, without falling)”
- 18a–19b
- Wel aan, zo ‘t u lust, wy zingen eens by beurt, Dat zelf de Maasgodt worde in ‘t stroompaleis gesteuert, En opwelt met zyn stoet op **tuimlende** dolfynen [1710]

- Well then, if you like, we will sing taking turns, so that even the local river god in his streaming palace will be disturbed, and will rise from the waves with his courtiers on **tumbling** dolphins

### 3.33 Introducing Tuimelen

- “to whirl, move in an agitated way (figuratively)”
- 18b
- Aldus woelen, **tuimelen**, en barnen (= *branden*) hier verscheiden hartstoghten [1759]
- And so various passions toss, **tumble** and burn

### 3.34 Introducing Tuimelen

- “to fall down (figuratively)”
- 19a–19b
- Ware B. met de kous op den kop ‘t huis gekomen, het Ministerie zoude **getuimeld** zijn, maar de Koning had de Regering behouden [1830]
- Had B. come home without results, the Government would have **tumbled**, but in actual fact the king succeeded in keeping his Government.

### 3.35 Introducing Tuimelen

- to pivot, turn round one’s axis”
- “19a–19b
- Het gebruik van gegoten ijzeren ramen is in de laatste tijd aanmerkelijk toegenomen, . . . ; gewoonlijk worden zij als vaste ramen aangewend, waarin zich een draaijend of **tuimelend** gedeelte bevindt [1848]
- The use of cast-iron windows frames has increased greatly in recent times, . . . . Usually they are used as fixed windows with a part that swings or **tumbles** open

### 3.36 Introducing Tuimelen

- “to sway, stagger, almost fall down”
- 19b
- Hikkende, brakende, **tuimelend** over zijn pooten van achteren, zijn evenwicht herstellend met de voorpooten, waggelde hij (*een stier*) voort [1889]
- Hiccupping, vomiting, **tumbling** over its hind legs, re-establishing its balance on its front legs, the bull staggers on.

### 3.37 Introducing Tuimelen

- “to wind up in, involuntarily reach a certain position (figuratively)”
- “19b
- Steeds weêr ben ik in mijne schrijverijen van ‘t eene onderwerp in ‘t andere **getuimeld**, zonder richtsnoer, zonder vooraf berekend plan [1885]
- Ever again I have **tumbled** from one subject into the other in my writings, without guiding line, without preconceived plan.

### 3.38 Overview Tuimelen

semantic extensions based on

- literal similarity (fall down, whirl down, whirl freely, pivot)
- metaphorical similarity (fall down figuratively, whirl figuratively, wind up figuratively)
- metonymy (sway)

### 3.39 Overview Tuimelen

	roll round one's axis	touching the ground	in downward movement	with purpose and intention
somersaults	+	+	+	+
fall down	–	+	+	–
whirl down	+	–	+	–
whirl freely	+	–	–	+
pivot	+	–	–	–

### 3.40 Representing change

three ways of representing semasiological change

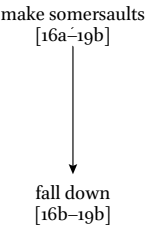
- chronological steps in radial sets
- a hybrid family resemblance approach
- a global linear approach

(advantages and disadvantages)

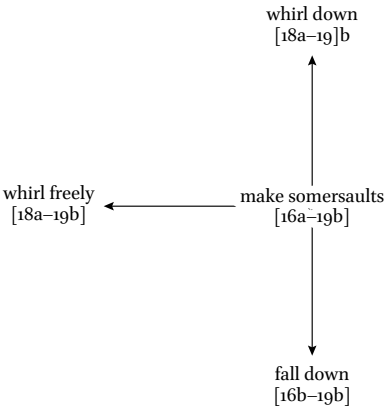
### 3.41 Tuimelen in steps

make somersaults  
[16a–19b]

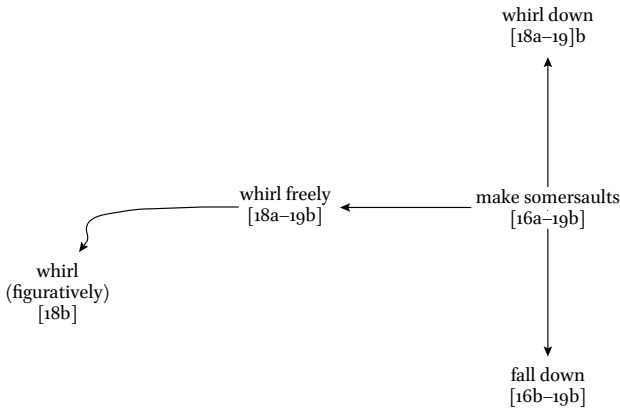
3.42 Tuimelen in steps



3.43 Tuimelen in steps

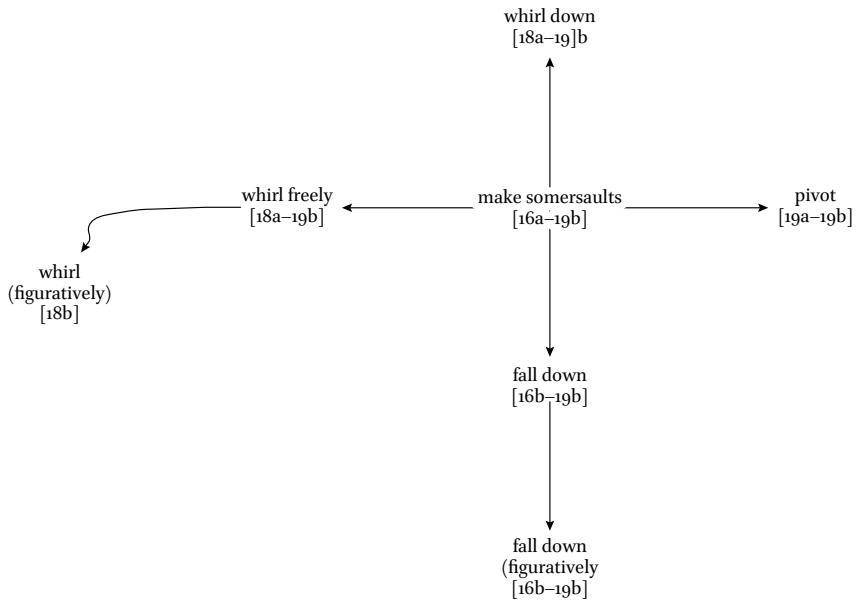


3.44 Tuimelen in steps

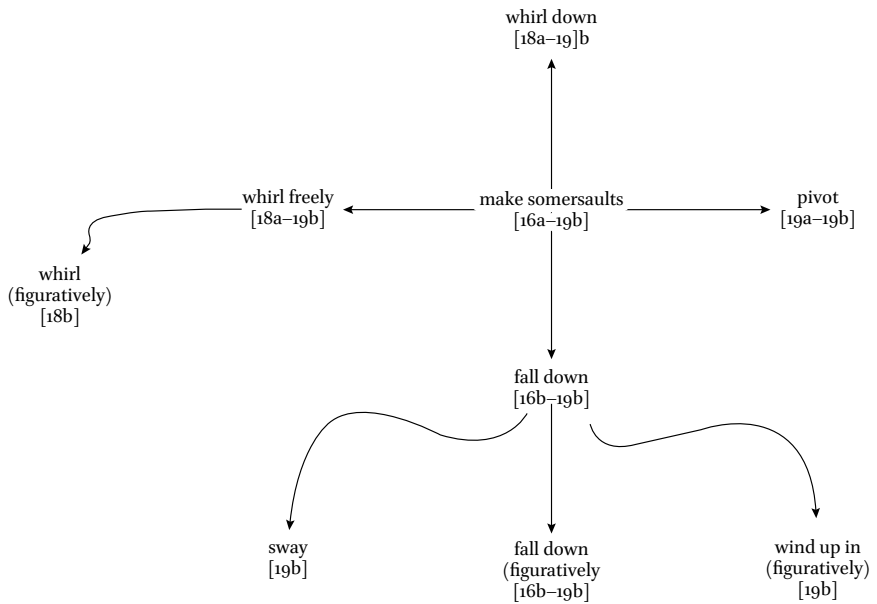




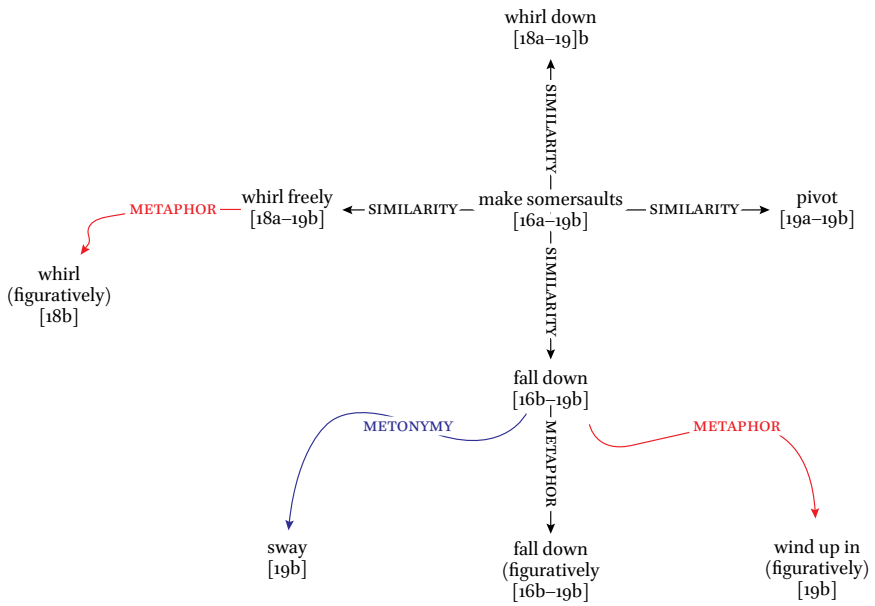
### 3.45 Tuimelen in steps



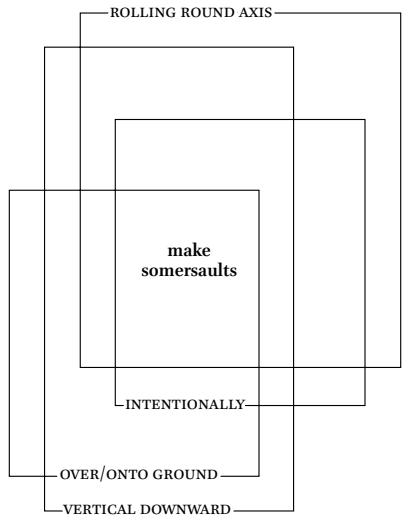
### 3.46 Tuimelen in steps



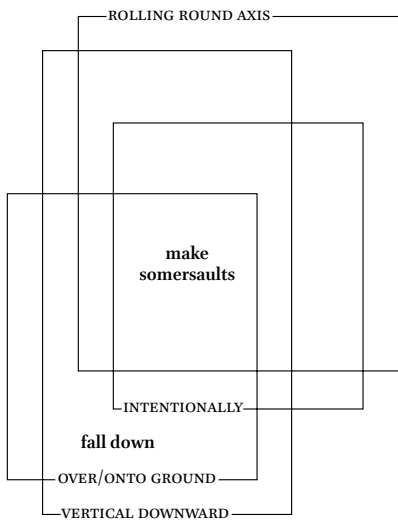
3.47 Tuimelen in steps



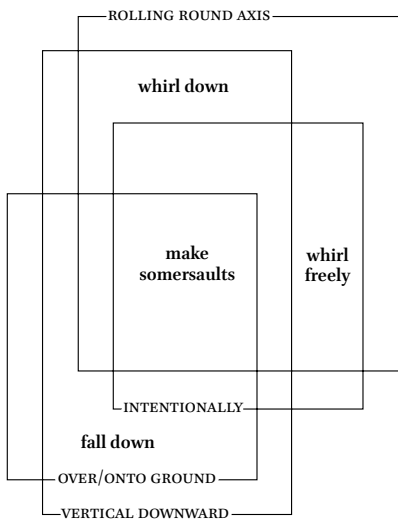
3.48 Tuimelen 16a



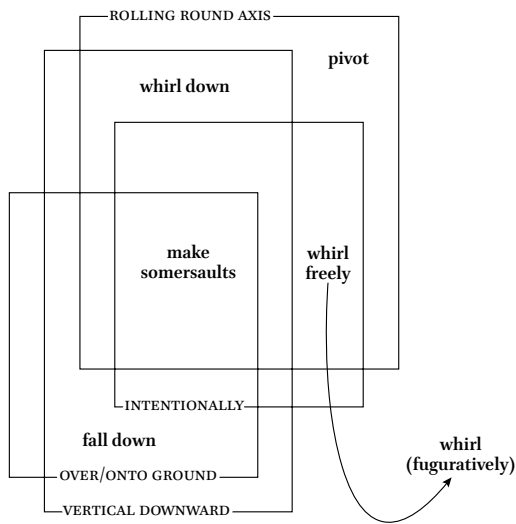
3.49 Tuimelen 16b



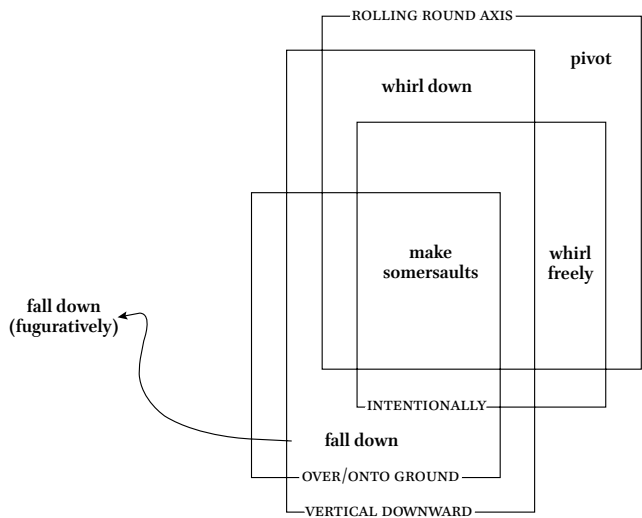
3.50 Tuimelen 18a



3.51 Tuimelen 18b



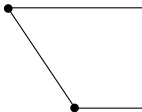
3.52 Tuimelen 19a





3.56 Tuimelen across time

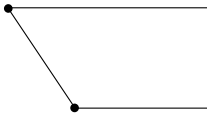
16a      16b      17a      17b      18a      18b      19a      19b



- whirl freely (figuratively)
- whirl freely
- whirl down
- pivot
- make somersaults
- sway
- wind up
- fall down
- fall down (figuratively)

3.57 Tuimelen across time

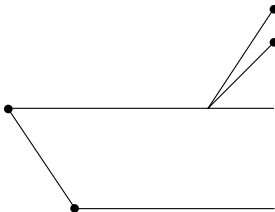
16a      16b      17a      17b      18a      18b      19a      19b



- whirl freely (figuratively)
- whirl freely
- whirl down
- pivot
- make somersaults
- sway
- wind up
- fall down
- fall down (figuratively)

3.58 Tuimelen across time

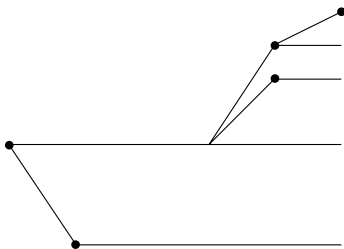
16a      16b      17a      17b      18a      18b      19a      19b



- whirl freely (figuratively)
- whirl freely
- whirl down
- pivot
- make somersaults
- sway
- wind up
- fall down
- fall down (figuratively)

3.59 Tuimelen across time

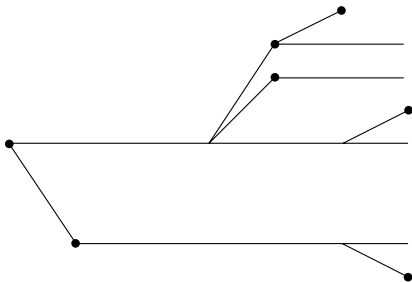
16a      16b      17a      17b      18a      18b      19a      19b



- whirl freely (figuratively)
- whirl freely
- whirl down
- pivot
- make somersaults
- sway
- wind up
- fall down
- fall down (figuratively)

3.60 Tuimelen across time

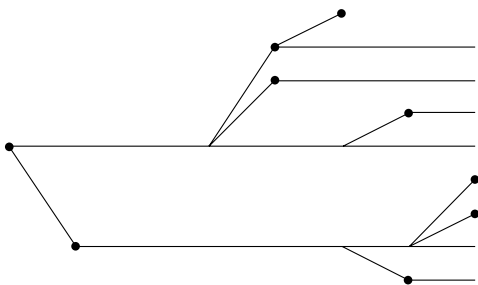
16a      16b      17a      17b      18a      18b      19a      19b



- whirl freely (figuratively)
- whirl freely
- whirl down
- pivot
- make somersaults
- sway
- wind up
- fall down
- fall down (figuratively)

3.61 Tuimelen across time

16a      16b      17a      17b      18a      18b      19a      19b



- whirl freely (figuratively)
- whirl freely
- whirl down
- pivot
- make somersaults
- sway
- wind up
- fall down
- fall down (figuratively)

### 3.62 Conclusions

#### 3.63 Semasiological variation

- contemporary models of semantic structure incorporate variability into the architecture of linguistic categories
- diachronic research (of a short range or a long range kind) corroborates the importance of variability, both semasiologically and onomasiologically

#### 3.64 Semasiological variation

- the characteristics of the variation are largely similar from a monosemic and a polysemic perspective; in both cases, we find
  - the gradual expansion of dominant readings
  - a multidimensional, non-atomistic network of relations among the readings

#### 3.65 Semasiological variation

- there are clear indications that social factors play an important role in the multidimensional structure of variation;

for instance, the evolution of **legging** is clearly related to the fashionable success of leggings in the period considered





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## Stereotypes, Prototypes and Norms

[4.1] The present talk will be slightly shorter than the ones we have had so far. If everything goes well, you will have a longer coffee break. On the other hand, there is also a kind of difficulty here that I should mention because the talk that I gave this morning was very practical and it showed you ways of describing historical evolutions in language. This talk is much more abstract. There are even some fairly philosophical references here. So be prepared. Put on your seat belts and try to follow me.

[4.2] We are still within the semasiological variation part of the lectures. The material that I am presenting now refers to a paper that I published in a volume edited by Gitte Kristiansen and René Dirven, a volume that I have already mentioned a number of times, the *Cognitive Sociolinguistics* volume.

[4.3] The questions that the paper addresses are the following: if we accept the importance of a social perspective for the study of semasiological variation, what are the forces that determine those social aspects of meaning, and do we have any theoretical models that describe the relations among those forces? We will see in a moment what I mean by these forces.

[4.4] The steps I want to take are the following: First I want to talk about Bill Clinton as a semantician. Next is a philosophical section on the theory of the division of semantic labor, which was developed by the philosopher Hilary Putnam. I will evaluate that theory and argue that we need some extensions or alternatives to the theory. Then I will get a final picture of what I just mentioned as forces and relations within languages.

[4.5] First, Bill Clinton. A few more introductory steps maybe. In the previous talk, we talked about the semasiological variability of meaning. Let's first rehearse why we can say that social factors play a crucial background role in that variability. I would say there are three reasons.

[4.6] In the first place, there is inherent flexibility in meaning, but why would we be using that flexibility, why would we expand, extend the range of application of a category at all? Our cognitive abilities allow us to do that. We have mechanisms like similarity, metaphor, metonymy, and obviously blending. But

why would we use this mechanism at all? That's because we want to be communicative. We want to communicate something. We want to categorize and communicate our categorization. So the functional motivations for exploiting the inherent flexibility of meaning are probably to a large extent social in nature. We saw very low level examples of that when we looked at 'legging': we could see that the semantic variability tied in with the success of a certain garment as part of the clothing fashions. So that's one first reason we can say that behind the flexibility that we have been describing there are social mechanisms.

[4.7] The second reason why we can think of semantic variability as socially structured is that so far we've been working at a certain level of idealization. This was also mentioned in Professor Kristiansen's talk: we need to go to a realistic level of description, and we need to avoid too much idealization in talking about homogeneous languages and homogeneous linguistic communities. If you think about what I did this morning and what I did yesterday with the prototype categories, you could maybe raise an objection. You could say: you've described a structure with a core area and extensions, but how do you know that all those different meanings or applications are known to all the speakers of the language? Well, I don't. One of the things that we should really investigate is to what extent various extensions of the semantic range of application of a category are shared by different groups of speakers, or are not shared by different groups of speakers. So that's where prototype models also suggest a link with a sociolinguistic model. One thing you can imagine is that the core of a category, the central applications, would certainly have a wider social distribution than the peripheral ones. The peripheral applications might for instance be technically specialized and will then only be known to technical specialists or would be restricted in another lectal way. But the central application of the category would probably be known to all speakers or to almost all speakers of that language. So that's another reason why we can think of variability as having a social background. The variation is not shared by all members of the linguistic community.

[4.8] And then there is a third reason, and that's where Bill Clinton will come in. One more reason to think about semantic flexibility and semantic variability as having a social structure and a social background is that semasiological variation is open to explicit social negotiation. That is to say, to put it more simply, there may be a social fight over meaning. People may debate whether a certain term is applicable or not. That was what happened to Bill Clinton. The

process was very nicely illustrated by Bill Clinton, when he had to testify about his sexual relations with Monica Lewinsky. You all remember the story, right? The question that was put to him was whether he had had sexual relations with Miss Lewinsky. What I am going to do now is to present a number of excerpts from Clinton's testimony. What you will have to focus on is what Clinton will be doing in his reply to the judge's question. He is not exploiting the flexibility of categories by extending a category, by stretching it to new cases. But he is doing precisely the opposite. He is trying to restrict the category to its core reading and implicitly denying the other aspects of the category.

[4.9]–[4.11] At one point, Clinton says *'I thought the definition'* (the definition of a sexual relation, that's what this is about) *'I thought the definition included any activity by the person being deposed, where the person was the actor and came in contact with those parts of the bodies with the purpose or intent of gratification'* (that's legal language), *'and excluded any other activity. For example, kissing is not covered by that, I don't think'*. So his reasoning is: 'sexual relation' is only valid when you talk about intercourse, when you sleep with someone; kissing is not part of a sexual relation. That is his reasoning. Then the judge asks, *'Did you understand the definition to be limited to sexual activity?'* Clinton replies, *'Yes, I understood the definition to be limited to physical contact with those areas of the bodies with the specific intent to arouse or gratify'*. Further, *'I believe at that time that she (that's Lewinsky) filled out this affidavit, if she believed that the definition of sexual relationship was two people having intercourse, then this is accurate. I believe that is the definition that most ordinary Americans would give it. If you said Jane and Harry have a sexual relation, and you're not talking about people being drawn into a lawsuit etc, etc. But you are just talking about people in ordinary conversation. I'll bet the grand jurors if they were talking about two people they know, and said they have a sexual relation, they mean they were sleeping together; they meant they were having intercourse together'*.

What is he doing here, what is his semantic strategy? To deny that he had a sexual relation with Lewinsky, while his semantic strategy is to restrict the category to a core reading. When you talk about this as a semantician and a linguist, you could say, 'well, probably somewhere in the central reading, in the central application of the term *sexual relation*, yes, having intercourse is part of that central reading'. But as linguists we would, at the same time, say, 'but then you have more peripheral, less central readings where that aspect does not necessarily have to be present'. So Clinton here, working as some kind of semantician, is in a sense restricting the category. So far, we have seen examples where we expand the category, where we can see that in the course of time,

these natural language categories extend to attract more meanings, tend to be used flexibly. Clinton now shows us that it can also work the other way round. Actually, we see two things, we see both that categories can be envisaged only from the central meaning, and specifically, we also see that that has a social function. What we have here is a social debate about restricting rather than expanding the semasiological range of a concept. The theoretical question I want to address now is, given a case like this, what models do we have to deal with these aspects of variability?

[4.12] Remember that in the beginning of this talk, I mentioned the term *forces*, so at this point, you can also think about those forces as going two directions. You have an expansive force and you have a restrictive force. Probably, in most cases, the expansive force would be the most important one, while in a number of cases, like the Clinton one, there would be a restrictive force. If we try to be more generic about that, if we try to be more theoretical about it, what are the bases of those forces, what actually decides in which direction things will go? And what have people been saying about that, what kind of general model do we have to talk about these two opposing tendencies in language, restrictive tendencies versus expansive tendencies?

That is where I want to take a good look at Hilary Putnam's principle of the division of linguistic labor. Notice that by the very labeling of the theory, we get a social perspective. This is a theory about the distribution of meanings in a society, and that's what we should have when we think about the social background of semasiology: we should have something like a theory about the distribution of meaning in society and about the forces that influence that distribution.

[4.13] In order to get at the division of linguistic labor, I need to take a few steps. I need to introduce you to some of the more philosophical aspects of Putnam's approach, and the approach that he wrote down in his famous article called *The meaning of meaning*. The approach in fact consists of two parts: the theory of rigid designation and then the linguistic division of labor. But in order to explain about the linguistic division of labor, we have to go through the explanation about rigid designation first. We also have other labels for the two parts of the theory. The rigid designation part is also known as 'semantic externalism', the division of labor part is also known as 'semantic deference'.

[4.14] Let's have a look at rigid designation first. This is the philosophical part of the approach, because this is about the question: what is meaning and where do we find meaning? Putnam's approach is rather, we could say,

uncognitive, because his idea is that meanings are not in the head. As cognitive linguists, we would probably think of meanings as being at least partly in the head. We will have to come back to that, but superficially speaking, this seems to be very uncognitive. We have to explore this and see to what extent there is possibly an incompatibility between the two approaches. What does it mean that meanings are not in the head? Putnam illustrated this with his so-called 'Twin Earth' thought experiment. Try to follow this, because this is really philosophical reasoning.

Let's imagine that next to our own earth, there is a Twin Earth, somewhere, you know, somewhere in the cosmos, could be anywhere. We happen to know what it looks like: it looks very much like our own earth. Twin Earth resembles real earth in all respects, except for the fact that what we call water here is represented on Twin Earth, or corresponds on Twin Earth, by a liquid that superficially has the same appearance and the same properties as earthly water. But if you look at it chemically, its composition is different from what we have here. Its composition is not  $H_2O$ . But it's rather an imaginary XYZ. Everything is the same. All trees look the same. All people look the same. The history of the planet is the same; the Twin Earth is the same. The only one tiny difference is that  $H_2O$  versus XYZ difference.

[4.15] Next step. Now imagine that Twin Earth is visited by a human being A, who is living around 1750. How we can imagine this, that's another thing, but let's imagine that situation. In 1750, we didn't know yet that the chemical composition of water was  $H_2O$ . So person A does not know that water, the thing that he or she calls *water* is  $H_2O$ . The concept of chemistry at that time was not yet known. So A is unaware of the fact that one molecule of earthly water consists of two molecules of hydrogen and one molecule of oxygen. In analogous circumstances, because it is really twin-like, a native B of Twin Earth visits our earth, the earthly earth. B is similarly totally unaware that his own 'water' is XYZ and that the earthly 'water' is  $H_2O$ . You still follow me?

Now consider the idea that meaning is something cognitive in the head, that is to say, a concept, a psychological concept. Then we have a problem. Because A and B have exactly the same cognitive state, their psychological state about what they call *water* is exactly the same, because the only difference between earthly water and twin water is not known to them. So everything they know about water is exactly the same.

[4.16] Still there is a difference in the reference of *water*. We're willing to accept A and B are in the same psychological condition, but at the same time, we accept that the referent of *water*, the extension of *water* (the extension, in the

philosophical sense, is what *water* refers to) is something else in English and in twin English. In English it refers to  $H_2O$ , and in twin English it refers to XYZ.

What does Putnam conclude? Meanings are not in the head, because the two heads in this case are the same, but the meaning is different. His argument is: the meaning of *water* is different in our own earth and Twin Earth, because the referent, the extensional referent is different. But the meanings in the head or the concepts in the head are the same. Further step in his reasoning: meanings are not in the head but they are determined by the hidden essence of things, like in this case, the chemical composition of the substance in question. There is a restriction here: he develops this theory specifically for natural categories, that is to say for categories that refer to natural kinds, to things in the world. Whether this would also apply to artifacts, to the products of human activity, that is another question. We will not really go into that very deeply. Originally, the theory is developed for natural categories. His theory is that natural categories rigidly designate things with a unique essence. Twin earth water is XYZ. Earth water is  $H_2O$ . That settles the meaning. That determines the meaning of *water* in twin English and *water* in earth English. So that's why you get semantic externalism: meaning cannot be in the head. Putnam argues it can't be in the head precisely because the two heads were the same in the thought experiment, but things were different. The references were different. That's the rigid reference aspect of Putnam's theory.

[4.17] Once we have that, we can add the part about the division of linguistic labor. Putnam argues that not all members of a linguistic community are required to know the hidden structure of the extension of an expression of their language. In our developed societies, we all know that water is  $H_2O$ . But when we were still children we might not know that. It is something we have to learn. There are in fact many things, maybe even most things, of which we don't know what the chemical composition is. We are more or less required to know what the composition of water is, because we have learned about it in school. We are supposed to know that it is  $H_2O$ . But for many other substances we are not supposed to know what the chemical composition is, what the hidden essence is. That's what Putnam calls the division of linguistic labor. The division of linguistic labor implies that there are hidden essences that determine the rigid designation, but we are not all obliged to know the hidden essences. We have specialists for that. We have scientific experts who can tell us what the chemical composition of this or that type of matter is. There is a division of linguistic labor that ensures that there are societal experts who know that water is  $H_2O$  and who know many more things that laymen need not necessarily know. Laymen then, non-experts attune their linguistic knowledge or

their linguistic usage rather to that of the expert scientists and technicians. That means that if there is a debate about the true meaning of things (the true meaning being the reference to the hidden essence), you will refer back to an expert. You will ask an expert, 'is this really the same thing as that?' That's the division of semantic labor.

[4.18] There is another term that I have to introduce now, namely the term *stereotype*. Now notice to begin with that there are two terminological remarks to make here. Let me first explain what Putnam means, and then I will make the remarks. The fact that we don't need to know everything about those hidden essences does not exclude that there are requirements in a society about a minimum level of knowledge that we are supposed to possess and to acquire about concepts. So for instance, even if we are not to know that water is  $H_2O$ , we will still have to know other things. When can you say that you know the concept of water? Knowing the concept of water would necessarily imply knowing certain things. It would not necessarily imply knowing the chemical composition, but we would have to know other things. We have to know water is a colorless, transparent, tasteless, thirst-quenching liquid that boils at  $100^\circ$  Celsius and freezes etc, etc. Putnam has other examples of this socially required minimum knowledge, that's what he calls 'stereotypes'. The stereotype of 'tiger' would be something like 'a feline animal, yellowish with black stripes'. That's the kind of knowledge he means: a socially determined minimum set of data with regard to the extension of a category.

Now the terminological remarks. First, this looks very much like the notion of 'prototype': 'stereotype', 'prototype', what's the distinction? We have to say a lot about that in a moment. Second remark, this is 'stereotype' in a very specific sense, in the context of a philosophical theory of reference and meaning. It has a social aspect, but it is not the same as the notion of 'stereotype' in the sense of 'social stereotyping'. Social stereotyping is when you have a certain image of a group of people. The stereotype of Belgian people from the point of view of the Dutch people from the Netherlands is that Belgians are sort of sloppy but joyous. That's the stereotype. And the stereotype of the Belgian people with regard to the Dutch people is somewhat different: they are loud and stingy. I'm not going into that. But you know about that, that's social stereotype. That's not what we are talking about here, even though we are talking about stereotypes with a social aspect.

[4.19] Why is all of this interesting? Think back of the Clinton question. In the Clinton example, you had a debate about meaning. Is the meaning of 'sexual relation' restricted to intercourse or not? In principle, if we could follow Putnam's



approach, we could possibly refer to expert knowledge. There might be an expert definition or maybe a legal definition for this expression. Superficially speaking, it would seem that Putnam's approach is an excellent starting-point for a sociosemantic enrichment of prototype theory. As we already suggested, 'stereotype' and 'prototype' both seem to identity core semantic knowledge. Water as a colorless, tasteless etc. that corresponds to the water we spontaneously think of as the prototype of the category 'water'. A Putnamian stereotype would then be a social interpretation of the concept of prototype: a stereotype would be looking at central prototype cases of a category from the social point of view. What would you necessarily have to know about categories? So that looks good as a starting-point for getting a grip on the social forces dealing with or determining semantic flexibility, and restriction of meaning. However, there are some major difficulties. We cannot just do it in this way. Why not? There are some aspects of stereotypes and prototypes where the two are clearly distinct. Let me mention the two most important ones.

[4.20] Semantic externalism, the idea that there is a rigid designation to essences, clashes with what is sometime called the 'non-Aristotelian' aspect of cognitive linguistics—i.e. the idea that our categorization is very flexible and that our categorization is not directly determined by the outside world, but that it is determined by our experiences, our culture, our being as human beings, our activities as human beings, our functional needs etc. So reducing meaning to some form of essence, and specifically an essence that is to be found in the outside world, that's not very cognitive. It goes against the insistence of cognitive linguistics on flexibility and human agency on construal, on the fact that we categorize the world and we construe the world by categorizing it. That's the difficulty. That's the tension between the essential aspects of Putnam's theory and the focus on flexibility in cognitive linguistics.

Then take the other aspect. Take semantic deference, i.e. the fact that in order to settle debates you would go for a restrictive definition that you can find in the form of expert knowledge. That seems to clash with everything we discussed this morning and in the second talk yesterday where we saw how dynamic and expansive prototype-based theories or concepts actually are. So we have a tension: 'stereotype' and 'prototype' do not match as closely as we thought at first sight.

[4.21] We can develop this a bit by having a closer look at the relationship between semantic externalism and semantic deference. If we translate what I just explained in more schematic terms, we can say that in Putnam's stereotype theory you get a combination of semantic externalism and semantic

deference; and in prototype theory, you get exactly the opposite, you get a combination of absence of semantic externalism and absence of semantic deference. Once we've seen this, there is another question we can ask that can help us to move beyond Putnam. That is, to what extent are semantic deference and semantic externalism logically dependent on each other? If we take these two cases—the 'stereotype' concept and the prototype concept—they seem to go together: either you have both of them or you have neither of them. But that's a simplification because we can think of situations where you have one and not the other in the two directions. Let me illustrate that as we do in philosophy, i.e. we are using the same reasoning that Putnam uses.

[4.22] Let's think of situation in which you have semantic externalism but no semantic deference. Imagine an egalitarian society in which all members of the community have the same degree of schooling, maybe even the same degree of intelligence (who knows), and in which all attain the same level of proficiency in the sciences. You can imagine that. It's a logical possibility. In such a community, a division of semantic labor would not be necessary, because all the people, all members of the community would be schooled and they would all know the hidden essences, they would all be aware of the current situation of science. In that case, you would have semantic externalism. They would still refer to science as the expert judges to decide on hidden essences. But you would not need a division of semantic labor, because they would all be scientists and experts. That's a logically possible situation in which you have semantic externalism and no semantic deference.

[4.23] The other situation is one in which you have no semantic externalism, but in which you would have semantic deference. Imagine in a sense the opposite of what we had a moment ago, not an egalitarian society but an old fashioned theocratic society in which there is a caste of priests who not only watch over the Holy Shrine of whatever God, or a set of Gods, but who at the same time observe a number of linguistic taboos. Let's assume that this is a society with an intricate system of linguistic taboo, and it would be the expert role of the priests to decide on the taboos. In that case, the taboo items would be known to the community at large but they would be known to the community at large by reference to the linguistic practices that are maintained and propagated by the caste of priests. Every once in a while, when something new would appear in the language or in the culture, the question would arise whether the new thing falls under one of the existing taboo categories. Who would be the judge? Who would decide? The priests would decide. In that case, the semantic question ('Is this a taboo item or not, linguistically speaking?')

would be answered by semantic deference to the theocratic elite. But there would be no semantic externalism, because science does not play a role here, it's not about the hidden essence of things. The decision about taboo might even be arbitrary. We can easily imagine, in other words, situations in which semantic externalism and semantic deference are separated. They do not occur together.

[4.24] That means, if we come to a conclusion, that we can see now that semantic deference and semantic externalism do not necessarily occur together. We have a really empirical question: what factors actually determine their presence? What are the actual forces that determine whether a society has something like semantic deference? That's a first major problem we have with Putnam: the question about stereotype versus prototype. At first they look somewhat similar, but they certainly are not. The underlying assumptions are different. That means we have to look more closely to what actually happens.

[4.25] I want to mention another problem that you can have with Putnam and that constitutes a more direct indication of some difficulties and descriptive inadequacies that the theory faces. These have been pointed out fairly early already by a number of philosophers and I'm referring here to Robert Ware, as one of them. At the same time, I should mention that the philosophy is still a highly respected theory. Putnam's theory is still widely debated and accepted by a number of people. It's not the case that these inadequacies have had a major effect on the philosophical debate, but as linguists, we can see that there are certainly some difficulties with the linguistic part of Putnam's theory. Let's have a look at a few arguments. A first point is one that we could see in the Clinton example. To the extent that semantic deference plays a role at all, that's to say to the extent that we refer to experts at all when we want to settle debates, the relevant experts are certainly not always scientists, and it's not always about hidden essences that we want to get expert knowledge. As I mentioned, Putnam's theory holds only for natural kind terms. But most of the words in the language do not involve natural kind terms. Still they might be subject to semantic normativity effects. Or you might try to impose a norm, as Clinton did implicitly. If we want to have a theory or a model of semantic normativity in language, we'll have to go beyond Putnam. Because Putnam only refers to one type of normativity, scientific normativity, and that's not the whole story.

[4.26] Second, the extent to which speakers rely on the experts may differ, i.e. it may be quite different according to the context and according to the specific purposes and interests of the speakers. For instance, when you ask for whiskey with ice, you don't ask for whiskey with water, even though the experts, the chemical experts, will say that the hidden essence of water and ice is the same. Ice is just a form of water, a condition in which water appears, but asking for a whiskey with ice is not asking for a whiskey with water. So depending on the circumstances norms do not always apply, if they apply at all.

And third, there is a very simple fact, a further fact to diminish the importance that Putnam seems to attach to semantic authority in language. There may obviously be conflicts among authorities, and as academics we all know that. In a sense, we live on differences among authorities: that's why we have journals and debates and conferences. So the authorities, the scientific experts certainly don't always agree. That recognition somehow weakens the force of Putnam's theory and Putnam's model of semantic authority.

[4.27] Where are we now? First, we've seen that, given what Clinton did in the court, we need a model of normativity in language. Clinton seems to apply a restrictive interpretation of a category as a normative kind of reasoning. Second, we then had a look at Putnam's theory of normativity in language, but we found that it was not totally convincing. There are some difficulties with it. At the same time, we do see that Putnam has the interesting idea that at least in some case people refer to experts to settle debates. That's an interesting point that we might want to take along. Still, we need alternative models and we would also like to see a model that not only says something about the restrictive tendencies, i.e. the tendency to restrict meaning to a certain norm, but we would also like something that explains why we have the expansive tendencies.

[4.28] Again, I'm now going to refer to a philosophical theory about this, and that is Renate Bartsch's theory on norms of language. Renate Bartsch is a German born philosopher who worked in Amsterdam and who is retired now. What she stresses in her theory of norms is extremely interesting from the point of view of prototype theory, because it is a way of trying to explain why you can have semantic flexibility and still talk about norms. That's one of the difficulties that we are facing. When we think about norms, we automatically think about norms as restricting the possibilities. How can we have semantic norms? How can we include flexibility? How can we include flexibility like we saw in our examples in a theory of norms? That's Bartsch's question. In her work on language norms, she tries to solve the problem in the following way.

[4.29] She argues that semantic flexibility is not a breach of norms. It's not breaking the existing system of norms as it would almost automatically be the case with Putnam, but it is itself motivated by the normative aspects of language. Why? We have a hierarchy of communicative norms in language, and the hierarchy of norms explicitly allows for prototype-based deviations from established usage.

[4.30] This is what Bartsch writes, '*All specific linguistic norms are justified relative to the highest norm of communication and that is "express yourself in such a way that what you say is recognizable and interpretable by your partner in agreement with what you intend him or her to understand"*'. So communicative efficiency is the highest semantic norm: you can break lower level specific linguistic norms if that is important to achieve your communicative goal, in accordance with the highest linguistic norm. Correspondingly, for the hearer the highest linguistic norm is '*interpret in such a way that the interpretation will be in agreement with what the speaker intends*'. There are of course some difficulties with the statement that as a hearer you have to be in agreement with what the speaker intends: how do you know what the speaker intends? That's where some philosophical difficulties might come in.

[4.31] Let's go on to what is important here: does this hierarchy of norms allow us to explain flexibility not as going against normativity but as being part of normativity? That is to say, when we use a word with a new meaning, we break the given norms of language. We stretch the norm of language. We do something new that is not part of the convention. That's un-normative and going against the convention. At the same time we are entitled to do so if we maintain the highest norm of communication. If we use a word flexibly with a new nuance then we may do so precisely because it's communicatively relevant, because we want to talk about something that does not have a name yet, to put it very simply. When speakers are expressing new attitudes, when they are expressing evaluations, when they are expressing points of view, when they develop new scientific insights or when they communicate new technical developments, the new concept or the new context may not be easily communicated by remaining within the existing lower level norms. So you have to break the lower level norms on the basis of the communicative efficiency that is expressed in Bartsch's higher level norm.

[4.32] What we get here is a quite interesting theory that allows us to combine flexibility on the one hand and normativity on the other. Do we have our completed model yet at this point? May be not yet. Because what we have now,

if we take one step back and look at it with a bit of distance, are three kinds of sociosemantic forces or sociosemantic theories. First of all, in Bartsch's approach, you basically get a cooperative stance. Why? It's like saying that what speakers do is always to conform to the highest norm of communication, and that's basically working together. It consists of trying to express yourself as clearly as possible to the benefit of your interlocutor, and on the other hand as a hearer trying to understand the other person as explicitly as possible, as well as possible. That's the semantics of cooperation, and that's what seems to underlie the unproblematic prototype-based expansions of meaning which we've seen in our examples this morning, and which are also described from the point of view of norm theory by Bartsch. Existing norms for linguistic behavior are stretched towards novel ways of using words, but the departure from the existing norms is socially acceptable because it conforms to the highest norm of cooperation of communication. That's being communicatively cooperative.

[4.33] But that's only one underlying model. There is another one which is Putnam's model where you have the semantics of authority. The semantics of authority comes into play when discussions and debated issues are settled by deference to recognized experts. These need maybe not always be scientific experts as in Putnam's original theory of the division of linguistic labor, but the semantics of authority does exist. People do refer to experts, and they do use that reference to experts, and the expert's opinion to settle debates on meaning. In some cases, even linguists are invoked as experts, for instance when a question about the meaning of a word is settled by looking at a dictionary. That is the semantics of authority. So it seems that apart from the semantics of cooperation, we do have a semantics of authority: as opposed to the expansive free cooperation, you have more restrictive forces at work.

[4.34] And then finally, we also have the semantics of conflict and competition. That is when semantic choices are implicitly questioned or explicitly debated. Of course, such debates may be settled by invoking the semantics of authority, but they could even occur in the absence of a mutually accepted authority that could settle the discussion. When I initially talked about forces that seem to shape the social dynamics of meaning, these are the things that I was anticipating on, I was anticipating on models where you could see a force of communicative cooperation, a force of referring to authorities and a force of conflict and competition.

[4.35] We can go one tiny step further when we try to see the relationship between those various forces. I would first like to do that from a sociological

point of view. Because what you get here, if you think about the basic forces, is something that you also find at other levels and in other forms of the organization of society. What are the major types of social structure that we have? Basically we have three basic types. (Most societies would be mixtures, but let's look at schematic types.) We have competitive structures, competitive societies like capitalism. We have societies that are based on direct power relations, as in more conservative or authoritarian societies. And we have societies that are based on institutionalized collaboration, what we would call socialist societies. We can see then that the forces that play a role in the social dynamics of meaning are not really restricted to meaning. My suggestion would be that we find the same type of organizing forces in other aspects of society.

And then there's the point with which I would like to conclude. I would also claim that these underlying forces (this was actually already implicit in the way I presented it earlier) may work either in a restrictive or in an expansive direction, if we think about what they do to meaning. Bartsch's approach is clearly expansive. It explains why we can get new meanings and why we have prototype-structured flexibility that leads to the expansion of categories. That's what comes out of applying her model of cooperative communication. Putnam's approach on the other hand would be rather restrictive, as it would lead to forces that contain the expansion by reference to authorities.

[4.36] If we bring things together, let's think of two dimensions. On one hand, we have the distinction between semantic expansion and semantic restriction. That's the vertical dimension in this chart. On the other hand, on the horizontal dimension, you get the distinction between harmonious models and models that are conflictuous, models that focus on discord, difference of opinion and models that stress the possibility of harmonious solutions or harmonious cooperation. If we then try to plot the three types of semantic forces that we mentioned, we get this picture. The semantics of conflict is obviously situated on the discord side, and then it could go either way, in terms of the other dimension: when there is a competition about meaning, it could be resolved in an expansive way, or it could be resolved in a restrictive way. When we have a harmonious solution of the conflict or a situation without conflict, you either get the semantics of cooperation which is an expansive tendency or you would get the semantics of authority which would be more restrictive.

[4.37] To conclude then, I would say that a sociosemantic perspective on meaning variability will have to go beyond the observation of variation as correlating with social factors. That's a minimal step we should take and to a larger extent, it still needs to be taken. As Professor Kristiansen pointed out

in the previous talk today, it's absolutely the case that lectal variation is still understudied, specifically in the field of semantics. But we can study it, and my suggestion here is that when we study it we should maybe try to go even one step further and not just look at the correlations between lexical structures and social factors. We should also try to see how the social forces or the sociosemantic forces that I just pointed out determine the flexibility. We'll have to identify the underlying forces that determine or restrict the variability. At the same time we need to see if we can think of models that bring together these various aspects as I did today in this talk. But I think you will agree that what I can present here was very abstract and philosophical and was not really based on sound and practical investigation, not of the same type as the materials that I used in the talk this morning. So there is lots of work to do here. But it is for you, younger people, to develop this line of thought.



## Handout Lecture 4

### 4.1 Situating the talk

- 1–2 Introduction
- 3–4 Semasiological variation
- 5–6 Conceptual onomasiological variation
- 7–9 Formal onomasiological variation
- 10 Conclusion

### 4.2 Background

- Geeraerts, Dirk. 2008. Prototypes, stereotypes and semantic norms. In Gitte Kristiansen and René Dirven (eds.), **Cognitive Sociolinguistics. Language Variation, Cultural Models, Social Systems** 21–44. Berlin/ New York: Mouton de Gruyter.

### 4.3 Questions

- given the importance of a social perspective for the study of semasiological variation,
- what are the forces that determine those social aspects of meaning?
- what theoretical models describe the relations among those forces?

### 4.4 TOC

- Step I. Bill Clinton as a Semantician
- Step II. Putnam fs Division of Semantic Labour
- Step III. Alternative Models

### 4.5 Step I Bill Clinton as a Semantician

### 4.6 Social aspects of meaning

- we have established the semasiological variability of meaning, but why can we say that social factors play a crucial background role in that variability?
- three reasons:
- the functional motivation for exploiting the inherent flexibility of meaning may be social in nature;  
(cp. 'legging': semantic variability ties in with fashionable success)

#### 4.7 Social aspects of meaning

- if a lexical category consists of a core reading A and peripheral senses A<sub>1</sub>, A<sub>2</sub>, A<sub>3</sub>, the subconcepts may be variously distributed over subgroups of the linguistic community

at least the core reading A would be shared by all, but the peripheral senses may be distributed in different combinations over different individuals or groups; the central application of the prototypically structured concept implicitly receives a social function rather than a purely psychological one

#### 4.8 Social aspects of meaning

- semasiological variation is open to explicit social negotiation; there may be a social 'fight' over meaning

an example:

Bill Clinton on the meaning of "sexual relation"

(not just exploiting the flexibility of categories, but also exploiting the possibility of restricting the category to the core)

#### 4.9 Clinton on "sexual relation"

- **clinton:** I thought the definition included any activity by the person being deposed, where the person was the actor and came in contact with those parts of the bodies with the purpose or intent of gratification, and excluded any other activity. For example, kissing is not covered by that, I don't think.
- **question:** Did you understand the definition to be limited to sexual activity?
- **clinton:** Yes, I understood the definition to be limited to, to physical contact with those areas of the bodies with the specific intent to arouse or gratify.

#### 4.10 Clinton on "sexual relation"

- I believe at the time that she filled out this affidavit, if she believed that the definition of sexual relationship was two people having intercourse, then this is accurate. And I believe that is the definition that most ordinary Americans would give it. If you said Jane and Harry have a sexual relationship, and you're not talking about people being drawn into a lawsuit and being given definitions, and then a great effort to

trick them in some way, but you are just talking about people in ordinary conversations, I'll bet the grand jurors. . . .

#### 4.11 Clinton on "sexual relation"

- . . . if they were talking about two people they know, and said they have a sexual relationship, they meant they were sleeping together; they meant they were having intercourse together.

→ restricting "sexual relation" to a core reading involving intercourse, i.e. a social debate about restricting rather than expanding the semasiological range of a concept: what models do we have to deal with these two aspects of variability?

#### 4.12 Step II Putnam's Division of Linguistic Labour

##### 4.13 Putnam's theory

- Hilary Putnam, "The meaning of meaning" a combination of
- rigid designation  
(semantic externalism)
- a linguistic division of labor  
(semantic deference)

##### 4.14 Semantic externalism

- anti-intensionalism:  
meanings are not in the head
- the Twin Earth thought experiment
- Twin Earth resembles earth in all respects, except for the fact that what we call water is represented on Twin Earth by a liquid that has the same appearance and properties as earthly water but that does not have the chemical composition  $H_2O$ , but rather  $XYZ$

##### 4.15 Semantic externalism

- imagine that Twin Earth is visited by a human being A who is living around 1750, and who is therefore unaware of the fact that one molecule of (earthly) water consists of two molecules of hydrogen and one molecule of oxygen. In analogous circumstances, a native B of Twin Earth visits the earth.
- because the only difference between the liquids referred to by *water* on both planets is not yet discovered, A and B have the same convictions and beliefs with regard to the liquids in question; they are in the same psychological state.

#### 4.16 Semantic externalism

- still, the extensions of *water* in English and Twin English differ: A refers to H<sub>2</sub>O, and B to XYZ

→ meanings are not in the head but are determined by the hidden essence of things; natural categories “rigidly” designate things with a unique essence

#### 4.17 Semantic deference

- not all members of a linguistic community are required to know the hidden structure of the extension of an expression of their language. A **division of linguistic labor** ensures that there are societal experts who know that water is H<sub>2</sub>O etc.
- laymen attune their own linguistic usage to that of the expert scientists and technicians

#### 4.18 Semantic deference

- a **stereotype** is a socially determined minimum set of data with regard to the extension of a category.
- For the category water (H<sub>2</sub>O), the stereotype includes the information that it refers to a natural kind that is a colorless, transparent, tasteless, thirst-quenching liquid that boils at 100° Celsius and that freezes when the temperature drops below 0° Celsius.

#### 4.19 Semantic deference

- Putnam’s approach might seem to provide an excellent starting-point for a sociosemantic enrichment of prototype theory:
- “stereotype” and “prototype” alike identify core semantic knowledge,
- with “stereotype” = the social interpretation of “prototype”

however ...

#### 4.20 Criticising Putnam

##### 1. stereotypes versus prototypes

- semantic externalism clashes with the “non-Aristotelian” anti-essentialism of Cognitive Linguistics

- semantic deference (and the semantically restrictive tendencies it embodies) clashes with the dynamic, expansive nature of prototype-based categories

#### 4.21 Criticising Putnam

- stereotypicality:  
+ SEMANTIC EXTERNALISM, + SEMANTIC DEFERENCE
- prototypicality:  
– SEMANTIC EXTERNALISM, – SEMANTIC DEFERENCE

but:

semantic deference and semantic externalism are logically independent:

#### 4.22 Criticising Putnam

- + SEMANTIC EXTERNALISM, – SEMANTIC DEFERENCE  
Imagine an egalitarian society in which all have the same degree of schooling and in which all attain the same level of proficiency in the sciences. In such a community, no division of semantic labor would be necessary, since all would be experts. At the same time, assuming that scientific discourse is indeed determined by an attempt to capture the hidden essence of natural kinds, rigid designation would play a role apart from a division of linguistic labor.

#### 4.23 Criticising Putnam

- – SEMANTIC EXTERNALISM, + SEMANTIC DEFERENCE  
Imagine a theocratic society in which a caste of priests guards the Holy Shrine together with the linguistic taboos. The taboo items are known to the community at large, by reference to the linguistic practices maintained and propagated by the theocratic elite. But the taboo language need not be fixed for eternity. Every once in a while, such as when a new invention appears, the question would arise whether the new thing falls under one of the existing taboo categories.

#### 4.24 Criticising Putnam

- The decision would not necessarily be one in which hidden essences of the kind meant by Putnam play a role, but it would be a decision taken by the societal “experts in taboo”, the priests.

→ whether there is semantic externalism and/or semantic deference is an empirical question: what factors actually determine their presence?

#### 4.25 Criticising Putnam

##### 2. descriptive inadequacies

cp. Ware, Robert, 1978, The Division of Linguistic Labor and Speaker Competence.

Philosophical Studies 34: 37-61.

- a) to the extent that semantic deference plays a role at all, the relevant experts are not always scientists. Putnam's theory holds only for natural kind terms, but most of the words in the language do not involve natural kind terms, whereas they may still be subject to semantic normativity effects

#### 4.26 Criticising Putnam

- b) the extent to which speakers rely on the experts may differ according to the specific purposes and interests of the speakers  
(when you ask for whiskey with ice, you don't ask for whiskey with water, even though experts would say the hidden essence is the same)
- c) there may be conflicts among authorities (as all academics will know)

#### 4.27 Step III Alternative Models

#### 4.28 Additional factors

Putnam identifies one important sociosemantic force: deference to authority; but there are other forces to add, forces that link up directly with prototypicality:

- **conflict**  
cp. the Clinton example
- **cooperation**  
cp. Bartsch, Renate, 1987, Norms of Language. Theoretical and Practical Aspects. London & New York: Longman.

#### 4.29 Bartsch on norms

- semantic flexibility (as epitomized in prototype theory) is not a breach of norms (as Putnam would have it) but is itself motivated by the normative aspects of language
- a hierarchy of norms explicitly sanctions prototype-based deviations from established usage:

#### 4.30 Bartsch on norms

- “All specific linguistic norms are justified relative to the highest norm of communication, which is:  
‘Express yourself in such a way that what you say is recognizable and interpretable by your partner in agreement with what you intend him to understand’. And, correspondingly, for the hearer it is: ‘Interpret such that the interpretation will be in agreement with what the speaker intends’ ” (1987:212).

#### 4.31 Bartsch on norms

- Any time a word is used with a new meaning, the given norms of the language are broken, or at least, the lower norms of the language are broken, but the highest norm may still be intact: using a word flexibly with a new nuance may be important precisely because of communicative exigencies. When speakers are expressing new attitudes, evaluations or points of view, when they develop new scientific insights or when they communicate new technical developments, the new context may not be easily communicated by remaining with the existing lower norms.

#### 4.32 The resulting model

three kinds of sociosemantics:

- The **semantics of cooperation** generally underlies the unproblematic prototype-based expansion of meaning as described by Bartsch. Existing norms for linguistic behavior are stretched towards novel ways of using words, but the departure from the existing norms is socially acceptable because it conforms to the highest norm of communication.

#### 4.33 The resulting model

- The **semantics of authority** comes into play when discussions and debated issues are settled by deference to recognized experts. Although these need not be scientific experts, as in Putnam's theory of the division of linguistic labor, the semantics of authority generally follows the model of semantic deference put forward by Putnam.

#### 4.34 The resulting model

- The **semantics of conflict and competition** plays a role when semantic choices are implicitly questioned or explicitly debated. Such

debates may be settled by invoking the semantics of authority, but they may also occur in the absence of a mutually accepted authority that could settle the discussion.

#### 4.35 The resulting model

- background 1: sociological models

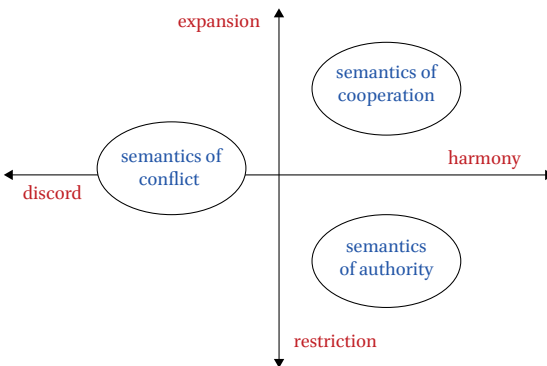
collaboration (cp. socialism)

power (cp. conservatism)

competition (cp. capitalism)

- background 2: the underlying forces may work either in a restrictive or an expansive direction (Bartsch's approach is expansive, Putnam's restrictive); schematically:

#### 4.36 The resulting model



#### 4.37 To conclude

- a sociosemantic perspective on meaning variability will have to go beyond the observation of variation correlating with social factors:

it will have to identify the underlying forces determining (or restricting) the variability

- but such an approach is still largely undeveloped





All original audio-recordings and other supplementary material, such as any hand-outs and powerpoint presentations for the lecture series, have been made available online and are referenced via unique DOI numbers on the website [www.figshare.com](http://www.figshare.com). They may be accessed via this QR code and the following dynamic link: <https://doi.org/10.6084/m9.figshare.4980527>

## The Cultural History of Metaphors

[5.1] What I want to talk about this morning is a first example of what we've been identifying as conceptual onomasiological variation, that is to say, differences of categorization, differences of categorial construal of the world.

[5.2] As a reference to the background of this talk, note that the material that I'm presenting today can be found in one of the chapters in the book I published in 2006: *Words and Other Wonders*. Specifically, it's Chapter 9 in that book.

[5.3] The questions I want to address have to do with cultural variation and historical variation in categorization, and specifically in this case, the categorization of emotions. I want to talk about a very well-known metaphor in Cognitive Linguistics, namely the ANGER IS THE HEAT OF A FLUID IN A CONTAINER metaphor. This is a metaphor that you've probably known from George Lakoff's and Zoltán Kövecses's work on ANGER; it's a prime example of Conceptual Metaphor Theory. What I want to show is that this particular type of categorizing the emotion of anger probably has, at least to some extent, a culturally specific background and a historically specific background. That's an interesting point, because in the discussion of this type of metaphor you often get the statement, or sometimes just the implication or the assumption, that it is a universal metaphor and that there is a physiological basis to it. The idea then is that it is a metaphor that is based on a feeling of getting hot when you are angry. That is supposed to be the motivation for having this type of metaphorical construal. By contrast, I would want to point to the specific historical background of this metaphor. So the overall line of argumentation in the context of the talk as a whole is that when you can establish this type of historical background for this well-known metaphor, then we can certainly say that there is something socio-culturally and historically specific to categorization.

[5.4] How will I go about this? I will try to show that in the development of the anger is the heat of A fluid in a container metaphor you get a process that I will identify as *deliteralization*. What I would like to show is that the metaphor originally was not a metaphor. Originally it was meant as—for that time, for the period in which it evolved—a historically literal expression, a scientifically correct expression, given the scientific background of the time.

What I mean by deliteralization (in itself the term is not so important) is the fact that sometimes categories may lose their motivation. So when we think of metaphor, we usually think that metaphor is a process where you're trying to name something that you don't know yet and then you look for a model that is more familiar to you and you use that model to name the new thing or to name the unexpected thing or to name a thing that you already know in an unexpected way. That's how we think of metaphor. In this case, we have a different source for the metaphor. The source is that at one point in time people forget what was originally the literal, scientific motivation for the categorization. So that's a different source of metaphor than what we usually think. Specifically, (I want to repeat this because it's important,) it's a process of metaphorization that shows you that there is something socio-culturally and historically specific to these processes.

I just give you another example of what can go on when you lose an originally literal motivation. Here you have the Dutch word *walvis*, which is the same as *whale* in English, but in *walvis* you have the component part *vis*, which is like *fish*. So morphologically, *walvis* is 'whale-fish'. Now in the medieval period, if you look at a text of that time, you can see that whales were actually considered to be fishes. Nowadays we no longer consider whales to be fishes. We know that they are mammals. But still, the 'fish' part is there in the name, which means that we are now reinterpreting the 'fish' component. If 'fish' makes sense at all in *walvis*, it's through a process of deliteralization—something that was originally a literal denomination, a literal categorization has lost its motivation because our scientific insights have changed and the component is now being interpreted metaphorically, or at least figuratively.

[5.5] I would like to show that something similar is going on in the emotion metaphors. If we indeed have that process of deliteralization, then we do find something very interesting for theories of categorization, because (as I've already said) metaphorical categorization is then not just 'finding an approximating model for something that we do not understand very well' but also 'finding an appropriate interpretation for a category whose motivation has become unclear', which would mean that we could distinguish between two types of metaphorical thinking: we have metaphorical thinking where you try to make sense of the world, which is the primary way we think of metaphor, but we could also have metaphors that derive from trying to make sense of the language, like saying: you have this 'fish' part in the name *walvis*—'whale fish'; what can it mean given that we do know that whales are not fishes? Then you start thinking of new interpretations as a way of making sense of the language rather than making sense of the world.

[5.6] The specific focus of the talk will now be on the word *emotion*. If you think of emotions and if you think of the category 'emotion', why are emotions called emotions? And what is the 'motion' part in emotion? Is there a link between emotion and motion as in 'movement'? If we think about the motivation for the term *emotion* at all, it's probably in terms of something like 'internal movements': emotion is something that upsets the equilibrium of your mind or your soul. Emotions are internal turmoil or something like that. So if that is the case, maybe most of the time we don't even think of the motivational background of the term *emotion*. But if we do it at all and if we ask people, they usually come up with this kind of explanation—emotions are called emotions because there is this link with motion in the soul or in the mind, let's say as an internal turmoil.

The question then, against the background of what I've just explained, is the following: is that an original metaphorical link or is it rather a metaphorical link that results from a deliteralizing interpretation, a re-interpretation? I will try to show that the interpretation of the word *emotion* itself, like *walvis* in my example a moment ago, to the extent that we link it with a figurative reading of *motion*, is the result of a deliteralizing process.

[5.7] I have to take quite a number of steps to show this. First I have to give you a bit of background. Then I'll say something about the research strategy that we're using here. Then I have to do two things: I first have to give you a semasiological analysis of the verb *émouvoir* in Old French. Why? *Emotion* in English is a loan from French. French *émotion* as a noun derives from the French verb *émouvoir*. So if we want to know something about the history of *emotion*, we'll have to have a look at the Old French verb *émouvoir* first. We'll go through a number of quotations of the Old French verb on a semasiological basis, and then the next step will be that we compare the verb *émouvoir* with the verb *mouvoir*. That's the more onomasiological analysis. Why do we want to do that? If you take the French verb *émouvoir*, it's a compound or at least it's a composite term, and it's composed from another verb, *mouvoir*, which means 'to move'. So in older French, the relation between *émouvoir* and *mouvoir* is the same as that between *emotion* and *motion*. There's some Latin background here too, but we'll come back to that in a moment. So we're going to have a fairly close look at some quotations from Old French and Middle French and so on, and then we'll come to conclusions.

[5.8] The background here—but I don't want to explain too much about it, except that we have a number of tendencies, a number of fields of research in diachronic semantics within Cognitive Linguistics. Basically, there are three lines

of research if you look at what people do in diachronic Cognitive Linguistics. You have prototype research. We've already talked about that, and you've seen the examples. Then there is a very strong tendency to look for regularities of semantic change. That's a line of research that links up very closely with grammaticalization research. And then there's also a trend of historical metaphor research that has so far not been very popular, but you can see that in the last few years there is more and more of this historical metaphor research. What I'm presenting is situated in that current of research.

[5.9] In terms of background we also need to mention the question which I already hinted at that a few minutes ago, i.e. the question about the universality of the embodiment of metaphors. It's one of the claims of some people in Cognitive Linguistics that embodiment is a universal phenomenon. That's probably uncontroversial up to a certain point, but then specifically, what about embodiment as illustrated by this metaphorical pattern ANGER IS THE HEAT OF A FLUID IN A CONTAINER? Is this also a universal thing, is it a universal metaphor? Proponents of the universalist view would say that is a universal thing precisely because it has a physiological basis. However, in an article that I published together with Stef Grondelaers, already many years ago, an article called *Looking Back at Anger*, we tried to show that the ANGER IS THE HEAT OF A FLUID IN A CONTAINER metaphor is not a universal physiologically motivated conceptualization but a culturally specific one. Specifically, it reflects the historical importance of what is known in the history of science and the history of medicine as the theory of humours.

[5.10] Let's first (although this is something that you may be familiar with) have a look at some of the evidence that is invoked to posit this metaphorical pattern ANGER IS THE HEAT, etc. The metaphorical expressions that people refer to when they postulate that pattern are expressions like these: *I had reached the boiling point; She was seething with rage; He lost his cool; You make my blood boil*, etc. You probably know these. So that leads Kövecses and Lakoff to posit this pattern ANGER IS THE HEAT OF A FLUID IN A CONTAINER, and more generally ANGER IS FIRE with the idea that there is a physiological background to the pattern.

[5.11] Now I could do two things at this point. I could ask you, from your own cultural background: how universal is this metaphor? For you, if you think of Chinese culture, to what extent is anger related to fire? It could be, but it's also the case, at least that's what I read, that there is an association between fire

and certainly also the color red with liveliness and festivity and joy. So, in the Chinese culture, is fire anger or is it joy? But that's for you to investigate. I will be coming back briefly to that when we have a full view of what the theory of humours is.

So that's one thing I could do. We can start making cultural comparisons in a direct away. But I rather want to go through some aspects of western history, and take a diachronic rather than a cross-cultural perspective. So let us first have a look at some anger expressions that we find in Shakespeare. This is a quotation from the *Taming of the Shrew*, this Shakespearean play. You get this character, Kate, who is really easily irritated and easily angered and this is how she describes herself. You will note that you get a lot of expressions that superficially seem to fit in with the ANGER IS HEAT metaphor. But there are some other aspects to these quotations that will lead us to a slightly different type of interpretation: *Were I not a little pot and soon hot* [IV:1:5], *Is she so hot a shrew* [IV:1:17] etc.—More examples on the slide. The third quote on the hand-out introduces a new element, because what you get here is a reference to food. What it says is: *I'm telling you Kate, this type of food, we should not eat it. We shouldn't eat it because it makes us angry. It planteth anger. It makes us angry. Why? It engenders choler. What is choler? And of ourselves we are already choleric.* What does that mean? What you have here is a physiological reference. Choler refers to what in medical theories of that time is considered as one of the basic fluids in the human body. People who are choleric (and note that we still know the word *choleric* today) are the people who are easily angered. But why are they easily angered? Because their physiological equilibrium is not optimal: it produces too much choler, and if they eat certain types of food, the choler will rise even more.

Think about that for a moment. The first quotation that we have here: *Were I not a little pot and soon hot*—that's something that you can place straightforwardly in the ANGER IS THE HEAT etc. metaphor, but then if you look at some of the other quotations and all the other expressions that Shakespeare uses to refer to this anger feeling, you'll see that there's another background, that there is a physiological theory behind this conception of anger, a physiological theory which has to do with fluids in the body and specifically an overproduction of choler.

[5.12] I'm not going to go through the other quotations from the play, but let's try to move to a more generic point here. So it seems that the Shakespearean expressions fit the ANGER IS THE HEAT OF A FLUID IN A CONTAINER metaphor, but at the same time the origin of the metaphor would seem to be cultural

rather than physiological—‘cultural’ in the sense of scientific or even medical, medicinal. At least in Shakespeare we find that the influence of the humoral theory is well-established.

[5.13] Now what is that humoral theory? It’s a medical theory that was first formulated by Hippocrates in the fifth century BC. It consists of a combination of a physiological and a psychological theory. It’s a physiological theory in the sense that the workings of the body are conceived of in terms of four basic fluids—the humours—and the psychology of human beings is then related to that physiological theory in the way in which we saw already. So anger is related with the fluid choler and an overproduction of choler produces anger. In western culture this is then further developed by Aristotle, who adds a cosmological background in the form of micro/macromos correspondences. Galen in the second century adds a dietary pharmacology, that is to say, you classify the types of food that you can eat in terms of what they do to the four humours. So if you are a choleric type of person, if you have a choleric temperament, then of course you should avoid those kinds of foodstuffs that make you overproduce choler.

You will notice that there is a lot in here that links up with aspects that (at least to my knowledge) you also find in Chinese cultural history. The idea of an equilibrium in the body is well-known in this culture, and so is the idea of a relationship between what you eat and what it does to your body and probably also to your temperament, to your mental equilibrium. On the other hand, the basic elements that we refer to in the theory of humours would seem to be somewhat different from what you get in the Chinese counterpart of this kind of approach. But that’s for in a moment.

At this point I also need to mention that the humoral theory was extremely long lived in western history and in the history of western medicine, and it actually disappeared only very gradually after the Renaissance; basically it just disappeared in the 19th century. If you think of practice like blood-letting for instance, that is typically related to the theory of humours. So when people were ill, what doctors did was to tap away some of their blood. That seems a bit silly because if you are ill, you don’t want to lose the vital fluid. But the reasoning was that the bad humours, the humours that make you ill, are transported by the blood. So if we take away some of the blood, the bad humours, the humours that are making you ill, will disappear. This was probably fairly counterproductive, but what I want to emphasize is that blood-letting was a regular practice well into the 19th century. So the disappearance of the theory of humours was only very slow.

[5.14] The full late medieval picture of the theory of humours looks like this. So you get the four basic fluids—phlegm, black bile, yellow bile and blood. (Yellow bile, that's choler. That's what gives you the choleric temperament.) The four humours have their own characteristics. You've got something like a feature description, in fact: cold and moist, cold and dry, warm and dry, warm and moist. They're related to a specific element: water, earth, fire and air. In the traditional system in China (again, this is to the extent that my knowledge of Chinese culture is correct) you don't have four elements but five, but they overlap to some extent with the humoral system. Water, earth and fire are there but then you have metal and wood in the traditional Chinese system. Also, the relation to the emotions is somewhat different from what you get in the theory of humours. The whole system of equilibrium, a physiological equilibrium related to certain basic elements and related to certain basic emotions, is similar, but at the same time the cultural translation of that original intuition is different. So already if we compare this system, this medieval western system, and what you find in Chinese culture, you can see it's culturally specific. Just think of the basic idea: four elements or five elements, that's different. So there is certainly something to investigate from a cultural, historical point of view.

I'm not going to go through the whole table but I will only mention the most important aspects. So you have the natural elements, then you have the temperaments, the psychological part of the theory, where you have a phlegmatic character, a melancholic character, a choleric character and a sanguine character, and then you have the physiological basis in the sense that humours are produced in specific organs—phlegm in the brain and bladder, black bile in spleen, yellow bile in liver/stomach, and blood in the heart. Then you get the further, more symbolical extrapolation of the theory: you get colors and tastes and so on, seasons and winds, and interestingly also the planets. Why is that interesting? It leads to another aspect of the original theory, namely that there is a cosmological influence on your temperament, i.e. this leads us to astrology. When you're born under a certain sign, a certain constellation of the planets influences your temperament. Again, that's something that you also find in traditional Chinese culture: a correspondence between macrocosmological and more micro-level phenomena. So this is, schematically represented, the theory of humours.

[5.15] The first step in my argument now is that if you take this background into account and if you then see these expressions here, which you still have in English, then you can with certainty establish that there has been an influence of the theory of humours on the emotion vocabulary in English. We saw that



in the Shakespearean quotes. We can see that as well when we look at expressions like these, which are taken from *Roget's Thesaurus*. In the dictionary you find expressions that have this humoral background—*choler* for ‘anger’, *gall* for ‘anger’, *rouse one's choler*, *stir one's bile*, *choleric*, *splenetic* for ‘ill-tempered’ and so on. All of these expressions relate to the theory of humours. So we have clear evidence that the theory of humours has influenced emotion vocabulary in a language like English.

[5.16] And not just in a language like English. I have a few extra examples here from French and Dutch, like French *mélancolie*, which is like English *melancholy*, *colère*, a basic term for anger in French, which is like *choleric*, *choler*. I'd like to draw your attention to an interesting one from Dutch, from the Dutch dialects specifically, so it's not standard term. When you have a cold, when your nose drops so to speak, that's called in some Dutch dialects a *valling*, the same term as in the English *falling*. Something that falls, that's a precipitation, but what is that falls? It's the phlegm. It's this fluid that is produced somewhere in the brain and that in a sense falls down, that comes out through the nose: that's the cold you have. But if you were to ask people now why a cold is called a *falling* in these dialects, they wouldn't know. They wouldn't even recognize the term as being related to the verb *vallen*, ‘to fall’. But if you think of this background, you can recognize the original motivation.

[5.17] We have very good evidence now that there has been an influence of the humoral theory on the emotion vocabulary and we can also see now that ANGER IS THE HEAT OF A FLUID metaphor fits this humoral pattern fairly seamlessly, because you have this relation of anger with fire in the humoral system, and the fluid, well of course that would be the choleric humour as such. So the metaphor would seem to be a historically and culturally specific relic rather than a universal metaphor. The methodologically very important point that I want to make is that this type of historical research makes you doubt about physiological universalist explanations that are perhaps too easy to posit. Don't immediately say that something is universal because it seems to have a universal physiologically embodied basis. That need not be the case. You have to do the cultural, historical research to establish what the exact origin of the term is. So now let us hurry up a bit to move to the central question for this lecture.

[5.18] Now, where does the word *emotion* come from? So given that we have been able to establish that so many specific emotion expressions involve the

theory of humours, could it be that the word *emotion* itself also has humoral origins?

[5.19] What I'm going to do now is to present part of the materials that were collected by one of our PhD students, Anneies Bloem. She worked under the supervision of myself and my colleague Michèle Goyens. Goyens is a specialist of the history of French. As I already said, we'll be focusing on the verbs. What Annelies Bloem, the PhD student, did was to look very broadly at the history of the two verbs *émouvoir* / *mouvoir* in Old French and specifically also in Middle French. She specifically studied the works of Evrart de Conty, who was the private doctor of one of the French kings in that period. He was a very learned man who knew all of the history of medicine (to the extent that it was known then) and who translated Aristotle into French.

[5.20] These are the two works from which a number of quotations will come, but that's not so important.

[5.21] The steps to take are the following: first, I will show (that's the semasiological part) that the psychological reading of *émouvoir* derives from the literal reading, not by some metaphorical jump but through humoral bridging contexts. To explain, what do I mean by the psychological reading and the literal reading of *émouvoir*? So *émouvoir* is composed of the verb *mouvoir*, which is 'to move', and the prefix *é-*, which is basically a prefix expressing a direction 'out of'. It's like Latin *ex-*. *Émouvoir* in contemporary French means 'to cause emotion'. It's the same as the English *move*, 'to move someone, to be moved by something psychologically'. But in French, in contemporary French you can only express that by using *émouvoir*. In English, you can use *move*. So in English you have *to move* 'to bring into emotion' and then the noun *emotion*. In French you have *émouvoir*, which means 'to bring into emotion', and then *mouvoir*, the original basis, which now basically only means 'to move' in the literal sense, 'to undergo or cause a change of spatial position'. However, if we look at Old French, we can see that *émouvoir* and *mouvoir* both have the literal interpretation and the psychological interpretation. So the specialization between the two verbs that you find in contemporary French must have evolved at one point. At the same time, the question is: if we look at the two verbs, where does the psychological reading come from, given that originally both *mouvoir* and *émouvoir* have a literal spatial interpretation? How does the psychological reading emerge? What is the semasiological history of those verbs that brings into existence the psychological reading?

And then the second question is, given that they are now separate in meaning, how does the onomasiological split between them occur? Why or at least how does this specialization occur? But this second question is not so important for the main story. I will only briefly say something about that. The crucial point here of course is: where does this psychological reading come from? If we have these two verbs that originally indicate spatial movement, how can we go from spatial movement to psychological emotion? Is that a metaphorical link or is that, as I will claim, a link that is based in the theory of humours?

[5.22]–[5.23] Let me first show to you that, at least in Middle French, the psychological readings of *émouvoir* already exist. I assume that your knowledge of Old French is about as extensive as my knowledge of Chinese, so we can't assume a lot here. So let me translate this. (By the way reading and certainly pronouncing Old French is a difficulty in itself because we know that Old French was not yet standardized, so you get different dialects. So if I were to read this to you, it would be a combination of Modern French and some spelling pronunciations. But let's not do that. Let's just go to a translation.) The translation of this quotation is as follows: *But, says he, anger is not without cause, and it is not so that reason commands that one becomes angry, but anger makes the injury explicit* (if you've been hurt by someone, let's say), *and softens it. This* (wrong you have suffered) *makes the heart move towards a state of anger.* What you get here in the last part of the quotation is *C'est la cause qui le courage fait a ire esmouvoir*: it is the cause that makes *the courage*, in this case that's the heart, that makes the heart *émouvoir*, move, change to a state of anger, *ire* in this case (which you also have as a loan in Old English as *ire*). So what you find in this case is a set of abstract causes and abstract results, but there is also a clear physiological frame: there's a cause for anger—someone has hurt you—and there is a result, a psychological result in the form of anger, but the whole process is placed against a physiological background. So given that we clearly find the psychological reading of *émouvoir* in Old French, the question is: where does it come from, given the original spatial reading of the verb?

Let me now show you how we get bridging contexts between the spatial reading and the psychological reading. What is a bridging context? A bridging context in this case will be one in which we find a reference to literal movement as the cause of the psychological effect. I have my spatial reading of *mouvoir* or *émouvoir*. I have the theory of humours. I want to get a psychological result. So what should I show? I should show that the psychological result occurs when the humours are set in motion, literally set in motion. When bodily fluids are transported through the body, that will be the literal interpretation

of 'emotion': bodily fluids set in motion, literal motion. And the result of that is a psychological state. So the bridging context will be quotations where we find the two interpretations together, where you can say, here you have a reference to literal transportation of fluids in the body and at the same time a psychological interpretation as mentioned. I assume that logic is quite clear, so let's just see if we find quotations like that.

[5.24]–[5.25] A first quotation we need involves purely spatial movement which is not connected with the body: *Why is it that waves that are stirred up in vast and deep waters come to a halt and quiet down [much] later than those that are brought into movement in small and undeeep waters.* Or in other words, why do you have big waves in the sea and not in a pond? That's the question here. But the term here, *esmeues*, that's the past participle of *émouvoir*. So this is purely spatial material movement.

[5.26]–[5.27] Then the next one: *That is why we have to know that in spring, when the body is too full and the life spirit cannot easily get rid of them* (that is to say of the melancholic humours in the literal sense, referring to fluids) *because of its warmth and humidity, it stirs them up and this is often the cause of several illnesses, that is why Hippocrates also says that in spring the melancholies are in movement.* Melancholies, the melancholic fluids, are in movement, literally. The warmth of spring sets the fluids in motion in the most literal sense. There is no specific mention of a psychological reading yet, but we do have this physiological idea, so we go from spatial movement in the outside world (the previous quotation) to spatial movement of fluids in the body.

[5.28]–[5.33] These slides show a few additions and nuances, but they are not so important, so let me skip them, except for this one: *la multiplication des esperis*. This is interesting, because what you also get is also movement, but not of fluids as such but of what is called 'spirits'. So what is 'spirit', literally? Spirit is the evaporated fluid. It's the gas, if you wish, that you get when you heat the fluid. Here for instance it says *the multiplication of spirits that, as a result of the aforementioned heat, start to move and come together.* So physiologically, the humoral framework does not just involve the fluids as such, but also things related to fluids like the evaporation of the fluids. Moreover, you also get metonymical quotations where the reference is not to the fluids themselves but to the organs that contain or produce the fluids, produce the physiological substances. An example is this one: *the natural warmth that, in case of fear, moves from the outer and superficial parts of the body, and withdraws inward and from the top downwards, works in the same way and makes the belly and urine move.*

So *urine*, that's the physiological fluid, but *make the belly move*, that's a metonymical expression referring to the location of the fluids.

[5.34]–[5.35] Now let us look at a quotation in which we find a combination of a psychological and a physiological interpretation. Let me read this in French: *Ire donc est une passion de l'ame qui esmoet et encline le coraige humain a desirer vengeance de aucune iniure faite [...] la naturele chaleur e ire se retrait et asamble de le ordenance de nature aussi comme toute entour le coeur [...] et pour ce est il aussi dit que ire est une maniere de ebullition de sanc chaut entour le coer pour le desir de la vengeance [EdC:P].* So *anger is a passion of the soul (une passion de l'ame), a passion of the soul that moves and directs the human heart to wish vengeance.* That's psychological. The human heart is moved towards vengeance: that's a psychological event. *To wish vengeance from whatever wrong that has been done...* *The natural warmth of anger withdraws and comes together round the heart in a natural way...* and that's physiological. On the one hand, the heart is moved towards vengeance: a wish for vengeance is a psychological phenomenon. On the other, immediately after that, *the warmth of anger withdraws, comes together round the heart* which is a physiological phenomenon. And then, *anger is a form of boiling of the blood around the heart due to the desire for vengeance.* Again we find the two aspects together. We can see how beautifully this fits in with ANGER IS THE HEAT OF A FLUID IN A CONTAINER, but the background is physiological in a culturally specific medical sense, in the form of the theory of humours. So here we have our bridging context.

[5.36] What we conclude from the semasiological analysis of *émouvoir* is that in this verb (the verb that is now in contemporary French associated with a psychological reading only) we find a historical polysemy that consists of spatial readings, psychological readings and then bridging contexts that bring together the two. The bridging contexts refer to the theory of humours, so the causal link between the literal movement of concrete physiological substances and psychological events is explicitly explained in the texts. For Old French emotion is an effect of physiological movement, the literal movement of physiological fluids.

[5.37] This is a summary of the semasiological analysis where you see that we go from an original literal meaning through a process of specialization, to a literal physiological interpretation referring to a literal movement of the bodily fluids, and then through a metonymical link from cause to effect, i.e. to the psychological reading where you have the emotive effects.

[5.38] What we've established so far is the first step in this argument, namely, that the psychological reading of *émouvoir* derives from the literal one not by a metaphorical jump, but through humoral bridging contexts. There's a second step to take but as I mentioned I won't say too much about that. That's the onomasiological step where you have the question: how does the current specialization of the verb that you find in contemporary French emerge?

[5.39]–[5.47] We won't look at the details (you can check them in the slides), but the type of semasiological analysis that we did for *émouvoir*, where we saw that you have both spatial readings and psychological readings and then bridging contexts, you can do exactly the same thing for the verb *mouvoir* alone. If you look at the verb *mouvoir* alone, you'll get exactly the same polysemy in Old French with exactly the same kinds of contexts.

[5.48] So where does the current specialization come from, where you have *émouvoir* in present day French only for psychological interpretations and *mouvoir* only for the literal interpretations? I will show you how the process occurs in gradual steps, but I won't say a lot about the reasons for that specialization. These could be very general reasons, in the sense that some people claim that too much synonymy in a language is disfavored, that if you have really strict synonymy, there will be a general tendency to avoid synonymy, for instance by specialization of the terms. That's a very interesting hypothesis, but I'm not so sure whether it is generally correct, so I won't go into those very deep reasons. What I just want to show is that we can indeed see the process happening. When we look at the further evolution of these two verbs after the Old French and Middle French periods we can actually trace the specialization process.

What we need is the following. On this slide, have these abbreviations for four meanings: SPA for spatial meaning, PHY for physiological meaning combined with the bridging contexts (so if it's a literal humoral movement together with a psychological interpretations, the quotation will be counted with the purely physiological ones), EMO for the purely emotional readings and OTH for a few other interpretations that I didn't present but that we do find in the material. So we have four classes and then we have four points in time: Old French (Ancien français), Middle French (Moyen français), the Renaissance and Classical French (17th century). So the materials I'm showing go from the oldest attestations of French, let's say, round the year 1000 up to Classical French. Contemporary French as such is not included but we know that in Contemporary French the separation between the two verbs is almost complete.

[5.49] These are the data that we found. For each of the four semantic classes and for each of the four periods, you get the number of cases of *mouvoir* and the number of cases of *émouvoir*. To make it more intuitively clear I will be using mosaic plots to represent the changes.

[5.50] How do you want to read this? The left hand block gives you the material for *émouvoir*. The right hand block gives you the material for *mouvoir*. Then the colors (from top to bottom) indicate the various readings that you get. So the blue color is the spatial reading. The light blue color is the physiological reading. The green color is the emotional reading. The yellow color, those are the other senses that I did not discuss. Then the third dimension in the plots is of course time. So within each of the two blocks you get 4 smaller columns. The first one is Ancien français, so the oldest period, and Moyen français—Middle French, Renaissance French and Classical French. The proportion the surface occupied by these various elements of the plot, is a reflection of the frequency that we find in the cells of the table in 5.50. For instance, to give you an idea, if you look along the horizontal dimension, both in the left hand block and the right hand block, you will see that we don't have a lot of material for Old French: the first column to the left is much narrower than the second column. The second column is the one for Middle French and why is it bigger? There is a very practical explanation: there is less material for Old French and specifically also the PhD student who did this study focused to a large extent on Middle French. So in this case, the difference between the narrower band and the broader band is not so important; we know that that is a reflection of the availability of materials. But there are other differences that are quite interesting because they tell us something about the distribution of the meanings. That's the case if you look along the vertical dimension. If you look along the vertical dimension for each period, you can see what proportion of the material is taken up by the various senses. If you take the left-most column, you can see that a lot of that column is occupied by the blue color, by the spatial reading. In the left hand block, where we look at the word *émouvoir*, what we expect is that the importance of the spatial reading diminishes, and by contrast, that the proportion occupied by the green reading, the emotional one, will grow. Why can we expect that? Because we know that in contemporary French *émouvoir* is basically only the green reading. And what you see is exactly what we expect: if, in the left hand block, the one for *émouvoir*, you look at the progression from the left-most column to the right-most column, green becomes dominant and blue becomes marginal. On the other hand, if you take the right hand block for the verb *mouvoir*, the spatial reading (the blue one) is basically dominant all the time. We see how the specialization occurs: it takes place

through a change in the verb *émouvoir* specifically, while in the verb *mouvoir* nothing much changes.

[5.51] You can also transform this representation into another one. Here you get four smaller blocks for each period in time, and for each period in time we contrast *émouvoir* and *mouvoir*. If you compare the two left-most columns, then in Old French the distribution of the two verbs over the blue reading is roughly the same. If you take the green reading (the psychological one), then *émouvoir* is already more dominant or more prominent than *mouvoir*. On the other hand, if you take Classical French, to the far right, *mouvoir* is totally dominant for the blue reading, and conversely for the green reading it's *émouvoir* that is totally dominant. Here, in other words, you get a clear graphical representation of the stages in the specialization process. I repeat that this specialization process is not the most important thing that you want to think about in the context of this lecture. The most important thing is that we can see that the emotive readings, the psychological readings, actually derive from a literal reference to movement of fluids in the body.

[5.52] There are some further questions about *émouvoir* that should be mentioned for the sake of completeness. Why is it *émouvoir* that specializes? What is the relation between *émouvoir*, the verb, and the noun *émotion*, and then the loan *emotion* in English? Those are questions that we need not address here, so let me go on to the conclusions.

[5.53] The first conclusion is that, at least originally, there certainly is a concept of embodiment involved in *émouvoir* and *emotion*, but it's a directly and literally physiological one, and it doesn't have the type of universal background that was initially assumed by Kövecses for instance. So it has a physiological background that is rooted in a long-standing scientific tradition, the humoral theory. The type of embodiment that you get here then is not a universal physiological one, but rather a culturally specific one.

[5.54] It further follows that contemporary French *émouvoir* and *mouvoir* and probably their cognates in English, if they are felt as figurative at all, would be figurative through a process of deliteralization. Like in the *whale-fish* case, we no longer believe in, or we no longer have access to, the original literal scientific theory that motivated the expression. We are reinterpreting the expressions because the original literal basis of the expression is lost on us, which is something different from what we usually consider metaphor to be. As we discussed earlier, we indeed need to distinguish between different types of metaphor:



metaphor as figuration versus metaphor as deliteralization. Figuration is trying to find a model for something in the world that you don't understand, or at least, for which you need a categorization. Deliteralization is thinking up a motivation for an expression that you don't understand, an expression whose motivation is unclear to you.

[5.55] To make the distinction between the two processes a bit more clear, take this picture. You have the verb *to move* and we know that it has a literal, physical interpretation, 'to change position' or 'to make change position, to cause to change position'. That's the starting-point. So when we normally think of metaphor, we will say that on the one hand we have an existing reading for *to move*, and on the other there is something that we want to categorize: a certain feeling. How can we do that?

[5.56] We take the model that we find in the existing verb and then we say: we can categorize this feeling as in some way, to put it simplistically, similar to the physical material motion and then we get 'feeling as inner turmoil'. That's the normal process of metaphorical use as figuration, finding a figurative construal for a certain event, a certain object or whatever, finding a figurative interpretation given a certain existing model.

[5.57] The metaphorical process that I introduce here is of a different kind. That's the process where you start with this configuration: there already is a link in the language between the concept of feeling and the word *to move*. Only we don't know why the link is there, and then we reinterpret the link. We as linguists know that a link is there as a historical relic, but the ordinary language users would not know.

[5.58] If the ordinary language user wants to make sense of the expression, you get a metaphorical reinterpretation in the way indicated here: figurative similarity is so to speak construed as a way of making sense of the expression. Importantly for the line of reasoning that we are developing in this set of lectures, the process is culturally and historically specific. The language that we have consists to some extent of sediments from different historical periods: what we encounter in our present-day language is the result of a historical evolution that is culturally specific.

[5.59] If we look more broadly at some major steps in the evolution of metaphor studies in Cognitive Linguistics, then you can see that there are some shifts going on. You can see a shift of emphasis from a focus on the experiential

basis of metaphor and embodiment to what is now called 'situated embodiment': we begin to realize more and more that there are cultural differences in our experiences and those cultural differences clearly have an influence on language and categorization in language.

[5.60] But my point now is also that when we take that step, when we go along with that shift from a more universalist interpretation of embodiment and experience to a culturally specific and culturally situated interpretation of embodiment, then there is a third step to be taken, namely, that if metaphor is a cultural phenomenon, then we also need to study the cultural and linguistic history of metaphors. So if you accept that metaphors may not only express thought but may also shape thought, then we do need to study how language is historically transmitted. In other words, I don't think there can be a valid Cognitive Linguistics, and certainly not a valid Cognitive Sociolinguistics without a fair amount of historical linguistics. That's the bottom line for this lecture. Thank you!

## Handout Lecture 5

### 5.1 Situating the talk

- 1–2 Introduction
- 3–4 Semasiological variation
- 5–6 Conceptual onomasiological variation
- 7–9 Formal onomasiological variation
- 10 Conclusion

### 5.2 Background

Dirk Geeraerts 2006

**Words and Other Wonders. Papers on Lexical and Semantic Topics.**  
Berlin: Mouton de Gruyter.

chapter 9

### 5.3 Starting-point

Conceptual Metaphor Theory

ANGER IS THE HEAT OF A FLUID IN A CONTAINER:

variation in conceptual metaphors typically belongs to conceptual onomasiology: different ways of seeing reality  
– but what determines the variation ?

specifically, in the case of anger:

a physiological basis or a historical-cultural basis ?

### 5.4 Research question

deliteralization:

classificatory categories may lose their literal motivation as a result of changing worldviews and scientific progress

e.g. Medieval Dutch **walvis** “whale”

a fish, but what happens when we know more about fishes and sea mammals?

→ reinterpretation in a metaphorical or otherwise derived sense

### 5.5 Research question

a challenge for theories of categorization:

not just “finding an approximating model for something that we do not understand very well”

but also “finding an appropriate interpretation for a category whose motivation has become unclear”

two types of metaphorical thinking:

making sense of the world vs making sense of the language

(metaphor as a primary vs as a secondary effect)

### 5.6 Research question

a case study:

where does the word **emotion** come from?

there would seem to be a link with **motion** (movement),

but if we think about emotion as ‘internal turmoil’, is that an original metaphorical link, or rather a deliteralizing reinterpretation?

### 5.7 TOC

→ Background

→ Research strategy

→ Semasiological analysis: **Emouvoir** in Old French

→ Onomasiological analysis: **(E)mouvoir** through time

→ Conclusions and further questions

### 5.8 Background

in general: **diachronic semantics in Cognitive Linguistics**

three dominant lines

– prototype research: Geeraerts (1997),

Koivisto-Alanko (2000), Molina (2000), Fabiszak (2001), Tissari (2003), Soares da Silva (2003)

– looking for regularities: Traugott (and Dasher 2002), Koch and Blank (2003), Heine (1997)

– metaphor research: Allan (2009), Gevaert (2007), Trim (2007)

### 5.9 Background

specifically: the **universality of embodiment?**

Geeraerts & Grondelaers 1995 “Looking back at anger” (in Taylor & McLaury, eds., *Language and the cognitive construal of the world*) showed that anger is the heat of a fluid in a container is not a universal

physiologically motivated conceptualization, but a culturally specific one, reflecting the historical importance of the theory of humours

#### 5.10 Contemporary Metaphors

I had reached the **boiling point**, She was **seething** with rage, He lost his **cool**, You make my **blood boil**, He was **foaming** at the mouth, He's just **letting off steam**, Don't get hot under the collar, Billy's a **hothead**, They were having a **heated** argument, When I found out, I almost **burst a blood vessel**, He got **red** with anger, She was **scarlet** with rage, I was **fuming**, When I told him, he just **exploded**, **Smoke** was pouring out of his ears, He was **breathing fire**, Those are **inflammatory** remarks, That **kindled** my ire, He was **consumed** by his anger

#### 5.11 Shakespearean anger

Were I not a little pot and soon hot [IV:1:5]  
 Is she so hot a shrew [IV:1:17]  
 I tell thee, Kate, 't was burnt and dried away,  
 and I expressly am forbid to touch it,  
 for it engenders choler, planteth anger;  
 and better it were that both of us did fast,  
 since, of ourselves, ourselves are choleric [IV:1:56]  
 Gru. What say you to a neat's foot?  
 Kath. 'Tis passing good. I prithee let me have it.  
 Gru. I fear it is too choleric a meat.  
 How say you to a fat tripe finely broil'd?  
 Kath. I like it well. Good Grumio, fetch it me.  
 Gru. I cannot tell. I fear 'tis choleric.  
 What say you to a piece of beef and mustard?  
 Kath. A dish that I do love to feed upon.  
 Gru. Ay, but the mustard is too hot a little [IV:3:25]

#### 5.12 Shakespearean anger

seems to fit ANGER IS THE HEAT OF A FLUID IN A CONTAINER metaphor, but the origin of the metaphor may be cultural rather than physiological: at least in Shakespeare, the influence of the **humoral theory** is well-established

5.13 The theory of humours

Hippocrates of Kos (5th ct BC): physiology + psychology (four temperaments)  
Aristotle (4th ct BC): adding a cosmology (micro/macromos correspondences)  
Galen (2nd ct AD): adding a dietary pharmacology

disappearance: only very gradually after the Renaissance  
cp. the persistence of blood-letting  
Virchow 1858 *Die Cellularpathologie*

5.14 The theory of humours

	PHLEGM	BLACK BILE	YELLOW BILE	BLOOD
CHARACTERISTIC	cold and moist	cold and dry	warm and dry	warm and moist
ELEMENT	water	earth	fire	air
TEMPERAMENT	phlegmatic	melancholic	choleric	sanguine
ORGAN	brain/bladder	spleen	liver/stomach	heart
COLOR	white	black	yellow	red
TASTE	salty	sour	bitter	sweet
SEASON	winter	autumn	summer	spring
WIND	North	West	South	East
PLANET	moon	Saturn	Mars	Jupiter
ANIMAL	turtle	sparrow	lion	goat

5.15 The theory of humours

**choler** ‘anger’, **gall** ‘anger’, **rouse one’s choler** ‘to elicit anger’,  
**stir one’s bile** ‘to elicit anger’, **galling**, ‘vexing, causing anger’,  
**choleric** ‘irascible’, **liverish** ‘irascible’, **splenetic** ‘ill-tempered’,  
**hot-blooded** ‘irascible’, **fiery** ‘irascible’, **hot-headed** ‘irascible’

obvious lexical relics; cross-linguistically:

### 5.16 The theory of humours

	ENGLISH	FRENCH	DUTCH
phlegm	<b>phlegmatic</b> 'calm, cool, apathetic'	<b>avoir un flegme</b> <b>imperturbable</b> 'to be imperturbable'	<b>valling</b> (dialectal) 'cold'
black bile	<b>spleen</b> 'organ filtering the blood; sadness'	<b>mélancolie</b> 'sadness, moroseness'	<b>zwartgallig</b> 'sad, depressed' (literally 'black-bilious')
yellow bile	<b>bilious</b> 'angry, irascible'	<b>colère</b> 'anger'	<b>z'n gal spuwen</b> 'to vent (literally 'to spit out') one's gall'
blood	<b>full-blooded</b> 'vigorous, hearty, sensual'	<b>avoir du sang dans les veines</b> 'to have spirit, luck'	<b>warmbloedig</b> 'passionate' (literally 'warm-blooded')

### 5.17 The theory of humours

so, ANGER IS THE HEAT OF A FLUID fits the humoural pattern seamlessly:  
 anger ≈ fire  
 fluid ≈ humours (specifically blood as the carrier of the others)  
 → a historical, culturally specific relic rather than a universal metaphor

### 5.18 Research question

where does the word **emotion** come from?  
 → given that we have been able to establish that so many specific emotion expressions involve the theory of humours, could it be that the word **emotion** itself has humoural origins?

### 5.19 Research strategy

PhD 2008 by Annelies Bloem under the supervision of Michèle Goyens and Dirk Geeraerts; characteristics:

- focus on French **émouvoir** / **mouvoir**  
 (**émouvoir**/**émotion** is a French innovation;  
 the noun **émotion** appears later than the verb)
- basis of the investigation: a very broad basis of philological materials,  
 among them two works by Evrart de Conty (ca. 1330-1405) that we will  
 draw our examples from

## 5.20 Research strategy

[EdC:P]

Evrart de Conty's translation of Aristotle's *Problemata* (ined.)

[EdC:EAM]

= Guichard-Tesson Françoise, Roy, Bruno (éds). 1993. *Le livre des eschez amoureux moralisés* (Bibliothèque du moyen français 2). Montréal : CERES.

## 5.21 Steps in the Argument

[1] the psychological reading of **émouvoir** derives from the literal one not by a metaphorical jump, but via humoural bridging contexts

[2] initially, the humoural readings are not exclusive for **émouvoir**: the specialization of **émouvoir** for psychological readings and of **mouvoir** for literal ones is a gradual diachronic process

## 5.22 Semasiology: The question

in MFr, psychological readings clearly exist:

**Mais, dit il, ire n'est mie du tout sans aucune raison, non mie que raisons commande c'on se courouce, mais elle moustre et allege le injure. C'est la cause qui le courage fait a ire esmouvoir** [EdC:P]

abstract causes, abstract results,  
but a physiological frame (the heart)  
→ where does this reading come from?

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abstract causes, abstract results,  
but a physiological frame (the heart)  
→ where does this reading come from?

But, says he, anger is not without cause, and it is not so that reason commands that one becomes angry, but anger makes the injury explicit and softens it. This [the wrong suffered] makes the heart move towards a state of anger.

PS courage: both "heart as organ" and "heart as mood, soul"



#### 5.24 Emouvoir: Spatial movement

spatial movement of physical objects and masses :

**Pour quoy est ce que les undes esmeues en grans yaues et profondes se cessent et apaisent plus tart que celles qui sont esmeues en petites yaues et sont poy profondes [EdC:P]**

#### 5.25 Emouvoir: Spatial movement

spatial movement of physical objects and masses :

**Pour quoy est ce que les undes esmeues en grans yaues et profondes se cessent et apaisent plus tart que celles qui sont esmeues en petites yaues et sont poy profondes [EdC:P]**

Why is it that waves that are stirred up in vast and deep waters come to a halt and quiet down later than those that are brought into movement in small and undeeep waters

#### 5.26 Emouvoir: Physiological movement

spatial movement of humours and bodily fluids:

**Pource devons nous savoir que li prins tans [...], quant il troeue le cors trop plain et que la vertu ne s'en poet mie bien delivrer lors pour sa chalour et son humidité, il les esmoet et est souvent cause de plusieurs maladies. Et pource dit ausy Ypocras que u prin tans les melancolies se esmoeuvent [EdC:P]**

#### 5.27 Emouvoir: Physiological movement

spatial movement of humours and bodily fluids:

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That is why we have to know that in spring, when the body is too full and the life spirit cannot easily get rid of them [the melancholic humours] because of its warmth and humidity, it stirs them up and this is often the cause of several illnesses. And that is why Hippocrates also says that in spring the melancholies are in movement.

## 5.28 Emouvoir: Physiological movement

.... not just reflexive constructions, but also intransitive:

**Quant les superfluités reumatiques de la teste se commencent a es-mouvoir et a distiller, adont se font les obtalmies et les maladies des yeuls** [EdC:P]

... and transitive :

**C'est pour ce que le humidité esmeue par le chaleur du grant fu se degaste et resolve insensiblement et non pas en sensible sueur** [EdC:P]

## 5.29 Emouvoir: Physiological movement

.... not just reflexive constructions, but also intransitive:

**Quant les superfluités reumatiques de la teste se commencent a es-mouvoir et a distiller, adont se font les obtalmies et les maladies des yeuls** [EdC:P]

... and transitive :

**C'est pour ce que le humidité esmeue par le chaleur du grant fu se degaste et resolve insensiblement**

When the rheumatic fluids of the head start to move and be secreted, at that moment inflammations and illnesses of the eye emerge

## 5.30 Emouvoir: Physiological movement

.... not just reflexive constructions, but also intransitive:

**Quant les superfluités reumatiques de la teste se commencent a es-mouvoir et a distiller, adont se font les obtalmies et les maladies des yeuls** [EdC:P]

... and transitive:

**C'est pour ce que le humidité esmeue par le chaleur du grant fu se degaste et resolve insensiblement**

That is why the humidity created by the big fire is removed and dissipated in an unnoticed way, and not in easily perceptible sweat

## 5.31 Emouvoir: Physiological movement

.... not just the body fluids, but also spirits:

**La multiplication des esperis qui, pour la chaleur desus dite, s'esmeuvent et asamblent** [EdC:P]

.... and metonymically, the organs containing/producing the physiological substances :

**La chaleur naturele qui en peur se moet des parties de dehors et superficielles du cors et se retrait dedens et de haut en bas œuvre semblablement et fait le ventre et le orine emouvoir** [EdC:P]

### 5.32 Emouvoir: Physiological movement

.... not just the body fluids, but also spirits (evaporated humours):

**La multiplication des esperis qui, pour la chaleur desus dite, s'esmeuvent et asambtent [EdC:P]**

.... and metonymically, the organs containing/producing the physiological substances :

**La chaleur naturele qui en peur  
ficies du cors et se retrait dede  
ment et fait le ventre et le orine**

The multiplication of spirits that, as a result of the aforementioned heat, start to move and come together

### 5.33 Emouvoir: Physiological movement

.... not just the body fluids, but also spirits:

**La multiplication des esperis qui, pour la chaleur desus dite, s'esmeuvent et asambtent [EdC:P]**

.... and metonymically, the organs containing/producing the physiological substances :

**La chaleur naturele qui en peur  
ficies du cors et se retrait dede  
ment et fait le ventre et le orine**

The natural warmth that, in case of fear, moves from the outer and superficial parts of the body, and withdraws inward and from the top downwards, works in the same way and makes the belly and urine move

### 5.34 Emouvoir: Psycho-physiological movement

concrete physiological processes are explicitly presented as the cause of psychological phenomena:

**Ire donc est une passion de l'ame qui esmoet et encline le coraige humain a desirer vengeance de aucune iniure faite [...]**

**la naturele chaleur e ire se retrait et asamble de le ordenance de nature aussi comme toute entour le coeur [...]**

**et pour ce est il aussi dit que ire est une maniere de ebullition de sanc chaut entour le coer pour le desir de la vengeance [EdC:P]**

### 5.35 Emouvoir: Psycho-physiological movement

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**la naturele chaleur e ire se retr**

**aussi comme toute entour le co**

**et pour ce est il aussi dit que i**

**chaut entour le coer pour le de**

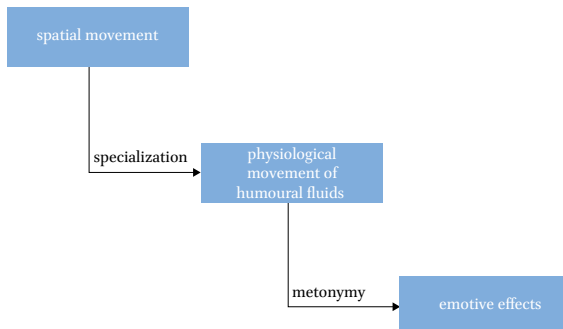
Anger is a passion of the soul that moves and directs the human heart to wish vengeance from whatever wrong that has been done ... The natural warmth of anger withdraws and comes together round the heart in a natural way ... And that is why it is also said that anger is a form of boiling of the blood around the heart due to the desire for vengeance

### 5.36 Semasiology: Conclusions

- 1) a polysemy analysis of **émouvoir** reveals the existence of bridging contexts between the purely spatial 'movement' reading and the psychological 'emotion' reading
- 2) the causal link between the literal movement of concrete physiological substances and psychological events is explicitly explained in the texts

→ emotion is (an effect of) physiological movement

### 5.37 Semasiology: Conclusions



### 5.38 Steps in the Argument

- [1] the psychological reading of **émouvoir** derives from the literal one not by a metaphorical jump, but via humoural bridging contexts
- [2] initially, the humoural readings are not exclusive for **émouvoir**: the specialization of **émouvoir** for psychological readings and of **mouvoir** for literal ones is a gradual diachronic process

### 5.39 Onomasiology: The question

an analysis of **mouvoir** reveals that in Ofr and MFr, it exhibits the same polysemy as **émouvoir**, with a semasiological chain from the purely spatial 'movement' reading to the psychological 'emotion' reading

→ can we trace the evolution leading to the current specialisation of **émouvoir** for psychological readings, and of **mouvoir** for spatial readings?

### 5.40 Mouvoir: Spatial readings

spatial movement of physical objects and masses :

Et pour ce veons aussi que la Mer Occeane est obeissans a la lune et que elle flue et reflue deux foiz, que jour que nuit [...] et en moult d'autres et diverses manieres se meut elle et debat [EdC:EAM]

**5.41 Mouvoir: Spatial readings**

spatial movement of physical objects and masses :

Et pour ce veons aussi que la Mer Occeane est obeissans a la lune et que elle flue et reflue deux foiz, que jour que nuit [...] et en moult d'autres et diverses manieres se meut elle et debat [EdC:EAM]

And so we see that the Sea Ocean obeys the moon and flows and reflows twice, during the day and during the night . . . and in many other ways does it move and be restless

**5.42 Mouvoir: Physiological readings**

spatial movement of humours and bodily fluids:

Et c'est pour ce que les passions et les accidens de l'ame font la chaleur naturele et les esperis transmuier et mouvoir en moult de manieres diverses [EdC:P]

**5.43 Mouvoir: Physiological readings**

spatial movement of humours and bodily fluids:

Et c'est pour ce que les passions et les accidens de l'ame font la chaleur naturele et les esperis transmuier et mouvoir en moult de manieres diverses [EdC:P]

And that is why the passions and the different states of the soul cause the natural warmth and the spirits to change and move in many different ways

**5.44 Mouvoir: Psycho-physiological readings**

psychological events caused by humours and bodily fluids:

Ire est une des passions de l'ame et est une maniere de inflammation et de ebullition de sanc chaut et de esperis entour le coeur [...]. Et pource se moiet en ceste passion la chaleur au dehors du cors impetueusement [EdC:P]

**5.45 Mouvoir: Psycho-physiological readings**

psychological events caused by humours and bodily fluids:

**Ire est une des passions de l'ame et est une maniere de inflammation et de ebullition de sanc chaut et de esperis entour le coeur [...]. Et pource se moiet en ceste passion la chaleur au dehors du cors impetueusement** [EdC:P]

Anger is one of the passions of the soul, and a form of inflammation and boiling of warm blood and spirits round the heart . . . And that is why in this passion warmth moves out of the body in an impetuous way

**5.46 Mouvoir: Psychological readings**

psychological events caused by other abstract events:

**Et pource que li legislateur qui voient le acusee telement opprimé, soubmis et abaissié u regart de l'acteur sont meu de pitié et li sont favourable** [EdC:P]

**5.47 Mouvoir: Psychological readings**

psychological events caused by other abstract events:

**Et pource que li legislateur qui voient le acusee telement opprimé, soubmis et abaissié u regart de l'acteur sont meu de pitié et li sont favourable** [EdC:P]

And hence the legislators, seeing the accused in such a depressed, subdued and humiliated state in view of the prosecutor, are moved by pity and act favourably towards him

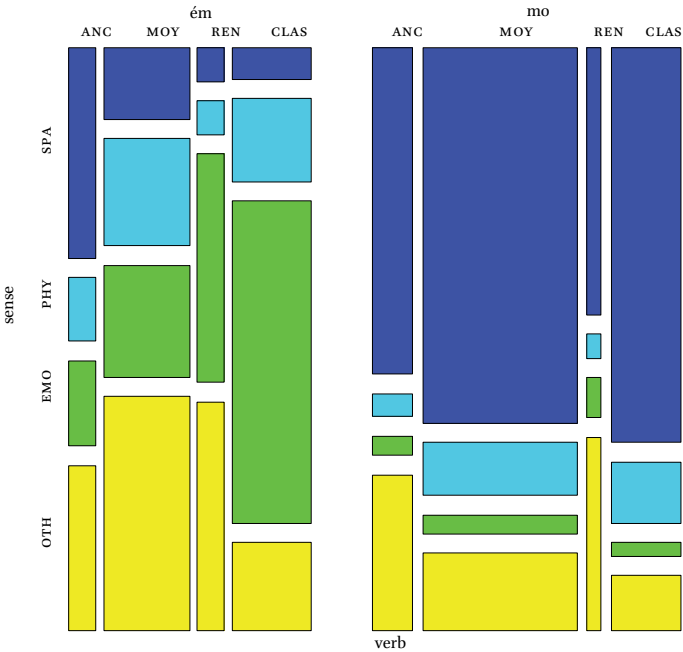
**5.48 Chronology**

SPA	= spatial movement
PHY	= (psycho-)physiological movement
EMO	= emotive readings
OTH	= a number of minor readings not treated here
ANC	= (Ancien français) Old French
MOY	= (Moyen français) Middle French
REN	= (Renaissance) 16th century French
CLAS	= (Classique) 17th century French

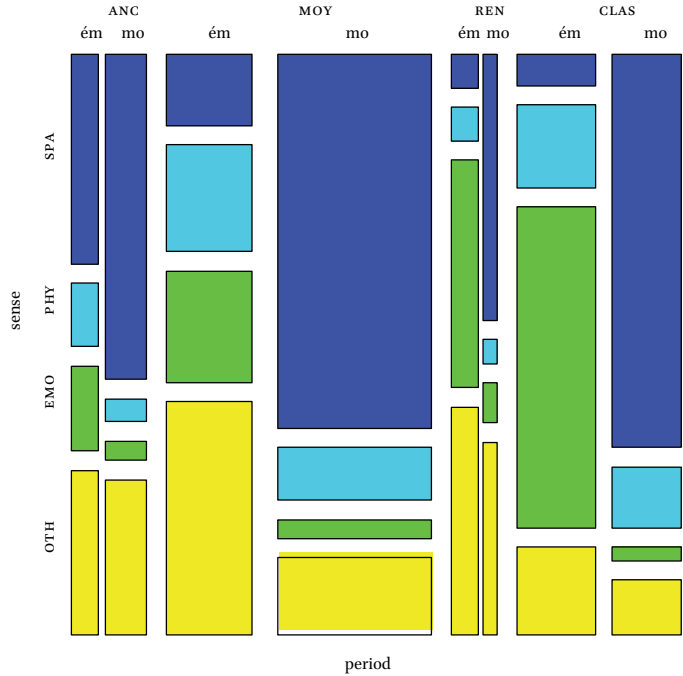
5.49 Chronology

		SPA	PHY	EMO	OTH
ANC	mouvoir	306/435	13/45	20/78	143/241
	émouvoir	129/435	32/45	58/78	108/241
MOY	mouvoir	415/442	16/26	57/113	203/349
	émouvoir	27/442	10/26	56/113	146/349
REN	mouvoir	55/67	8/16	9/110	52/173
	émouvoir	12/67	8/16	101/110	121/173
CLAS	mouvoir	446/496	37/187	26/589	32/173
	émouvoir	50/496	150/187	563/589	141/173

5.50 (E)mouvoir Semasiologically



5.54 (E)mouvoir Onomasiologically



5.52 Further questions

why exactly does **émouvoir** rather than **mouvoir** specialize for the emotional reading?

hypothesis: **émouvoir** < ex-movere 'to move out of', 'to set in motion' → an inchoative reading that seems to go together well with the application to fluids (and masses in general): not 'move from A to B', but 'set in motion, stir up, cause internal turbulence'

how does the relation between verb and noun (**émouvoir** / **émotion**) evolve ?

5.53 Conclusion 1

the concept of embodiment originally involved in **émouvoir** and **émotion** was a directly physiological one, determined by a long-standing scientific tradition, that of the humoural theory



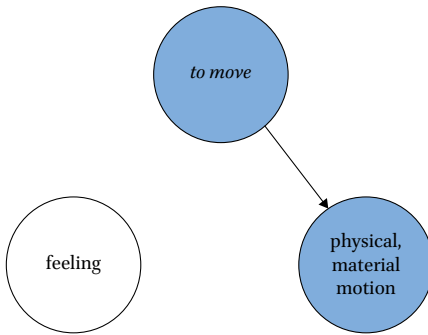
as such, embodiment is not (always) a universal physiological phenomenon, but rather a culturally specific phenomenon that is sensitive to historical influences

### 5.54 Conclusion 2

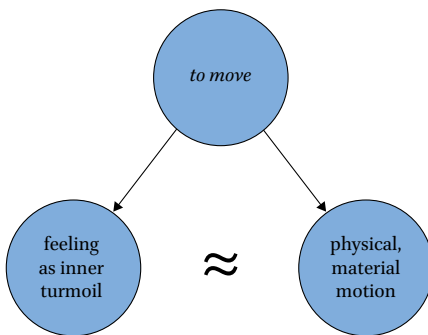
to the extent that contemporary French *émouvoir* and *émotion* (or their cognates in English) are felt as figurative at all, they are so through a process of deliteralization and not as a result of an original metaphor

different types of metaphorical processes need to be distinguished: metaphor as figuration versus metaphor as deliteralization

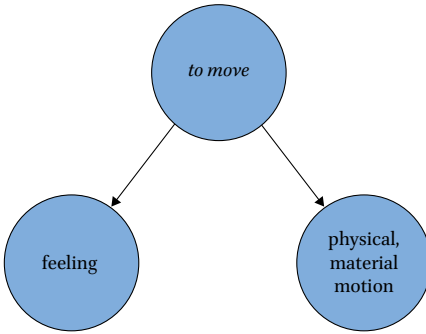
### 5.55 Conclusion 2



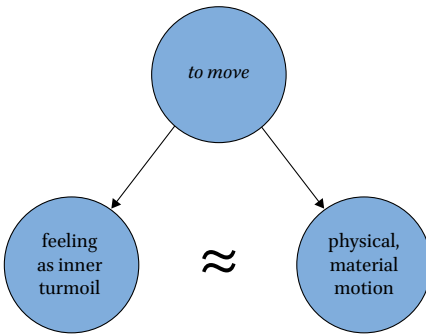
### 5.56 Conclusion 2



### 5.57 Conclusion 2



### 5.58 Conclusion 2



### 5.59 The wider picture

major steps in the evolution of metaphor studies in Cognitive Linguistics:

- from experientialism and embodiment  
(with a tendency towards universalism)
- to situated embodiment (Zlatev, Sinha, Ziemke a.o.)  
and cultural metaphors (Kövecses)

but a further step needs to be taken:

**5.60 The wider picture**

if metaphor is a cultural phenomenon,  
the cultural and linguistic history of metaphors needs to be studied;

if you accept that metaphors may not only express thought but may also  
shape it, you need to study how language is transmitted:

**there can be no cognitive linguistics without historical linguistics**





All original audio-recordings and other supplementary material, such as any hand-outs and powerpoint presentations for the lecture series, have been made available online and are referenced via unique DOI numbers on the website [www.figshare.com](http://www.figshare.com). They may be accessed via this QR code and the following dynamic link: <https://doi.org/10.6084/m9.figshare.4980521>

## Cultural Models of Language Variation

[6.1] So Cultural Models of Language Variation, what is that all about? Let me first situate this in the overall architecture of the ten lectures I have the privilege of giving here in Beijing. We have now arrived at what I've identified in some of the earlier lectures as 'conceptual onomasiological variation'. For those of you who did not witness the initial lectures, this is about cultural and historical and social differences in categorization and how people categorize the world and how they choose categories to talk about the world. In the first talks that I gave (the ones on semasiological variation and the introductory ones) what I did was in a very general way to point to the importance of social and cultural and historical factors (and specifically, social, cultural, and historical *variation*) when you study linguistics. Then this morning I zoomed in specifically on categorization and I tried to show that categorization does not just fall out of the air but that categorization has cultural and historical roots. In these talks we have these two main ideas: we have an emphasis on social, cultural variation; and then specifically this morning we had an emphasis on cultural models. What I want to do in this talk is in a sense to have the snake bite its own tail: what I am going to do now is to have a look at variation in the cultural models that people use to talk about language variation. It is about variation, and at the same time it's about cultural models about variation.

[6.2] The materials I am presenting can be found in Chapter 11 of this book that I referred to this morning as well: *Words and Other Wonders*, which was published in 2006.

[6.3] So my starting point for now is the following question. Cultural models as we saw are primary examples of conceptual onomasiology, i.e. of looking at variation in categorization from the semantic point of view and from the social point of view. But we have also mentioned earlier (and that was also a part of the lecture delivered by Professor Kristiansen) that language attitudes are an important part of studying language variation. Studying language variation is not just about what people do in a different manner, in one dialect or in another dialect, it is also about how people think and feel about language variation. The question for this afternoon will be: can we identify the full spectrum of underlying cultural models, the cultural models that shape debates about linguistics and language variation (so not about linguistics as an academic discipline,

but about language variation)? If we look at these underlying models, is there some kind of logic behind them? Do they have an internal way of reasoning that we can analyze and that we can compare between the different models?

[6.4] My answer to that question will be that we need to distinguish between four different types of models which are in a sense combinations of two basic factors. That is complicated; let me put it this way. First, I will argue that at a very fundamental level we need to distinguish between two antithetic underlying models: a rationalist one and a romantic one. The rationalist one is about language as an instrument and the romantic one is about language as an expression of identity. Those are the two basic perspectives that we need and those perspectives are to some extent in opposition to each other. That is why we call them *antithetical*. But then maybe, strangely enough, we can also see that we find ways of talking about language variation, ways of thinking and feeling about language variation, that present a *synthesis* of these two underlying tendencies. The syntheses that we will present are what I will call a nationalist synthesis and then a postmodern synthesis. When I am talking now about nationalism and postmodernism, you automatically notice that there is again, like in some of the other talks, a diachronic dimension to what I am doing. There is a chronological succession of models: I will be going through a number of stages in the way people have actually been thinking about language variation. I also want to make clear from the start that the models in question (the two basic models, and the four models, if you expand them a little bit), apply both to interlinguistic diversity, i.e. the relationship between different languages and to intralinguistic variation, i.e. the relationship between various dialects of one language. It is fairly obvious that it should be that way because we know (and we also heard that in Professor Kristiansen's lecture) that the distinction between a language and a dialect is not so clear. So it is to be expected that the models we use to talk about variation *between* languages can also be applied to variation *within* one language.

[6.5] The steps to take then are as follows. I will first present the two archetypal models of linguistic variation which in the history of ideas, if we may put it that way, can be related to the 18th century. That is going to be the rationalist and the romantic model, as I already said. Then there is the first transformation, if you wish, of those two models in the 19th century, when we get nationalist ideas about language variation. There is a second transformation which arises in late 20th century and that is the postmodern transformation of the two models.

[6.6]–[6.8] I might perhaps also remark that language ideology (because in a sense this is about language ideology) is not my dominant field of research, but what has brought me to this field are in fact two paths of development. One is going from descriptive studies in lexical variation (of which I have presented some materials in the previous lectures) to questions about language attitudes with regard to variation. I have already explained that this is a natural extension. And then there is the path (which came up this morning as well) where we go from the general framework of Cognitive Linguistics to applying the notion of cultural models to conceptions about language.

[6.9] Now the rationalist model. What are the basic elements of the rationalist conception of language? As I have already indicated, the very central point is that we think about language as a means of communication. Let's apply that to the variation that you might have within one language, between a standard variety of the language and all the varieties—dialects, regiolects, sociolects, whatever, all kinds of lects. I repeat that *lect* is the word that I will be using to refer to all kinds of varieties of one language. So *lect* is a cover term for dialect, regiolect, sociolect, whatever.

When we have the idea that language is a means of communication, how will we think about the relationship between the standard language and the other lects that exist within the language, the other variation in the language? From the rationalist point of view, the standard language is the preferred variety because it is a neutral means of communication and it is a collective means of communication. The standard language is the standard, precisely because it is there for everybody, i.e. because it is that variety of a language that is in principle shared by all members of the linguistic community. So from that point of view, a standard language should also conform to certain requirements. The standard language, in order to fulfill its role as a means of communication, should be a neutral means of communication. A standard language should be above the dialects and other lects. It should not be recognizable as one of the dialects, because in that sense it would no longer be a neutral means of communication. If we want perfect communication, the channel in which we communicate should in principle be neutral. It follows as a further step that language variation is not something that you will value very highly, because language variation would be a difficulty for communication. If there is too much variation, the communication goes away, communication becomes difficult. So from a rationalist point of view—the rationalist point of view that sees language primarily as a means of communication—dialects and all other



forms of language variation are not so very interesting. They are rather impediments to communication than something that you should value.

One further aspect of all of this is the question: why should we have a neutral means of communication at all? There you get another aspect of the ideology. It is not a coincidence that I use the term *rationalist* here, because this whole idea fits in with the ideals of the Enlightenment as a historical stage in the history of thinking. In the 18th century, during the Enlightenment, the idea emerges that people can freely determine their own fate, their own life, and that societies should be built up in an open way. That implies that all people can communicate within the society, and in order to communicate you need a neutral means of communication. So behind this rationalist conception of language is also a certain conception of what *emancipation* means. Why do we need communication in a society? Because everybody should be able to participate democratically. That is the background.

[6.10] There is a general pattern that I will use for all the four models. I will say something about their internal logic and then I will also say something about kind of rhetorical discursive strategies that they use. The logic here is that an optimal communication requires maximal uniformity and maximal neutrality in a channel of communication. (Now notice I am saying all of this without committing myself to it. I don't know whether this is true. None of us knows whether this is true, or maybe all of you know individually, but I am just trying to explain the way people think about it. We will see at the end how difficult it is actually to think about it in a totally open and neutral way. But we will come to that.)

Now if you have a neutral means of communication, where does the neutrality reside? Neutrality with regard to what? At least geographical neutrality. The standard language should not be the language of just, let's say, one province: if it is the language of one province it is not the standard language. It should also be neutral, socially neutral. It should not just be the language of the elite. If it is just the language of the elite, it is not socially neutral and within this ideal schema of things we want neutrality. It should also be (and that is a very specific kind of neutrality), it should also be thematically universal, that's to say, you should be able to talk about anything in the standard language. Because if you are not able to talk about anything in the standard language, it does not fulfill its aim of being an optimal means of communication. So what we want is geographical generality, social neutrality, thematic universality. That is also what you see in the actual development of standard languages, if you think of the European languages. Standardization often goes hand in hand with an

explicit intention to build the language, to develop the language, for instance to make new words, precisely to achieve this form of thematic universality.

And then another very important point is that the standard language, in order to be a neutral means of communication, should be a means of communication in which everybody can participate. In order to achieve that aim, everybody should have access to the standard language. Everybody should be able to learn the standard language, which means that you need education in the standard language, at least in the sense of helping people to acquire the standard language. If it is a leading ideal that everybody should be able to communicate with all the other members of the linguistic community by means of this neutral means of communication, then you need educational efforts to ensure that everybody can speak and write in that language.

[6.11] If you then have a look at the way in which people defend this conception of language, then you can see that people will refer to educational opportunities, to social mobility, to democratic participation. In some cases there would also be a debate about language reform in the sense of: what can we do to make the language even more optimal, if that is possible? Think for instance of social mobility; the types of arguments that you would get would be: it is important for people to learn the standard language, because that will help them to make their way in society.

[6.12] I realize that this may require some translation, but let me now give you a few quotes from the Enlightenment period, from the end of the 18th century, in which we find very explicit formulations of this rationalist conception of language and of standardization. The quotes that I have here are French quotes from two reports: one from Barère and one from Grégoire. These two reports were written for the revolutionary government in France after the French Revolution of 1789. When they had their revolutionary government, one of the questions they debated was: what should we do with French as a language? On French territory we have a number of different dialects, and we even have a number of languages that are only remotely related or not related to French. What are we going to do with this form of intralinguistic and interlinguistic variation? And totally in accordance with the rationalist Enlightenment ideals of the French Revolution, they thought that they should wipe out language variation. Their idea was: in order to serve the democratic revolution and liberation of the French people we need only one language. That is what you find in this quotation. These are people writing for the revolutionary government

and saying 'one language is enough'. They say things like this—well, I'm not going to read the French to you. Let me just give you a few translations.

[6.13] Let me read the first sentence. *Citoyens, la langue d'un peuple libre doit être une et la même pour tous*. Citizens, the language of a free people should be one and the same for everybody. That is to say, we need a language that is common to all and that is general.

[6.14] Another example. Let me try to translate. What is said literally is: *when the lights* (that's to say, the ideals of the Enlightenment) *are with great efforts brought to the periphery of France they die out. They die out because when they reach the peripheral areas the laws that we bring to the people are not understood* (because the people there don't understand the French in which the laws are written). *If we leave the citizens in ignorance of the national language, that means that we are betraying the revolution and betraying our country*. Just let me leave it there. So what it says is: the absence of a common language blocks the emancipation the people, and blocks the cause of the revolution.

[6.15] Further aspects of the same report include a reaction against language variation as it existed in the old regime, i.e. in the pre-Revolutionary times. *The tyrants said* (by 'the tyrants' they obviously mean the aristocrats and the old monarchs, the kings that they chased away) *let us use badly instructed people and those who speak a language or a dialect that is different from the language of public education to maintain our position*. So by depriving people from education you keep them ignorant, but in order to give them education you also need a language to do so—and it had better be the same language that you use for all your public life. So education is necessary to ensure that people can participate in the open society.

[6.16] This is the second report that I mentioned, by Grégoire. The title itself of the report is quite interesting. It reads *On the Necessity of Annihilating the Dialects and on the Ways of Doing so*. This is quite explicit: let's do away with language variation. The kind of arguments you find are roughly the same as what we had before.

[6.17] To make a language uniform means that we create a possibility for people to communicate, specifically, so that they can communicate their ideas among each other without any obstacle. So this is clearly a rationalist view, with language seen as a means of communication.

[6.18] Again, we find the idea that the absence of a common language hinders emancipation. This is a very nice idea he has in this respect. He says, '*Actually what we would want to see is basically that everybody could at one time in his life maybe become a member of parliament.*' So if we get more or less a rotational system in which everybody at some point might be a member of parliament, then obviously we would also have to make sure that they could express themselves and that they would be able to talk themselves in the parliament. In order to do that, they would all have to know the standard language.

[6.19] Then a final point here: dialects again are seen as belonging to the old regime, to the 'Ancien régime': *the feudal system consciously maintained the diversity of language and speech.* So, overall, this is the rationalist model, in which you have an insistence on the neutrality, the generality, the uniformity of the standard language as against the dialects. Dialects are something old, something that should be forgotten, something that belongs to a previous stage in the development of a society.

[6.20] Now let us move to the romantic model. The romantic model is actually, as I already suggested, nicely antithetical with regard to the rationalist model. If you think of the romantic model, the basic idea is to think of language not as a means of communication but as a means of expression. Expressing what? Expressing identity. Expressing yourself—not necessarily communicating with people as such, but specifically communicating to show who you are.

If you think about language in that way, then the imposition of a standard language or the existence of a standard language which is the same for everybody is precisely denying identity. A standard language which is uniform (precisely because it is uniform and because you think of language as an expression of identity) is then seen as imposing the same identity on everybody. You would not want that. On the contrary, it is language variation you want, because in language variation you get the possibility of expressing many many many different identities. From this point of view, this is really the opposite of the rationalist approach. The rationalist approach, in which language is just a means of communication, favors maximal uniformity and generality; a romantic approach in which you think of language as expressing a specific identity favors variation and actually resents the uniformity that is imposed ('imposed' at least from the romantic point of view) by the existence of standard languages.

[6.21] The internal logic that you find in this romantic model is an antithetical one with regard to the rationalist model. Specifically, the kind of reasoning that you get within a romantic point of view is very often that the ideal of

standardization is undermined, is 'deconstructed', we could say, as being an ideological filter on reality, as hiding the real realities.

It is interesting to see that the arguments with which you can do that from the romantic point of view refer back to the different types of neutrality that we could identify as being important for standard languages. For instance, when we said that standard languages should ideally be geographically neutral, then a romantic logic will say, *'Yes, OK. That is the ideal—but in actual practice most of the time standard languages are the languages of one province or one region or one city that is so important in the country in question, in the community in question, in the nation in question that it imposes its language on all the rest.'* So instead of there being a free choice for a neutral language, standard languages are not a matter of free choice, and standard languages do embody power relations, the power relations between the rich provinces and the poor provinces, for instance. That is indeed often the case if you look at the history of standardization, at least in the western countries. What is standard French? Standard French is not just a neutral means of communication: it is the means of communication of a certain area of France that became important. (Let's say, simplistically, it's the dialect of Paris.)

The same with social neutrality. The standard languages claim social neutrality but in actual fact, they are not socially neutral because some people will have the standard language as their native language, and others will not. People who have the standard language as their native language very often are people belonging to the elite, to the higher classes. So standard languages are not just neutral. Standard languages are very often socially marked as being the languages of certain elite groups.

The same is even true for thematic neutrality, or thematic universality. We said that you should be able to talk about anything in the standard languages. At the same time, the use of standard languages is typical for certain subjects and certain topics. The standard language is for instance the language of administration and government. When you think in a romantic way, according to the romantic schema, that you are a discriminated minority, then you will not like the language of the national government because the language of the national government you will see as being part of the power structures that oppress you. So from that point of view, romantic models will tend to deconstruct the ideology of standardization as being not neutral.

[6.22] In terms of rhetoric, then, how will people defend, from a romantic point of view, language variation? Precisely by referring to the view that languages link up with identities: so if you deny certain languages, certain lects, dialects, language varieties the right to exist (as we saw in the quotes from

these revolutionary men in France), it is like denying people the right to have their own identity. If language is identity then taking away language variation means taking away individual identities.

[6.23] Let me now to complete this first step and give you an example of a quote that embodies this romantic view of language. This is not an 18th century quote; this is a contemporary example taken from a discussion on what is known as Linguistic Genocide. Linguistic Genocide is the idea that we are living in a situation in which many different languages are being threatened with extinction precisely because there are international languages, like English or Spanish in Latin America for instance that are a threat to the indigenous languages, to the local languages. The disappearance of the local languages is then by some people seen as actually a cultural genocide—not just a linguistic genocide, but a cultural genocide in the sense that the culture of the people in question is disappearing together with their language. What you get is things like this. Let me just highlight a few aspects. This is from a publication by Tove Skutnabb-Kangas who is one of the main champions of the indigenous languages and variety in the indigenous languages. What she says are things like this. Let's perhaps read the quote:

Indigenous peoples and minorities are the main bearers of linguistic and cultural diversity in the world—over 80% of the world's languages exist in one country only and the median language has no more than 5,000 speakers. Some of the direct main agents of linguistic (and cultural) genocide (see linguistic and cultural genocide) today are parts of what we call the consciousness industry: formal educational systems and the mass media. The deficiency-based models that are used in most minority education invalidate the linguistic and cultural capital of minority children and their parents and communities. They make the resources of dominated groups seem handicaps or deficiencies, instead of valued and validated non-material resources, or they render them invisible and therefore not possible to convert into material resources and positions of structural power. This happens just as much in global international relations and the McDonaldization of the world as it happens in ESL classrooms.

[6.24] What do we get here? Notice how *linguistic* and *cultural* are consistently conjoined in this text. Any time you find a reference to language there is a reference to culture. That is to say, language *is* culture. Language is essential for cultural identity. That's the romantic model in its essence.

[6.25] Further, non-native education is oppressive. If you want (as you would do in a rationalist model) to teach people how to use the general means of communication which would then almost by definition be different from the indigenous local language, then that is not a form of emancipation, as you would assume from the rationalist point of view. No, from the romantic point of view, it is oppressive because it is said to reflect a deficiency-based model etc.

[6.26] Further, you have this rhetoric of threatened diversity. Minorities and minority languages are carriers of cultural diversity. You should not take cultural diversity away; you should not touch the languages that embody the cultural diversity.

[6.27] We now have our two basic models: the rationalist one and the romantic one. To round off this first step I could also point out (but I don't want to spend too much time on this) that there are different philosophical conceptions about the origin of language behind these two antithetical models. If we had a bit more time I could go into the 18th century voices that present those two fundamental means about language origin. Here, let me just briefly sketch the differences. On the one hand, you have views like those of Condillac, the French philosopher, who has a story about language as originating from interpersonal communicative gestures. If language is communication, how do languages arise? Languages arise through communication, because there is some communicative need. Opposed to that is a view that you find with the German romantic philosopher Herder who has a clearly romantic conception of the origin of language and who has a story (both philosophers work with stories in their exposes on the origin of language) about language originating as a certain view of the world. That is romantic because the view of the world that you have is typically expressing your identity. It is your own personal opinion, your own personal categorization of the world. Between language as categorization, as something essential, individual to yourself, versus language as a communicative means with which you express something for someone else (not primarily because it's your point of view but because you want to communicate), between those two we again have this basic opposition between, in that order, a romantic and a rationalist view.

[6.28] What I have here is part of Herder's story and if your German is good enough you could read it.

[6.29] And this is a part of Condillac's story and if your French is good enough you can read it. But it is not so essential for what I am talking about here. The

essential thing is that you get this opposition between a romantic and a rationalist conception of language variation.

[6.30] Fine, what is next? A universal struggle between the two models? Well, maybe. But in actual fact, what happens is that at some point you can see that. . . . Let me first say something else. What I am going to do now is to present what I earlier called the two 'synthetic' models. Why are they synthetic? They are synthetic because they bring together aspects of the two initial positions. The question we will have to ask ourselves is whether the way they bring together these two aspects is felicitous or not, whether it is a happy synthesis, a successful synthesis or not. We will see that this is actually not the case. So we will eventually still be left with tensions, tensions between the models. For the initial models, the tensions are quite clear, but even for the models that to some extent synthesize the two perspectives we are still left with a certain tension. What I will be doing now in the following steps is to explain the kinds of synthesis we get and then of course to point out that those syntheses do not remove all tensions within the models.

Now why can nationalism possibly present some form of synthesis of the romantic and rationalist ideal? The basic logic here is one of converging levels. Why? Let's ask ourselves, given a rationalist approach, given a romantic approach, what is the optimal level at which to ensure communication or the optimal level at which to express identities? If we follow the logic of the rationalist and the romantic model in a very extreme way, or perhaps even in a purely logical way, we arrive at a very extreme position. In what sense?

[6.31] Notice that rationalism has a universalist tendency. If you really want optimal neutral communication, what is the scope of your community? Ultimately the scope of your community is humankind, all people. If you want maximalization of neutral communication, you would want it on the scale of the world. So maximal emancipation, maximal democracy, maximally open societies involve a universal nation and a world language. If you think of something like Esperanto, it is a clear emanation of this universalist ideal. It is the ideal if you read the motivation that people have for promoting Esperanto, it is saying '*we need one neutral language for the whole world and everybody should speak it*'. So the internal tendency of a rationalist approach is to be universalist, to apply language uniformization to the entire world.

That is not very realistic for practical reasons and certainly not in the 18th century. What happens in the 19th century is that the actual level at which you standardize is the level of a nation. It is an existing political community. That's the level on which you impose standard languages, not the world. Those French



revolutionaries may try to impose French or to spread French or to teach people how to use French in the entire French territory. But they would not be able to export the use of French to the entire world. (They actually tried to do so, to some extent at least, to the rest of Europe, but for practical and historical reasons that you can very well imagine that's not something you could really do on a global scale.) So in actual practice the extreme universalist position of a rationalist approach naturally shrinks to a certain level. And in practice that is the level of the nation. So you get standardization as part of 19th century nationalism. There are some background concepts on the slide here, but they belong more to political theory than to linguistics; they refer to different kinds of nationalisms that you can get, but I don't really want to go into that except for saying that this type of conception of a nation—in which a nation is so to speak a body of communicating people—is what in political theory is known as 'liberal nationalism' or with a German term *Staatsnationalismus*.

[6.32] Then on the other hand, what is the tendency that is inherent in a romantic model? In the romantic model you get the other extreme. In the romantic model, which identity do you want to express? What is the maximal identity you could express? That is your own identity. So romanticism has an individualist tendency—and of course you know about that if you think about the romantic movement in general: it is a highly individualist movement. You could see that in the arts for instance. The ultimate identity that you might want to express is the identity of an individual person. Maximal diversity (which is what you want in a romantic model) involves individualism.

But of course, again, with regard to language, this is an ideal that you can not attain because what would the maximal expression of identity from the linguistic point of view mean? That would mean that we have individual languages. Each person his own identity; each person his own language: that would be the consequence of following the logic that we found for instance in Skutnabb-Kangas' quotes on linguistic genocide and so on. Each person his own identity; each person his own language. But even the most extreme romanticists will not want to abolish communication as a whole. If you still want some communication and you stick to the romantic conception of language, the scope of the identity that you want to express will have to be bigger than the individual person. In the rationalist model, it has to be smaller than humankind as a whole; in the romantic model, it has to be bigger than the individual as a single person, as a single identity.

So, what is the identity that you will want to express from the point of view of 19th century, romantic ideals? That's the identity of a group of people, to put

it more shortly, of a *people* in the romantic sense of a group of persons who have a similar identity, who share an identity as a group. Of course, associated with that is the notion that that group of people will also constitute a nation of its own, i.e. will have an expression of its identity not just in the language but also in social and political institutions. For practical reasons you don't stick with individuals but you enlarge the scope of the romantic ideal to the common language as a bearer of ethnic/cultural group identity. That's of course also what we saw in the quote on linguistic genocide. It is not about individual identities; it's about group identities.

And if you link that again to political views and political nationalism, then this would be an example of 'romantic nationalism'. A nation is a group of people with the same identity. That's romantic nationalism. In the liberal nationalism idea, a nation is a group of people who have decided freely to organize their common life in a certain way. In a romantic view of nationalism you get a nation as a group of people with a similar identity.

[6.33] You can see now how the two approaches can come together in the idea of nationalism as having a nation of intercommunicating persons and having a nation as people with the same identity. What you see in the development of nationalism in the 19th century is precisely that in most cases (there are some exceptions), language within a nation is presented as both of these things. Language is presented as the bearer of our national identity and is at the same time presented as the necessary tool that we need to organize our political institutions, to organize our education, to ensure that people have access to education and so on. So there the two converge. In principle, nationalism may combine both a romantic and a rationalist conception of language variation.

To summarize: between the extremes of universalism and individualism, rationalism and romanticism may converge towards the middle, coupling feelings of identity with claims to political independence and free organization of those people coming together in a nation.

Now in actual fact what happens is somewhat different.

[6.34]–[6.36] Let me first briefly mention the following. I am not going to have a close look at this quotation but already in the text from Grégoire and Barré which I presented earlier, you can find a nationalist tendency. I presented the texts as if they presented the rational ideal in a very pure sense but to some extent there are already clearly nationalist overtones in those texts. The text by Grégoire (6.34) points out, for instance, that a world language is an impossibility (6.35), and suggest that France has a specific national identity (6.36).

[6.37] Now if you are familiar with philosophy, and specifically with dialectic philosophy, you will notice that when I take the steps of putting forward one thesis, rationalism, and then romanticism as the antithesis, and then nationalism as the synthesis, then being good followers of the German dialectic philosopher Hegel, we would have to ask ourselves, '*yes, but is this a successful synthesis or not?*' That's what Hegel talks about. You have unsuccessful and successful syntheses when you have antithetical processes. You can not really say that nationalism is a happy synthesis of the two approaches. Far from it, in fact, because there are two types of problems that remain. But I will focus only on the first one.

[6.38] The first one in fact is quite easy to see. That's the demarcational problem: if you think about the history of nationalism, if you think about the history of 19th century nationalism in Europe for instance, it is obvious that there is a tension or perhaps even a continuous struggle about the level at which the nation should be situated. There is a continuous struggle between minority groups that live in a certain existing nation who think that they have the right to have their own independent nation. If you think of all the nationalist wars there have been, in the 19th and the 20th century, in Europe and elsewhere, it is clear that a nationalist conception does not automatically stabilize. It does not stabilize at all in fact: you always get a tension between existing bigger entities (independent nations), and smaller entities (ethnic groups etc.) that claim that they should be one of the independent nations.

Nationalism in that sense is not a solution to the question of linguistic diversity, as long as you keep the tension between for instance nation states and then ethnic or cultural minorities that claim the right to their own language and the right to an equal treatment for their own language. Again, a lot of the sociolinguistic history of European nations in the 19th century has to do with these questions. (As I said I won't go into the second problem mentioned on the slide.)

[6.39] Then, given that nationalism is clearly not a solution (because there is a convergence towards the middle but the two tendencies definitely do not automatically reach a happy solution or a stable solution), let's look at another ideological tendency that you can see emerging in, say, the last quarter of the 20th century. That is the type of ideology that we know as postmodernism.

What does postmodernism involve? In a sense (this is quite explicit in the philosophical definitions of postmodernism), it's reaction against nationalism. If you think about what kind of synthesis I presented from the nationalist point of view, it is a synthesis that takes the form of a combination of the two

models: nationalism is a way of trying to get both models at the same time. But from the point of view of language, nationalist linguistic policies go for only one language. What would be the other solution? The other solution would be to say 'let's just accept the variety, let's accept the variation'. That's a typically postmodern logic. The philosophical basis of postmodernism, in fact, can be introduced as follows. If we start from a romantic point of view, the postmodern view will be that you can have many identities; you can for instance at the same time be an inhabitant of a specific region and a member of a nation state. So linguistically, let's do the same thing. Instead of saying that it always has to be either-or, why cannot it be both at the same time? That's a conjunctive way of thinking about things. Notice then that this way of thinking—where you can say 'let's just accept the variation'—can be applied again from a romantic and a rationalist point of view.

[6.39] From a romantic point of view, let's call that romantic postmodernism. That's not the standard term, but if we call it romantic postmodernism, it will be clearer why we get a logic of multiple identities. As I said, it is not that you have to be only one type of person; you can be different types of persons. You can be both a Breton and a French citizen; you can be a Scot or an Englishman and a Brit; you can be a Fleming and a Belgian at the same time; so you can be member of minority group and at the same time belong to a nation or whatever identity you choose—also in cultural terms, and not just in political terms. So the rhetoric that you find there is then a rhetoric of shifting, fragmented, flexible identities. There are some major philosophical statements about that. I don't know how familiar you are with this, but note that the idea is basically what the well-known French philosopher Baudrillard expressed in his statement that the 'old grand narratives' are now in decline—stories like 'the nation', 'progress', 'enlightenment'. These traditional frameworks have lost their hegemony, and instead of that you get fragmentation; you get all things at the same time. So that's thinking in a postmodern way from the point of view of romanticism, from the point of view of identities.

[6.41] Although this is much less common, we can also take a postmodern position from the point of view of communication, from a functional point of view—let's say from a rationalist point of view. In that case, a rationalist motivation for a postmodern stand would again involve a logic of multiplicity, but now a logic of functional multiplication. Why restrict yourself to one language? You can have many languages, or you can have many different styles within one language. Within one language you can speak your local dialect on the local level and you speak the standard language at another level. From the

linguistic point of view, this is a defense of multilingualism, bilingualism, and stylistic variation. The rhetoric that goes with it is likewise a rhetoric or functional differentiation and multilingualism.

[6.42] If you see what happens to the two basic models here, you see that they are combined, but they are combined in a different kind of synthesis, not a synthesis by focusing on the level of people at which the common language should be achieved, but by saying: individual people may have different languages just like they may have different identities. As we've seen, that would make sense both from a romantic point of view and from a rationalist point of view. So again, it is a synthesis which brings together the two initial positions.

Fine, but if we go from rationalism to the antithesis of romanticism and then to the false synthesis of nationalism, do we now get a successful synthesis in the postmodern approach? No, we don't, because the tensions that we mentioned earlier are present in this approach as well. In what sense? Again, I have these two problems but I will focus on just one of them, on the first one.

[6.43]–[6.44] The demarcation problem that we could identify from the nationalist point of view (which group is your identity group, which group is your nation?) is now replaced by problems with regard to the demarcation of relevant functional domains. If you think of multilingualism in terms of multifunctionality, then you're still left with the question: which language for which function? That's a very concrete question and it's a question that arises a lot in contemporary society. To a large extent, it's a question like: when do we speak English and when do we speak our local or national language? For instance, take the European Union as a political institution that brings together different countries, different nations each with their own languages. But what is the language they will use when they communicate with each other? And which languages do we accept within the European Union as official languages? That's not a question that gets an automatic answer; it's a question that leads to tensions, tensions of the following kind. If you take a country like Spain, where you have Castilian as the main language but Catalan as a minority language of a substantial size, then the traditional nationalist question will be: what is the function, what is the role, what is the status of Catalan within the Spanish nation? That question is now in a sense replaced by a question in the European Union (as an institution that accepts multilingualism). Initially, on the level of the nation state, Spain would not accept multilingualism, and it took the Catalan nationalist movement a lot of effort to get a recognition of their linguistic identity. When we move the discussion from the level of the single nation that used to be unilingual to a larger body that is obviously multilingual, we

still have a question: should we accept Catalan as one of the official languages of the European Union or not? So the tensions and demarcational problems actually remain. It's not the case that the tensions are automatically relieved. In some cases, that would certainly be the case, but in general it is not the case that the debates will go away. Whatever type of synthesis you use—the nationalist one or the postmodern one—we are still left with demarcational problems and questions that will have to be settled.

[6.45] Let me give you an overview of what I have been saying. We have three models to talk about and three centuries to talk about. There is the 18th century when we get the archetypal models; there's the 19th century when you get a nationalist synthesis or transformation of the initial positions; and you get the 20th century when we have a postmodern transformation of the positions. For each of those three periods we can identify the rationalist point of view, the romantic point of view and then the difficulty that exists between them.

For the 18th century we can say the rationalist position implies that a common language is a neutral instrument of political, cultural and educational participation; the romantic position is that an imposed standard language is a discrimination of specific identities and the tension between both obviously is that the two are antithetical to each other. (You will see in the chart that I refer to the *Dialektik der Aufklärung*. That is a philosophical concept I will not explain in this context. Note that it has to do with explaining the antithesis that exists between the two basic models. That's something to explore if you want to do some more philosophy—when you are through with linguistics so to speak.)

Then the 19th century transformation of the rationalist position implies that the nation is the basis of a liberal democracy, and a nation needs one language in order to ensure its democratic status. The romantic position is that the nation is a focus of cultural and ethnic identity, and it needs one language as an expression of its cultural and ethnic identity. So these two positions could possibly come together, but in actual fact they often do not come together because there is the problem of demarcation of the relevant group. There is a conflict between existing nation-states and ethnic/cultural minority groups with their own language: linguistic minority groups that claim equal rights or more rights for their own identity as expressed in the language.

Finally, if we look at the postmodern transformation, the rationalist position implies that we get diversity and multilingualism as functional diversity and functional specialization. The romantic position is that diversity and multilingualism are the expression of fragmented and flexible identities. The

tension between both is again a demarcational tension, a demarcation of relevant functions in this case, not a demarcation of the relevant group but a demarcation of the relevant functions: what exactly is the shape of the functional specialization that we would go for?

[6.46] All in all, by way of conclusion, I have argued that dominant conceptions of language diversity form a logical pattern, if you wish, of two cultural models that mirror each other and that form a logical pattern. The pattern is a dialectic one with both antithetical and synthetical tendencies. If we were to restrict our sociolinguistic analysis of models of language variation to just one or a few of those models, that would be an impoverishment. For instance, in a discourse analysis of language policy debates, we need to take into account the full spectrum of the positions.

[6.47] We should also accept that all models are ideological to some extent. If we accept that there are tensions within all of the models that we have considered, then a strict defense of just one of the models as the best one could easily turn into a way of masking the tensions. That is why it is important that you are critical as linguists: if you look at the way in which people talk about language variation and language variety, you should be careful to keep in mind that there is always this hidden tension in all of the different models. Unfortunately, of course, that is also a way of being conscious of the fact that our role as linguists is limited. We may, as linguists, be able to identify the different models, but that does not necessarily mean that we've solved the problems or that we've solved the tensions that are inherent in the models. But even if we cannot solve the tensions, identifying the models and laying bare their internal logic is quite interesting in itself. So I hope I may have given you some idea of how this might be done. Thank you!

## Handout Lecture 6

### 6.1 Situating the talk

- 1–2 Introduction
- 3–4 Semasiological variation
- 5–6 Conceptual onomasiological variation
- 7–9 Formal onomasiological variation
- 10 Conclusion

### 6.2 Background

- Dirk Geeraerts 2006  
**Words and Other Wonders. Papers on Lexical and Semantic Topics.**  
Berlin: Mouton de Gruyter.
- chapter 11

### 6.3 Starting-point

cultural models are a prime example of conceptual onomasiology  
but to what extent do they shape language attitudes  
(see Lecture 2 on the scope of cognitive sociolinguistics)

- can we identify the full **spectrum of underlying cultural models** that shape linguistic debates ?
- can we determine their **internal logic**?

### 6.4 Claim

- we need to distinguish between
- two antithetical underlying models:  
a rationalist one and a romantic one
- two synthetic models:  
a nationalist one and a postmodern one

(these models apply both to intralinguistic and to interlinguistic diversity)

### 6.5 Steps

- two archetypal models of linguistic variation, rooted in the 18th century: the **rationalist** and the **romantic** model
- a first avatar: 19th century **nationalism**
- a second avatar: late 20th century **postmodernism**



## 6.6 Background

- language ideology is not my dominant field two paths to the present topic
- from descriptive studies in lexical variation ...

1994 **The Structure of Lexical Variation**

D Geeraerts, S Grondelaers & P Bakema [Mouton de Gruyter]

1997 **Diachronic Prototype Semantics**

D Geeraerts [Oxford University Press]

## 6.7 Background

... to questions about the language attitudes with regard to variation

- from the general framework of Cognitive Linguistics to applying the notion of **cultural model** to conceptions of language

cp. Lakoff, Moral Politics

(Critical Discourse Analysis with a Cognitive Linguistic twist)

## 6.8 Source

Geeraerts, Dirk. 2003. "**Cultural models of linguistic standardization**". In René Dirven, Roslyn Frank & Martin Pütz (eds.), *Cognitive Models in Language and Thought. Ideology, Metaphors and Meanings* 25–68. Berlin: Mouton de Gruyter.

## 6.9 The rationalist mode

- language as a means of communication
- standard language as a neutral medium of social participation
- language variation as an impediment to emancipation

## 6.10 The rationalist model

the **logic of standardization**:

- optimal communication requires maximal uniformity
- a neutral medium of communication requires  
geographical generality  
social neutrality  
thematic universality
- a standard language requires universal accessibility, i.e. education

### 6.11 The rationalist model

→ a rhetoric

of educational opportunities, social mobility, democratic participation  
(and possibly of language reform)

### 6.12 An Enlightenment example

Barère 1794, *Rapport du Comité de Salut Public sur les idiomes*.

Citoyens, la langue d'un peuple libre doit être une et la même pour tous  
Les lumières portées à grands frais aux extrémités de la France s'éteignent  
en y arrivant, puisque les lois n'y sont pas entendues

Laisser les citoyens dans l'ignorance de la langue nationale, c'est trahir la  
patrie; c'est laisser le torrent des lumières empoisonné ou obstrué dans  
son cours; c'est méconnaître les bienfaits de l'imprimerie, car chaque  
imprimeur est un instituteur public de langue et de législation.

Citoyens, les tyrans coalisés on dit: l'ignorance fut toujours notre auxilia-  
ire le plus puissant; maintenons l'ignorance; elle fait les fanatiques, elle  
multiplie les contrerévolutionnaires; faisons rétrograder les Français  
vers la barbarie: servons-nous des peuples mal instruits ou de ceux qui  
parlent un idiome différent de celui de l'instruction publique.

### 6.13 An Enlightenment example

Barère 1794, *Rapport du Comité de Salut Public sur les idiomes*.

Citoyens, la langue d'un peuple libre doit être **une et la même pour tous**  
Les lumières portées à grands frais aux extrémités de la France s'éteignent  
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Laisser les citoyens dans l'ignorance de la langue nationale, c'est trahir la  
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vers la barbarie: servons-nous des peuples mal instruits ou de ceux qui  
parlent un idiome différent de celui de l'instruction publique.

generality and  
neutrality of the  
common language

#### 6.14 An Enlightenment example

Barère 1794, *Rapport du Comité de Salut Public*

Citoyens, la langue d'un peuple libre doit être une et la même pour tous. Les lumières portées à grands frais aux extrémités de la France s'éteignent en y arrivant, puisque les lois n'y sont pas entendues. Laisser les citoyens dans l'ignorance de la langue nationale, c'est trahir la patrie; c'est laisser le torrent des lumières empoisonné ou obstrué dans son cours; c'est méconnaître les bienfaits de l'imprimerie, car chaque imprimeur est un instituteur public de langue et de législation. Citoyens, les tyrans coalisés ont dit: l'ignorance fut toujours notre auxiliaire le plus puissant; maintenons l'ignorance; elle fait les fanatiques, elle multiplie les contrerévolutionnaires; faisons rétrograder les Français vers la barbarie: servons-nous des peuples mal instruits ou de ceux qui parlent un idiome différent de celui de l'instruction publique.

absence of a common language blocks emancipation

#### 6.15 An Enlightenment example

Barère 1794, *Rapport du Comité de Salut Public sur les idiomes*.

Citoyens, la langue d'un peuple libre doit être une et la même pour tous. Les lumières portées à grands frais aux extrémités de la France s'éteignent en y arrivant, puisque les lois n'y sont pas entendues. Laisser les dialectes appartenir à l'ignorance de la langue nationale, c'est trahir la patrie; c'est laisser le torrent des lumières empoisonné ou obstrué dans son cours; c'est méconnaître les bienfaits de l'imprimerie, car chaque imprimeur est un instituteur public de langue et de législation. Citoyens, les tyrans coalisés ont dit: l'ignorance fut toujours notre auxiliaire le plus puissant; maintenons l'ignorance; elle fait les fanatiques, elle multiplie les contrerévolutionnaires; faisons rétrograder les Français vers la barbarie: servons-nous des peuples mal instruits ou de ceux qui parlent un idiome différent de celui de l'instruction publique.

dialects belong to the Ancien Régime; standardization involves education

#### 6.16 An Enlightenment example

Grégoire 1794, *Sur la nécessité et les moyens d'anéantir le patois*

Mais au moins on peut uniformer le langage d'une grande nation, de manière que tous les citoyens qui la composent puissent sans obstacle se communiquer leurs pensées.

Tous les membres du souverain sont admissibles à toutes les places; il est à désirer que tous puissent successivement les remplir, et retourner à leurs professions agricoles ou mécaniques. Cet état de choses nous

présente l'alternative suivante: si ces places sont occupées par des hommes incapables de s'énoncer, d'écrire dans la langue nationale, les droits des citoyens seront-ils bien garantis par des actes dont la rédaction présentera l'impropriété des termes, l'imprécision des idées, en un mot tous les symptômes de l'ignorance?

La féodalité qui vint ensuite morceler ce beau pays, y conserva soigneusement cette disparité idiome comme un moyen de reconnaître, de ressaisir les serfs fugitifs et de river leurs chaînes.

### 6.17 An Enlightenment example

Grégoire 1794, *Sur la nécessité et les moyens d'anéantir le patois*

Mais au moins on peut **uniformer le langage** d'une grande nation, de manière que tous les citoyens qui la composent puissent **sans obstacle se communiquer leurs pensées**.

Tous les membres du souverain sont admissibles à toutes les places; il est à désirer que tous puissent successivement les remplir, et retourner à leurs professions agricoles ou mécaniques. Cet état de choses nous présente l'alternative suivante: si ces places sont occupées par des hommes incapables de s'énoncer, d'écrire dans la langue nationale, les droits des citoyens seront-ils bien garantis par des actes dont la rédaction présentera l'impropriété des termes, l'imprécision des idées, en un mot tous les symptômes de l'ignorance?

La féodalité qui vint ensuite morceler ce beau pays, y conserva soigneusement cette disparité idiome comme un moyen de reconnaître, de ressaisir les serfs fugitifs et de river leurs chaînes.

### 6.18 An Enlightenment example

Grégoire 1794, *Sur la nécessité et les moyens d'anéantir le patois*

Mais au moins on ne peut pas compenser l'absence of a common language d'une grande nation, de manière que tous les citoyens qui la composent puissent sans obstacle se communiquer leurs pensées. The absence of a common language hinders the emancipation of the people.

Tous les membres du souverain sont admissibles à toutes les places; il est à désirer que tous puissent successivement les remplir, et retourner à leurs professions agricoles ou mécaniques. Cet état de choses nous présente l'alternative suivante: si ces places sont occupées par des hommes incapables de s'énoncer, d'écrire dans la langue nationale, les droits des citoyens seront-ils bien garantis par des actes dont la rédaction présentera l'impropriété des termes, l'imprécision des idées, en un mot tous les symptômes de l'ignorance?

La féodalité qui vint ensuite morceler ce beau pays, y conserva soigneusement cette disparité idiome comme un moyen de reconnaître, de ressaisir les serfs fugitifs et de river leurs chaînes.

### 6.19 An Enlightenment example

Grégoire 1794, *Sur la nécessité et les moyens d'anéantir le patois*

Mais au moins on peut uniformer le langage d'une grande nation, de manière que tous les citoyens qui la composent puissent sans obstacle se communiquer leurs pensées.

Tous les membres du souverain sont admissibles à toutes les places; il est à désirer que tous puissent successivement les remplir, et retourner à leurs professions agricoles. Cet état de choses nous présente l'alternative suivante: ou les dialectes belong to the Ancien Régime sont occupées par des hommes incapables de s'exprimer dans la langue nationale, les droits des citoyens seront-ils méconnus, ou des actes dont la rédaction présentera l'impropriété des termes, l'imprécision des idées, en un mot tous les symptômes de l'ignorance?

La féodalité qui vint ensuite morceler ce beau pays, y conserva soigneusement cette disparité idiome comme un moyen de reconnaître, de ressaisir les serfs fugitifs et de river leurs chaînes.

### 6.20 The romantic model

- |   |  |
|---|--|
| • language as a means of communication                          | • language as a means of expression                            |
| • standard language as a neutral medium of social participation | • standard language as a oppressive medium of social exclusion |
| • language variation as an impediment to emancipation           | • language variation as expressing different identities        |

### 6.21 The romantic model

the **antithetical logic** of deconstructing standardization as ideology:

- vs. geographical generality
- vs. social neutrality
- vs. thematic universality

cp. Horkheimer & Adorno: *Dialektik der Aufklärung*  
 ("forcing people to be free")

## 6.22 The romantic model

- a rhetoric
  - of threatened diversity and identity
  - (and possibly of linguistic purism)

## 6.23 A contemporary example

Tove Skutnabb-Kangas 2000, *Linguistic genocide in education*

Indigenous peoples and minorities are the main bearers of linguistic and cultural diversity in the world—over 80% of the world's languages exist in one country only and the median language has no more than 5,000 speakers. Some of the direct main agents of linguistic (and cultural) genocide today are parts of what we call the consciousness industry: formal educational systems and the mass media.

The deficiency-based models that are used in most minority education invalidate the linguistic and cultural capital of minority children and their parents and communities. They make the resources of dominated groups seem handicaps or deficiencies, instead of valued and validated non-material resources, or they render them invisible and therefore not possible to convert into material resources and positions of structural power. This happens just as much in global international relations and the Mcdonaldization of the world as it happens in ESL classrooms.

## 6.24 A contemporary example

Tove Skutnabb-Kangas 2000, *Linguistic genocide in education*

Indigenous peoples and minorities are the main bearers of **linguistic and cultural** diversity in the world - over 80% of the world's languages exist in one country only and the median language has no more than 5,000 speakers. Some of the direct main agents of **linguistic (and cultural)** genocide today are parts of what we call the consciousness industry: formal education and the mass media.

The deficiency-based model of language is culture, i.e. most minority education invalidate the **linguistic** language is essential for minority children and their parents and communities cultural identity the resources of dominated groups seem handicaps or deficiencies, instead of valued and validated non-material resources, or they render them invisible and therefore not possible to convert into material resources and positions of structural power. This happens just as much in global international relations and the Mcdonaldization of the world as it happens in ESL classrooms.

### 6.25 A contemporary example

Tove Skutnabb-Kangas 2000, *Linguistic genocide in education*

Indigenous peoples and minorities are the main bearers of linguistic and cultural diversity in the world - over 80% of the world's languages exist in one country only and the median language has no more than 5,000 speakers. Some of the direct main agents of linguistic (and cultural) genocide today are parts of what we call the consciousness industry: formal educational systems and the mass media.

**The deficiency-based models that are used in most minority education invalidate the linguistic and cultural capital of minority children and their parents and communities.** They make the resources of dominated groups seem handicaps or deficiencies, instead of valued and validated non-material resources, or they render them invisible and therefore not possible to convert into material resources and positions of structural power. This happens just as much in global international relations and the McDonaldization of the world as it happens in ESL classrooms.

non-native education  
is oppressive

### 6.26 A contemporary example

Tove Skutnabb-Kangas 2000, *Linguistic genocide in education*

Indigenous peoples and minorities are **the main bearers of linguistic and cultural diversity** in the world - over 80% of the world's languages exist in one country only and the median language has no more than 5,000 speakers. Some of the direct main agents of linguistic (and cultural) genocide today are parts of what we call the consciousness industry: formal educational systems and the mass media.

linguistic diversity is  
threatened

**The deficiency-based models that are used in most minority education invalidate the linguistic and cultural capital of minority children and their parents and communities.** They make the resources of dominated groups seem handicaps or deficiencies, instead of valued and validated non-material resources, or they render them invisible and therefore not possible to convert into material resources and positions of structural power. This happens just as much in global international relations and the McDonaldization of the world as it happens in ESL classrooms.

### 6.27 Background notions

different philosophical conceptions of the origin of language

rationalist: **Condillac 1746**  
*Essai sur l'origine des*  
*connaissances humaines:*

language originates as an  
 interpersonal  
 communicative gesture

romantic: **Herder 1772**  
*Abhandlung über den*  
*Ursprung der Sprache:*

language originates as  
 the expression of a world  
 view

### 6.28 Background notions

- **Herder**

Weiss, sanft, wollicht—seine besonnen sich übende Seele sucht ein Merkmal,—das Schaaf blöcket! sie hat Merkmal gefunden. Der innere Sinn würket. Dies Blöcken, das ihr am stärksten Eindruck macht, das sich von allen andern Eigenschaften des Beschauens und Betastens losriss, hervorsprang, am tiefsten eindrang, bleibt ihr. Das Schaaf kommt wieder. Weiss, sanft, wollicht—sie sieht, tastet, besinnet sich, sucht Merkmal—es blöckt, und nun erkennet sies wieder! 'Ha! du bist das Blöckende!' fühlt sie innerlich, sie hat es Menschlich erkannt, da sies deutlich, das ist, mit einem Merkmal, erkennet und nennet (1772 [1978]: 33)

### 6.29 Background notions

- **Condillac**

Celui qui souffroit parce qu'il étoit privé d'un objet que ses passions lui rendoient nécessaire, ne s'en tenoit pas à pousser des cris: il faisoit des efforts pout l'obtenir, il agitoit sa tête, ses bras, et toutes les parties de son corps. L'autre, ému à ce spectacle, fixoit les yeux sur le même objet; et [...] il souffroit de voir souffrir ce misérable. Dès ce moment il se sent intéressé à le soulager, et il obéit à cette impression, autant qu'il est en son pouvoir. Ainsi, par le seul instinct, ces hommes se demandoient et se prêtoient de secours [...]. Cependant les mêmes circonstances ne purent se répéter souvent, qu'ils n'accoutumassent enfin à attacher aux cris des passions et aux différentes actions du corps, des



perceptions qui y étoient exprimées d'une manière si sensibles (1746 [1973]: 194–195)

### 6.30 Nationalism

- the rationalist and the romantic model find a common ground in the debate over **nationalism**
- what is the logic behind this?  
a **logic of converging levels**:  
what is the level at which to ensure communication,  
what is the level at which to express identities?

### 6.31 Rationalist nationalism

- rationalism has a **universalist tendency**:  
maximal democracy involves a universal nation  
maximal communication involves a world language  
(cp. the Esperanto movement)
  - for practical reasons, restrict the standard to an existing political body  
as the locus par excellence for democratic participation, a **nation**
- liberal nationalism, *Staatsnationalismus*

### 6.32 Romantic nationalism

- rationalism has an **individualist tendency**:  
the ultimate identity is that of the individual person,  
maximal diversity involves individualism
  - for practical reasons (danger of incomprehensibility), enlarge the  
common language to an ethnic/cultural group as the bearer of identity, to a **people**
- romantic nationalism, *Volksnationalismus*

### 6.33 Nationalist convergence

- between the extremes of universalism and individualism, rationalism and romanticism may converge towards the middle, coupling feelings of identity with claims to political independence

- effects on rhetoric:  
e.g. nation states inventing identities (“the construction of the past”)

### 6.34 An example

already in Grégoire, an outspoken nationalist tendency (i.e. the rationalist and romantic archetypes hardly exist in their pure form)

- Quoiqu’il y ait possibilité de diminuer le nombre des idiomes reçus en Europe, l’état politique du globe bannit l’espérance de ramener les peuples à une langue commune. Cette conception, formée par quelques écrivains est également hardie et chimérique.

Une langue universelle est dans son genre ce que la pierre philosophale est en chimie.

- Ainsi, avec trente patois différents, nous sommes encore, pour le langage à la tour de Babel, et pour la liberté nous formons l’avant-garde des nations.

### 6.35 An example

already in Grégoire, an outspoken nationalist tendency (i.e. the rationalist and romantic archetypes hardly exist in their pure form)

- Quoiqu’il y ait possibilité de diminuer le nombre des idiomes reçus en Europe, l’état politique du globe bannit l’espérance de ramener les peuples à une langue commune. Cette conception, formée par quelques écrivains est également hardie et chimérique.

Une langue universelle est dans son genre ce que la pierre philosophale est en chimie.

- Ainsi, avec trente patois différents, nous sommes encore, pour le langage à la tour de Babel, tandis que pour la liberté nous formons l’avant-garde des nations.

rationalist logic: a world  
language is a practical  
impossibility

### 6.36 An example

already in Grégoire, an outspoken nationalist tendency (i.e. the rationalist and romantic archetypes hardly exist in their pure form)

- Quoiqu'il y ait possibilité de diminuer le nombre des idiomes reçus en Europe, l'état politique du globe bannit l'usage d'une seule langue aux peuples à une langue commune. Cette hardie tentative de quelques écrivains est également hardie et c'est à elle que nous devons le romantisme. romantic logic: our nation has a specific identity

Une langue universelle est dans son genre ce qu'un philosophe est en chimie.

- Ainsi, avec trente patois différents, nous sommes encore, pour le langage à la tour de Babel, tandis que **pour la liberté nous formons l'avant-garde des nations.**

### 6.37 Extant tensions

- from rationalism  
to the antithesis of romanticism  
to the synthesis of nationalism:  
a happy Hegelian process?
- far from it  
two types of problems

### 6.38 Extant tensions

- 1) **a demarcational problem**  
tensions between nation states and identitarian minorities
- 2) **an educational problem**  
a danger of "overeducation" in the name of identitarian uniformity—  
imposing identities and denying diversity, at all levels

### 6.39 Postmodernism

- the genius of the late 20th century: trying to resolve the tensions inherent in a nationalist logic  
by shifting **from a disjunctive to a conjunctive logic**:  
not either-or but and-and
- this type of logic may be applied both from the rationalist and from the romantic perspective

**6.40 Romantic postmodernism**

- a **logic of multiplicity**:  
not either one identity or the other  
(like either Breton or Français, Scot or Brit, Flemish or Belgian)  
but both (and more)
- a **rhetoric** of shifting, fragmented, flexible identities and the absence of a uniform perspective (the “decline of the Grand Narratives”)

**6.41 Rationalist postmodernism**

- a **logic of multiplicity**:  
not one language / communicative system rather than the other  
but both (and more)
- a **rhetoric** of functional differentiation and multilingualism

**6.42 Extant tensions**

- from rationalism  
to the antithesis of romanticism  
to the false synthesis of nationalism  
to the true synthesis of postmodernism:  
a happy Hegelian process ?
- the two types of problems remain

**6.43 Extant tensions**

- 1) a **demarcational problem**  
nationalism-related demarcation problems with regard to the relevant identity group are replaced by problems with regard to the demarcation of relevant functional domains

e.g. what is the functional scope of English  
in higher education  
as the international language of science  
as an administrative language in the EU ...

**6.44 Extant tensions**

- 2) an **educational problem**  
a danger of “undereducation”

if you do not teach people how to acquire a multifaceted repertoire of linguistic means of expressions, they will not necessarily do so

(and thus, they will be less emancipated than desired)

(Dialektik der Romantik ?)

#### 6.45 Overview

	<b>18th century: the archetypal models</b>	<b>19th century: the nationalist transformation</b>	<b>late 20th century: the postmodern transformation</b>
<b>the rationalist position</b>	the common language as an instrument of political, cultural and educational participation	the nation as the basis of a liberal democracy	diversity and multilingualism as functional specialization
<b>the romantic position</b>	the imposed standard language as a discrimination of specific identities	the nation as a focus of cultural or ethnic identity	diversity and multilingualism as the expression of fragmented and flexible identities
<b>the tension between both positions</b>	opposition between the models, enhanced by the 'Dialektik der Aufklärung'	demarcation of relevant group: conflict between nation-states and ethnic/cultural groups	demarcation of relevant functions: what is the exact shape of the functional specialization?

#### 6.46 Conclusions

- dominant conceptions of language diversity form a logical pattern with both antithetical and synthetical tendencies
- restricting the linguistic analysis to just one or a few of the models would be an impoverishment; a discourse analysis of language debates needs to take into account the full spectrum of positions

#### 6.47 Conclusions

- all models are ideological to the extent that they harbour but hide tensions

therefore, exposing one type of discourse as ideological should not imply falling prey to a different ideology

- identifying the models does not equal solving the tensions



All original audio-recordings and other supplementary material, such as any hand-outs and powerpoint presentations for the lecture series, have been made available online and are referenced via unique DOI numbers on the website [www.figshare.com](http://www.figshare.com). They may be accessed via this QR code and the following dynamic link: <https://doi.org/10.6084/m9.figshare.4980533>

## Lexical Variation as a Sociolinguistic Variable

[7.1] Today we will start with our seventh lecture in the series and what I want to talk about this morning is lexical variation as a sociolinguistic variable. To situate this in the whole structure of the talks, remember that we first had an introduction and then we went to an analysis of variation within one word: the *semasiological* approach. Then we had a few case studies in which we looked at variation in categorization, i.e. different categorizations expressing several meanings. Now we will turn to what I earlier introduced as *formal onomasiological variation*, this is variation in the choice among synonyms. Now what have we learned so far?

[7.2] In the first two talks I tried to make clear that a social perspective is important for Cognitive Linguistics; that was the bottom line there. In the second set of talks I tried to make clear, that polysemy is subject to lectal variation. You will remember that *lectal variation* is this cover term that I use for all types of social, cultural and to some extent also historical variation. In the third set of talks I introduced lectal variation into categorization research. We looked at categorization research from the onomasiological perspective, and argued that categorization too is subject to lectal variation. But now in a sense we are again turning this perspective around and now we will be saying, ‘Yes, but lectal variation as such is meaningful.’ Specifically, we look at lexical variation among forms that superficially speaking would seem to express the same thing, that would seem to have the same meaning: even *that* form of variation is meaningful, because it expresses social categories, because there is a social structure behind it. That’s what we will try to do today.

There is another introductory remark that I want to make because there is something else that we’ve learned in the previous days. That is that it’s important to methodologically refine what we are doing. Think of what Professor Turner presented in his last talk on Sunday afternoon. What we saw there was that a concept that we tended to take for granted, like Conceptual Metaphor Theory, needs to be refined; methodologically, you need to go beyond what is given at one point to get better results. Something similar applies to what I am presenting here, in the sense that methodological refinement is important here too. Now that we will be dealing with lectal variation among near-synonymous or synonymous forms, we are moving closer towards the traditional type of methodology that you find in sociolinguistic research. That’s a methodology



that is much more quantitative than what is usual in Cognitive Linguistics. It also means that the talks will be getting a bit more technical now and that they will be introducing some technical and quantitative apparatus that is maybe less common in a Cognitive Linguistics environment. But I will do my best to introduce it as informally as possible. The most difficult talk in that respect is the one that I will be delivering this afternoon. But this morning is still quite easy.

[7.3] Here's the bibliographical background. You've noticed that I'm referring to some publications for each of the separate lectures. This one, the main source here, unfortunately is a book that was published in Dutch.

[7.4] Coming to the actual topic, what I want to talk about here is what I will identify as a *lectometric* approach. Now what is a lectometric approach? We already know what lects are. What is a lectometry? Let's measure the relationship among lects. Suppose you have two dialects of a language. Then you can ask yourself the question how similar are they? And in a very simplistic way you could say, 'OK. Let's look at the phonology of the two dialects. How much similarity is there in the phonology of the dialects? Let's just count the phonemes.' That's one thing that people have been doing in what is known as *dialectometry*, measuring distances between dialects. Now in the same way in which I introduced the term *lect* as a cover term for dialectometry and so on, I'm introducing *lectometry* as a cover term for a quantitative study of the relationship among lects. So we will be asking questions like: how similar are two varieties of a language? Specifically, as that is the general focus in this whole series of lectures, I will be looking at that question from a lexical point of view, from the point of view of vocabulary and synonymy. Notice that when you do lectometrical research, i.e. when you start measuring the relations between lects, you can access a number of very interesting questions, like, for instance, questions about standardization. We talked about standardization from an ideological point of view last Sunday in Lecture 6: what are the models that people use to talk about the relationship between standard languages and dialects? But we also want to have a look at standardization from a descriptive point of view. So we will have to ask questions like: how similar are the different dialects of a language and how similar are they with regard to the standard language, and the standard language itself, how internally homogeneous is it? We want to measure whether it is one uniform level, one uniform register or lect. Or is there a lot of internal variation? So that's why you can see that when we're interested in matters of standardization and variation, that it may be useful to have a measurable form of sociolinguistic studies. I will try to show how formal

onomasiological variation (synonymy) may be used to study the diachronic and synchronic relationship between lects. I will illustrate this methodology by comparing Netherlandic Dutch and Belgian Dutch. In the third talk, we've already had a brief view of what the relationship between both varieties can be, and we've already had a brief introduction to the historical background of the relationship between those two national varieties of Dutch. But I will be saying more about that in the course of this talk.

[7.5] The steps that I will take are the following: first a bit of theoretical and specifically also methodological background, and then case studies, just to show what you can do with this, and then some discussion.

[7.6] When you look at it from a descriptive point of view, you can ask yourself: what kind of configurations, what kind of constellations, what kind of structures do we have in the relationship between standard languages and dialects? There is one German linguist, Peter Auer, who has just two or three years ago published an interesting descriptive model of the different relationships between dialects and standard languages that you can find in various languages in Europe. It's a typology (and in a sense also a historical typology) of constellations of dialects and standard languages. What Auer claims is that if you classify the different relations that you have, you can distinguish between a number of basic types.

[7.8] I simplify a bit but one type is this one, and this is an old type. What does this mean? On the lower level of the picture you have the original dialects, the base dialects, the spoken dialects. In a European situation, this would be for instance what you find in the Middle Ages. In the Middle Ages, the standard languages as such do not exist yet, not the standard languages that we know now. There is no standard French language; there is no standard English at that point. But you do have local dialects. On the other hand, you may also have a language of culture, a written or perhaps spoken standard language. But originally, that need not be very directly related to the dialects. That situation is not what is indicated in this chart, but at one point, you would have a situation in which you do have something like a language of culture above the dialects: in the European Middle Ages, that would be Latin. But then Latin will not be related to the dialects, if Latin is the language of culture that you would use in an area where the dialects are, for instance, Dutch dialects. Then obviously there is no relation between the standard language and the basic dialects. Then at one point in the history of the European languages, people start to use one of the specific dialects as a standard language, but just one of them. The vertical

dimension in the picture you can think of as a stylistic dimension, i.e. as different levels of talking. the highest level would be the level of the cultured language, the level of learned texts, the level of government and education, in general all those situations where you expect standard languages. So at one point, people pick out one language (probably the dialect of a dominant region) and start using that as a standard language. But there is no continuum of levels: there are just two levels of language use. You have the dialects and you have the standard or cultured language. This is like the situation that in the traditional terminology of sociolinguistics is known as *diglossia*. A diglossic situation is one with two fairly well separated strata, levels in the structure of the variation.

[7.9] Then, says Auer, comes a further development in which the continuum that you could have between the base dialects and the standard language is gradually filled up. You get new varieties in the language. So you would have, for instance, base dialects which are only spoken at a very local level, say, in your own village or in your own county or whatever. Then you would get regiolects, which would have a somewhat broader scope, a province maybe. Then you will get regional standard languages and automatically you would have the standard language that is used all over the territory. Auer's idea is that in this typology and in this evolution of standardization in Europe, the possible continuum that you get, the space that you get in the original situation between the standard language and the base dialects, is gradually filled up in the form of more variation, of intermediate varieties.

[7.10] And then, says Auer, then we get a further development which is what you see in, for instance, languages that have a long history of standardization like Danish or Netherlandic Dutch. What you see there is that the whole structure of variation shrinks. The dialects disappear. Everything goes into the direction of the standard language. So that is what in dialectology is also known as dialect loss, the disappearance of dialects.

[7.11] But now what worries me about this is that if you look at it closely, then if you take the original situation (7.9) and then the final situation as Auer describes it (7.11), there is not a lot of difference between the two. If you just look at these two situations, what is the difference? The only real difference would be the distance that you have between the two varieties. In both cases, you basically have two varieties, two levels, but the only difference between the original situation and the final one would be the distance between the two. How similar are the two levels? You expect them to be more similar in the final

situation than in the original one. So from a descriptive point of view, we might want to measure whether it is true, as Auer says, that you get a shift in evolution from this situation to that situation. Well, that means that we will have to measure the distances, that we will have to measure the similarity and the dissimilarity between the different varieties that we find. That's what I try to express here. To the left of the picture you find the same representation that we had a moment ago. On the bottom part of that representation you see that I'm drawing arrows. Drawing arrows here means that we're going to compare the elements that we find on that level. That's traditional dialectometry: measuring the distances between dialects in the traditional sense, local dialects. In the example that I gave: how similar is the phonology between this dialect and that dialect, by just measuring the number of phonemes they have in common? That's what people have been doing traditionally. What I'm suggesting here is that moving from there we should go to also measuring distances and similarities along the vertical dimension. So that will give us sociolectometry.

[7.12] And the motive for introducing sociolectometry is clear: it's only distance that distinguishes between the beginning and the end of Auer's evolutionary path.

[7.13] An important methodological point that we need to spell out now, is how to measure distances. I hope you see that it's interesting to do sociolectometrical research. But how are we going to do it? What methodological problems do we face? Because you can do it in two ways. Perhaps I should illustrate it again with the graphical representation in 7.12. Take the right-hand side where you see the white arrows that represent the distances we are going to measure. Here the question is: what are the elements among which we're going to measure distances? One way of thinking about that would be to say, 'we know what the language varieties are, we know what the lects are.' In a sense that is what is suggested in this figure: you have the ellipses, you have the ovals, and each oval represents a certain lect. You could say, 'we know what the lects are, so let's measure the distance between the lects.' That is like saying, 'we know what the dialect of Paris is and we know what the dialect of Avignon is, and we are going to measure the distance between those dialects. We know what the varieties are.' So that is one way of doing it.

In terms of methodological design, you could then say that your independent variable is a number of linguistic systems and that your dependent variable consists of communicative situations. Why? The real question that you would ask then is: given this difference between dialects or, let me put it more generally, given this difference between lects, where are they being used? We

know what lects are and we are going to see how and where they are used. That's a way of measuring the distribution of the lects, the functional distribution in which situations are they being used. But this way of doing it is only possible when we can already identify what the language varieties are. That is not necessarily the case. So this way of doing it, starting from, say, a linguistic system as such and then having a look at the distribution of the linguistic system over functional situations, that's only possible if you can a priori identify which linguistic systems, which lects, which varieties you have. That may be a difficulty. It's a difficulty because we're not really certain how internally uniform those varieties are. It is a traditional way of doing it; if people think at all about these problems, it's often in this way. It's saying, 'OK, you have the dialect of so and so or you have this standard language, and now I'm going to have a look at the situations in which this standard language or that dialect is being used.'

[7.14] But let's suppose now that the standard language as such (or any other lect involved) is not internally homogeneous, that there is a bit of variation within the standard language. Then you have a problem. Then you would have to do this in another way. That's what I'm suggesting here. If the linguistic system itself is highly variable, then one can study the linguistic relationship between communicative settings. Then we do it the other way around. Then we say, 'what we are going to keep constant is the communicative situation, and we're going to look at what people do in a specific communicative situation.' In a sense, for each linguistic variable separately, we're not going to have a look at linguistic systems, lects, as a whole. But we will look at separate variables and see how the separate variables are distributed over communicative situations. I could say, if I want to express it in a methodological vocabulary, that the independent variable (what you keep constant) is the communicative situation and the dependent variable is linguistic usage.

[7.15] That's the way that I will be doing it, because I don't want to make the assumption that what I've been calling lects are really internally homogeneous. We will see that very clearly in the very last lecture, in Lecture No. 10. We will see that lects are certainly not homogeneous internally. But even now, I want to be careful, so I don't want to make the assumption that a linguistic system exists as such. I want to have a look at the separate variables. Because we don't know in advance which linguistic systems, which lects to distinguish, it is the second perspective that we will follow.

That's already two very important methodological points. Why is measuring important? Because we want to see evolutions of standardization and so on.

Second, what's the basic perspective for measuring? In this case, I say: let's not simplistically assume that there is a thing as a 'lect'; let's just assume that we have different linguistic variables and we will see whether they occur together as lects or not.

[7.16] Now onto the more quantitative stuff. I'm presenting a case study here in which we look at lexical variation, and we specifically want to look at lexical variation in Dutch from a diachronic perspective. You may remember that I mentioned in Lecture No. 3 that the history of Netherlandic Dutch, Dutch in the Netherlands, and Belgian Dutch, Dutch in Belgium, is different. In Belgium, French used to be the language of culture and education for a very long time, even in those provinces where Dutch is the language of the dialects, of the local language. Only in the course of the 20th century did Dutch become a language of culture and higher education in the northern part of Belgium. At that point, people adopted the existing Dutch standard language from the Netherlands, because in the Netherlands standard Dutch had existed since the 17th century. The history of the standardization of Dutch is much longer in the Netherlands than it is in Belgium. So that raises the question: for Belgian Dutch, can we measure if indeed there is a convergence between Belgian Dutch and Netherlandic Dutch? There is a tendency in the 20th century of Belgian Dutch to adopt the existing standard from the Netherlands. But can we see that happening when we describe it? Can we see a convergence between the two? Or is it a process that is not successful and is there a divergence? That's what we want to measure.

[7.17] We are going to do that, obviously, by starting from the overall assumptions that I talked about in the first lecture: we will take the usage-based approach and of course we will have a focus on lexical variation. The new thing here is that we will use a *profile-based methodology*. That is what I need to explain now.

[7.18] What is the notion of 'profile' that I'm introducing here? Let's take a set of synonyms, i.e. formal onomasiological variation. A set of synonyms that name a certain concept can be differentiated by their relative frequency. We've already seen an example of that: remember that we looked at *leggings*. We said: let's compare the frequency of *legging* and *leggings* on the one hand and *caleçon* on the other hand, the term of French origin. Let's compare the frequencies of those two in Belgian Dutch and in Netherlandic Dutch. You may remember that Belgian Dutch started off with the French term and then gradually started to use the English term more, whereas Netherlandic Dutch had the

English term all the way down. If you remember that, you will now see that this is actually a process of convergence. You can see that the Belgian lect moves in the direction of the Netherlandic one. But what is the profile here? The profile, put as simply as possible, is the proportion between the number of times that you get *legging* and the number of times that you get *caleçon* as a name for the concept 'legging'. So to put it more theoretically, an onomasiological profile is a set of synonyms that designating a concept, differentiated by their relative frequency. As you understand, when we study convergence or divergence processes, we can do that precisely by looking at changes in those profiles, at changes in the relative frequencies of the different forms that express a certain concept. Why would we want to do that? Why would we want to study profiles and not just the individual terms? Couldn't we just say: let's just look at the frequency of *caleçon*, let's forget about the term *legging*, let's just look at the frequency of *caleçon*? Wouldn't we see the same thing? No, we would not because there is a methodological danger when you don't look at the relative frequencies but only at the frequencies of each term separately. The danger is that you get thematic effects. Think about it in the following way: take a pair of cross-variety synonyms like *underground* and *subway*, for British English and American English. Let's say that you have a text in which you find a lot of references to *subway*. Then you could conclude, 'oh, yes, this is a text coming from America, because it has a high frequency of *subway*.' Yes, but it could also be that it is just a text that is specifically about subways, so the frequency of the term as such could have something to do with the topic; at the same time, it can also have something to do with the lectal origin, the lectal identification. So if we want to separate those two, the interesting thing will be, if we look at all the terms that identify the topic or that name the topic, then the topic bias, the thematic effects, can be neutralized and we can focus on the lectal differences.

[7.19] Now some examples. The basic study that I will be presenting on the diachronic and synchronic variation between Belgian Dutch and Netherlandic Dutch basically refers to two semantical fields, two lexical fields: football terms and clothing terms. We've already seen one example of the clothing terms: *legging*, but now we add football term. Another example here on clothing terms is *spijkerbroek* and *jeans*: you know what *jeans* is, and *spijkerbroek* is a specifically Dutch term for that. So you get synonyms there, referential synonyms. In football, it's the same thing and very often you again get an alternation between English terms and native Dutch terms. Like in the case of 'goal', you get *goal* and you get *doelpunt*. In the case of 'penalty', you get an alternative term like *strafschop*. Most of the examples here have just two alternatives, but you also have examples with three alternative names, or sometimes even four or five.

Notice also that when we have a look at these profiles, these relative proportions among terms like *doelpunt/goal* or *legging/caleçon* and so on, what we basically measure is a form of onomasiological salience, i.e. if there is a high frequency of *legging* in comparison to *caleçon*. What we can see, for instance, is that from the formal onomasiological point of view *legging* is the most salient term. (You will remember that salience plays a crucial role in linking structure and use.) An additional perspective here concerns the importance of French and so on. You realize that that is important: I've already explained why in one of the earlier talks. For Belgian Dutch, French has an influence because French used to be the language of culture. English is important because there is the current globalization trend, which means that English has an influence on all languages. So one of the things we might want to know is: to what extent do these tendencies (the importance of English, the importance of French and so on) influence the evolutions that we can see, the developments that we can see?

[7.20]–[7.21] Now onto the real quantitative question: how can we measure the uniformity, the degree of similarity between two sets of usage data? The usage data are defined in terms of onomasiological profiles. Let me represent this graphically. Let's say that this circle on the left represents one communicative situation. Think of it for instance as a newspaper in Holland talking about football or think of it as a fashion magazine talking about clothing and specifically one type of clothing, 'leggings'. In that communicative situation we can then find references to 'goal' or to 'legging'. Let's take 'goal' for an example. We find different references to 'goal' and specifically, we find two terms A and B. A could be *doelpunt*, the Dutch term and B could be *goal*, the English loan. Let's say we then take a sample of ten cases. (Methodologically that will not be enough, but this is just for illustration.) Six of ten cases have the variant A and the other four have the variant B. So six times A and four times B, that's a profile. That's the onomasiological profile of the concept 'goal' in this communicative setting. Then we do the same for another communicative setting that we want to compare with. Let's say that this circle to the right is the same thing as before: a newspaper talking about football, but this time in Belgian Dutch. But here the profile is different: we find three As and seven Bs, not six As and four Bs.

[7.22]–[7.23] How similar are the two situations? That's in fact very easy: the correspondence between the two is basically just the number of As and Bs that you can connect. Let's do it step by step. What's the uniformity? Well, it is the number of common pairs of names and concepts. Here is one A and here is another A and here is another A. But at one point we are running out of As that



we can connect. The other As can no longer be connected, so from this point on they start doing something differently as far as the As are concerned. Let's do the same for the Bs, one, two, three, four. Now again we've run out of Bs that we can connect. So all the lines together constitute the overlap between the two varieties, between the two samples that we took.

[7.24] If this is the system we use, then we can translate that into this picture, which is just another way of representing it. It is just a measure of overlap that we have: how many times do the samples do the same thing? So if you start calculating it, you can say 70% of the naming events is identical in both samples.

[7.25] Now the interesting thing is, when you look at it informally in this way, you can translate that into a formula because you can say: the uniformity  $U$  for a concept  $Z$ , between two samples  $Y_1$  and  $Y_2$  (the two circles) is the sum of the minima of the relative frequencies of one lexical item in the onomasiological profiles for  $Z$  in the two samples. There is one difficult point here, when I mentioned 'minima'. Let's see what this implies, just to get from an informal intuitive representation to a formula. Let's take this one (7.24). We said there was a 70% overlap. So how many As can we connect and how many Bs can we connect? There are no more As that we can connect than the minimal number of As in the two samples. There are six As there and there are three As here. So the minimum of As is three and we can not connect more As than that minimum. Same with the Bs. We have four Bs there and seven Bs here. So we can only connect four of them. So what we can connect is the minimum, the minimum amount of the As and Bs. That's what is expressed in this scene, in this scene we take the sum of the minima. We get to 70% because we have 40% of the Bs and 30% of the As. So that's a sum of minima, of the minimal relative frequencies in the profiles. Adding the minima gives us a degree of uniformity of 70%.

[7.26] The interesting point is that you can also express that in a formula. This formula is exactly the same thing as what we said a moment ago. But the advantage is that if you have this, then of course you can also put that into a calculation algorithm. When you have your database of observations, you can do the calculations on the database because this is something that calculating machine and a computer could understand. The graphical representation or the informal description is not something that a computer understands. But this formula is something that a computer can understand. So when we have this, we can start doing the actual calculations.

[7.27] Let me introduce a further complication. No, not a complication but a refinement. Let's now see: what shall we do when we have a set of concepts? A moment ago we saw that we can calculate how similarly Belgian Dutch and Netherlandic Dutch behave, with regard to the naming of the concept 'goal' in football. We can calculate that now. Then we can see that newspaper X and that newspaper Y do the same thing to such-and-such an extent, for a certain percentage. But if we want to say something about the Dutch newspapers and the Belgian newspapers, we don't want to look at the concept 'goal' alone. We would want to have a look at many concepts. We want to have a look at many concepts in the field of football terminology, in the field of clothing terminology—and ideally speaking, if we would have sufficient time and materials to investigate, in the entire vocabulary. So we need an extra measurement where we go from one concept to a set of concepts. Normally speaking you would say, 'OK, but that's easy.' You just take the uniformity degree for concept one and for concept two and for concept three, and you take the average. You just add them and you take the average. Yes, but you might want to do it in a slightly more subtle way. Let's say that you talk about clothing terms. If you talk about clothing terms, we know that some clothing items are fairly basic, like *trousers*. But *bowler hats*, these round British style hats, those are not very basic. You don't talk about them a lot, so the thematical topical frequency of *bowler hats* is not so very high. So suppose now that you have a look at the frequencies, and you see that *bowler hat* has only one term so there is always a correspondence or uniformity of 100% for *bowler hats*. At the same time you have a look at *trousers* and you see that in the name for 'trousers' there is some variation and there is only an uniformity of 80% in the naming of 'trousers'. Now if you take the simple average you would get the result of 90%. With a 100% for *bowler hats* and 80% for *trousers*, you get an average uniformity of 90%. But that's skewing the results, because you would want *bowler hats* to be less important in the results than *trousers*, because *trousers* are so basic and because we talk about *trousers* more than we talk about *bowler hats*. So that's why we use not a simple average but what we call a weighted average. That is what is expressed here: so the uniformity U' for a set of concepts is the sum of the uniformity values for the individual concepts, but weighted by the relative frequency of the concepts. So, take the total number of times that you talk about *bowler hats*, and that is maybe one percent of your total material. Take the number of times that you talk about *trousers*, with whatever name, and that's for instance 25% of your total material. So then the uniformity results that you get for *trousers* will count 25 times more than the results you get for *bowler hat*, because you have only one percent of relative frequency for *bowler hat*. That's the weighted average.

[7.28] Again we have a formula for that. But that is not so important.

[7.29] Another thing is that we are also interested in the effect of certain item-specific or concept-specific characteristics. So we might want to ask questions like: given the historical influence of French on Belgian Dutch, can we actually see that the influence of French diminishes or not? Because that's what we expect: we expect a historically important influence of French, and we expect that the influence of French diminishes as time goes by, because there is a standardization in the direction of Dutch. We expect that the influence of English increases because the influence of global English increases everywhere. Can we see that in our materials? We also have a very specific additional hypothesis: in the standardization process of Belgian Dutch, there was a lot of explicit linguistic policy involved. In schools for instance, children had to learn lists of the type 'Don't say this. That's an old dialect word. But say that. That's the standard word'. That's explicit linguistic policy, language policy or language propaganda or linguistic education—whatever you would want to name it. So it's interesting to ask yourself the question: are the items that you find on those lists, the items that are either rejected or propagated in the explicit language policies, are those items actually the ones that start moving in actual language use? Or in another words, does linguistic propaganda have an effect or not? If for instance you compare items that we were not part of the school curriculum and items that were part of the school curriculum, do they behave differently in the process of convergence and divergence?

[7.30]–[7.34] Again, you can transform that into a formula but I won't elaborate on that. What you do, simply put, is this: when you have a profile like the one with *goal* and *doelpunt*, you can say: OK, *goal* is an English term, so I know what the proportion is of English terms in this profile. I can average that over all the profiles that I have. So if I want to measure whether English is on the rise or not, I can take the proportion of English terms in each individual profile that I have calculated and then take the overall result, then I can see whether English becomes more important or not. That's the way we look at specific items with specific features. There are some refinements here (7.32), but that's not so important. Again this is the formula (7.33), and there is another one with a weighted calculation (7.35).

[7.35]–[7.36] Now some results. We know what to expect: there is a late standardization in Dutch. There is an explicit language policy and there is a special relation to French. Our general expectations are that we will find convergence between Belgian Dutch and Netherlandic Dutch, that the normative tradition

(as just mentioned, in the form of explicit schooling and so on) will have an effect, and that there will be a negative reaction with regard to French in Belgian Dutch, because French in a sense is what you want to get away from. So what you expect is that French influence diminishes and that there might even be a form of purism (i.e. that French is explicitly avoided).

[7.37] So let us look at some diachronic results. Do we have convergence or divergence? We look at clothing terms and football terms. What is our sample? Where does the material come from? We look at journals and magazines at three points in time, 1950, 1970, 1990 (which also means that it's about time that we started doing some follow-up research). We have a corpus of newspaper texts and some additional newspaper texts in magazines. There are some additional data but I will come to that in a moment. Overall we have a database of 40000 instances of football terms and clothing terms, so that's quite a lot, that's certainly sufficient to get some reliable results.

[7.38] What we find is that we do indeed get convergence on the lexical level between standard Dutch in Belgium and standard Dutch in the Netherlands. If we look at the U' measure (the weighted average over a number of concepts) we see that it rises with ten percent from 1950 to 1990.

[7.39] These are the results. How can you read this? Well, it's easy of course. B50 is Belgium in the 1950s, B70 is Belgium in the 1970s, NL50 is The Netherlands in the 1950s, and so on. The U prime measure goes from 70% to 75% to 82%. So that's a nice illustration of a convergent process: you can see that there is indeed, as we expected, a growing uniformity, a growing similarity between Belgian Dutch and Netherlandic Dutch. That's the first result.

[7.40] We also want to ask ourselves the question what will happen if we have a look at the synchronic character of the two varieties, the two national varieties of Dutch. What I showed a moment ago was placed on the level of super-regional national communication: newspapers that have a national distribution in the Dutch-speaking part of Belgium and the same for Holland. But what if we look at more local language, what if we go to a stylistically more informal level? We investigated that too. We did that for clothing terms and we did that in a very specific way: we picked out two cities in the Belgian Dutch region and two cities in the Netherlands, and we collected materials in shop windows. So I had students looking at price tags, price labels in shop windows, that would say, 'pair of trousers, so many francs or so many guilders'. (Now it would be euros, but this is before the introduction of the euro.) That is also a form of

collecting material: you identify on the price labels whether the thing is called *caleçon* or *legging*. The interesting thing about that is that it is local material. These are local shops serving a local audience in that specific city. So is there more variation on the local level? This is something you more or less expect in the stratificational continuum that we took from Auer. If you have a stratificational continuum of the kind that we represented by a pyramid, we are now in a sense moving down in the pyramid, from a supraregional level to a more local level. Of course, unfortunately, we can do that only for 1990. It's impossible to do that for 1970 and 1950 (because we couldn't go back in time to collect shop window materials for those periods). So this is just from 1990.

[7.41] What we find (again this is very interesting but perhaps also to be expected) is an asymmetry in the structure of the two national varieties. In what sense? The distances that we can measure between the local materials in Belgian Dutch and the local materials in Netherlandic Dutch compared to their respective standard languages (let's say the newspaper material and the magazine material) are different, and specifically, the distance is much bigger in Belgian Dutch than it is in Netherlandic Dutch. So the distance between the local and national languages is much greater in Belgium.

[7.42] The upper part of this figure is the same as what we had a moment ago, but here below we measure the uniformity between on the one hand Belgian Dutch and Netherlandic Dutch in the 1990s at the standard level, and on the other hand, the shop window materials. I've labeled the latter *sub*, as in *substandard language*. Substandard local language in the Netherlands in 1990 has a uniformity of 68% or almost 70% with the newspaper register. But in Belgian Dutch, the parallel situation is much less uniform. It's only a uniformity of 45% there, not 68%. If you think about it in historical terms, this could be evidence of the late standardization of Dutch in Belgium. I mentioned that the standardization process started three centuries later than the standardization process in Netherlandic Dutch. Apparently, this standardization process in Netherlandic Dutch has progressed much further than the standardization process in Belgian Dutch. You can see that in the smaller degree of uniformity between superregional language and local language in Belgium than in the Netherlands. That's again something that seems to be corresponding to what we could expect, to what we find in our hypothesis.

[7.43] If we represent that in the graphical representation that we had earlier, we get something like this. If the right hand side is a representation of Netherlandic Dutch according to the model for which we found inspiration in

Peter Auer, then the levels are much closer to each other than in Belgian Dutch, where you have a big difference between standard language and the next level. So we can actually do something with these measurements and we can give a substantive, substantial specification of these abstract representations that we introduced.

[7.44] Further, let us have a look at the influence of specific characteristics; again, just to illustrate what you can do. The hypothesis was that the influence of French is diminishing in Belgian Dutch, and that is largely correct. But it is only relevant to show this for clothing. In the football terminology, French hardly plays a role. So I am giving you the results for the clothing terms.

[7.45] Here you can see the results in a graph. The left blue column is Belgium and the red right column in each pair is the Netherlands. If you take the blue figures you can see that they diminish. If you take the red one in Holland there is also some evolution toward less French, but it's not as regular as in Belgian Dutch. (The influence of French in Holland diminishes in the 1970s but then rises again in Holland. This is probably due to a cultural shift in fashion, but I won't go into that, because for the moment we're interested specifically in Belgian Dutch.)

[7.46] Concerning the influence of English, our hypothesis is that the influence of English increases both in Belgian Dutch and in Netherlandic Dutch. That's only correct for clothing terms, though; the point about football terms is that the influence of English has always been high in football, because it's originally an English game, so we don't see a lot of changes there.

[7.47] But in the clothing terms, we clearly see the impact of globalization and we actually see it in Belgian Dutch as well as in Netherlandic Dutch. Again the left, blue column of each pair is Belgium, the right one is the Netherlands. Here the pattern for both varieties is the same. A moment ago, for French, the pattern was different, but for English the pattern is the same, with an enormous rise of English influence in the 1990 material. Again, this is as expected. Overall, you can see that French is a factor that distinguishes Belgian Dutch and Netherlandic Dutch. English influence is a factor that contributes to the similarity.

[7.48] Then we reach the interesting question: does linguistic propaganda and explicit normativity have an effect? What we expect is that words that were explicitly disapproved of in dictionaries, in school books and so on would

lose their importance, would lose frequency, would become less frequent, and that conversely the words that are propagated, the words where they said 'this is what you *should* say', so the words that have normative backing, gain in importance. Again, we find both effects, but the effect is strongest for the negative normativity, for the words that are disapproved.

[7.49] In this graph, the colors are a bit different from what we had a moment ago. Here blue (to the left of the pairs) is the clothing terms and red (to the right) are the football terms. You can see that in both cases you get a disappearance of the words that are disapproved of. This is extremely outspoken in the case of clothing terms, but it's a minor effect in the case of football terms. It's not really clear to us why that would be the case, i.e. why there is such a difference in the effect between the two different fields. But the effect is there. You have an effect of the influence of normative traditions.

[7.50]–[7.51] Finally then, if I can have a few more minutes for some discussion, what could we expect? Overall, we get a converging trend between Belgian Dutch and Netherlandic Dutch. Is this a stable trend or not? What are the factors that contribute to the further evolution? Basically, the further evolution, put very simplistically, could take three forms.

[7.52] This is more or less the situation that you have now. The two standard languages, the language you find in the upper registers, are very close to each other; and in the more local, regional varieties, there is a bigger difference on the Belgian side than on the Netherlandic side. The question we are asking is specifically: what is going to happen to informal Belgian Dutch? Will it develop in a way in which there is much more similarity between the two, in the structure of the two varieties than is the case now? Will Belgian Dutch evolve, develop in the same way in which Netherlandic Dutch has already developed? In that case you will get a shift of informal Belgian Dutch in the upward direction. That's one possible evolution.

[7.53] The other evolution would be in the other direction, when the process of convergence would stop. Belgian Dutch will move away from Netherlandic Dutch and essentially informal Belgian Dutch will move downward in the graphical representation. You will get more internal uniformity in Belgian Dutch, but less external uniformity with the Netherlandic Dutch of Holland.

[7.54] Finally, it could be assumed that the situation is a stable one, for whatever reason.

[7.55] If we look briefly at the question what might influence the evolution in one direction or the other, there are fairly concrete factors that stand out. Let me start with global English as something that is putting pressure on both Netherlandic Dutch and Belgian Dutch, as we've already seen. Either through more borrowing from English, or (less likely) through some sort of defensive reaction with regard to English, that could lead to more internal uniformity. On the other hand, we can establish, when we look not at the lexicon but at the pronunciation, that Netherlandic Dutch is moving away from Dutch in Belgium. This is a change that is happening in the Netherlands and not in Belgium. So the lexical convergence that we mentioned is something that happened in Belgium, in Belgian Dutch. The pronunciation changes that you can also measure have something to do with changes that are happening in Holland, in the Netherlands.

[7.56] I'm giving you the figures here of the pronunciation changes but we need not look at them in detail. If you look at situation from a very material and practical point of view, you can say: well, we have evidence at this point of factors that can contribute to convergence like the common impact of English, which is the same for both languages, but we also have indications that things might go in a diverging direction, because we can already measure divergence on the level of pronunciation. So from this point of view we don't know very well what's going to happen: the evolution could go either way, and we can't make any predictions.

[7.57] On the other hand, there is an alternative, interesting point of view which we've been discussing before: it could also be the case that the evolution will be determined by attitudinal factors. So, as a very last step now, let's try to think of a way of linking these results (about convergence, divergence, and the factors that influence those processes) to what we said earlier about underlying attitudes with regard to language variation. Here I can refer back to this classification we made between rationalist, romantic, nationalist and post-modern attitudes with regard to language. A purely rationalist attitude in this case would mean: we need maximal communication, so that's why we need continued convergence. If that is what people implicitly or explicitly feel in the Dutch language area, then we can expect more convergence, if the rationalist attitude is dominant. However, if there is a nationalist feeling, for instance, if language is coupled to a romantic-nationalist preference for expressing a proper identity, then we can expect a growing divergence of Belgian Dutch with regard to Netherlandic Dutch. We can expect that because the process of linguistic standardization towards the use of Dutch is part of the emancipation



of Flanders (the Dutch speaking part of Belgium) with regard to the traditional dominance of French. The use of Dutch as a standard language is part of a process of identity formation and nation formation, at least historically. So, if the language situation is coupled to a certain form of nationalist feeling, then you can expect a growing divergence, because the nationalist tendencies in Flanders do not really aim towards a fusion with Holland. This is the second scenario.

[7.58] Third, if a postmodern preference for functional differentiation among multiple languages and among multiple registers would be prevalent, then, basically, it could be the case that we get a maintenance of the status quo of the present situation. But we don't know. If we would want to get a real prediction here, we should not only measure the actual differences and tendencies that we get, but we should also be able to measure the attitudes to get a better idea of how people feel about language and identity. That is not something that I can offer you at this point, but I'm sure that many of you will have ideas on how to do that and I will be happy to learn about that. Thank you!

## Handout Lecture 7

### 7.1 Situating the talk

- 1–2 Introduction
- 3–4 Semasiological variation
- 5–6 Conceptual onomasiological variation
- 7–9 Formal onomasiological variation
- 10 Conclusion

### 7.2 Situating the talk

- 1–2 a social perspective is important for CL
- 3–4 polysemy is subject to lectal variation
- 5–6 categorization is subject to lectal variation
- 7–9 **lectal variation among synonyms is meaningful**
- 10 Conclusion

### 7.3 Bibliographical background

D. Geeraerts,  
S. Grondelaers & D. Speelman 1999, **Convergentie en divergentie in de Nederlandse woordenschat**  
[Amsterdam: Meertens Instituut]

### 7.4 Purpose

- introduce a (lexical) lectometric approach to standardization studies, i.e. show how formal onomasiological variation may be used to study the diachronic and synchronic relationship between lects
- illustrate the method by comparing Netherlandic Dutch and Belgian Dutch

### 7.5 TOC

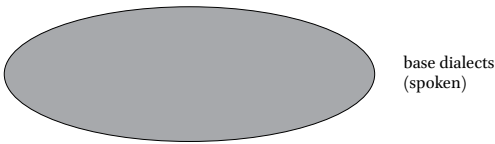
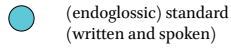
**Step I. Theoretical and Methodological Background**  
**Step II. Belgian Dutch and Netherlandic Dutch: A Case study**  
**Step III. Discussion**

### 7.6 Step I Theoretical and Methodological Background

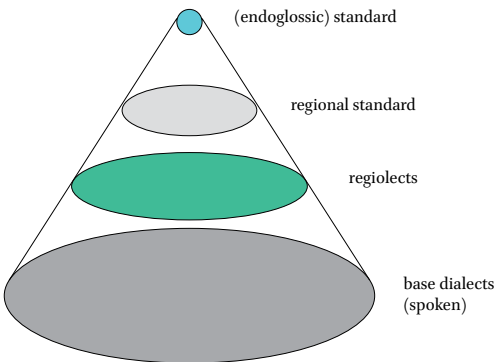
### 7.7 Dialects and standards

- cp. Peter Auer,  
“Europe’s Sociolinguistic Unity, or:  
A Typology of European Dialect/Standard Constellations”
- a typology of constellations of dialects and standard languages in Europe:  
an evolution from (simplifying)...

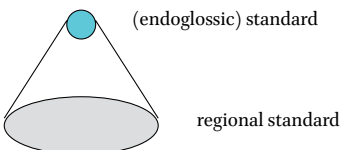
### 7.8 Diglossia



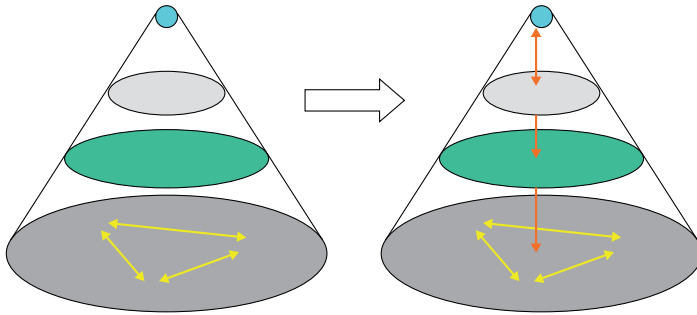
### 7.9 Diaglossia



### 7.10 Dialect loss

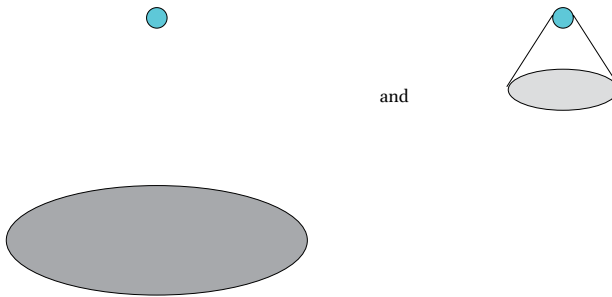


### 7.11 Adding (socio)lectometry



### 7.12 Why ?

- except for historical factors, only linguistic distance decides between



### 7.13 Methodological perspective

- either:  
the 'linguistic system' is known,  
and one can study the distribution of the linguistic system over different communicative settings

independent variable: linguistic system    dependent variable: communicative situations

### 7.14 Methodological perspective

- or:  
  
the linguistic system is highly variable  
but one can study the linguistic relationship between the various communicative settings

independent variable: communicative situation    dependent variable:  
linguistic usage

### 7.15 Methodological perspective

- because we do not know in advance which “linguistic systems” we have to distinguish, the second perspective is most suited for our purposes

### 7.16 CONDIVpro

“measuring convergence and divergence in a profile-based way”: an approach for charting distances between language varieties

- a usage-based approach
- with an initial focus on lexical variation
- and profile-based methodology

### 7.17 Usage-based

- **what:** a methodological preference for spontaneous, non-elicited evidence (corpora)
- **why:** linguistic variation and change imply choices among alternatives  
> study the actual choices

### 7.18 Profile-based

- **what:** profile =  
the set of synonyms designating a concept, differentiated by relative frequency  
(more generally: alternative expressions for a given function)  
→ use profiles rather than separate variables as input for measuring distances
- **why:** avoid thematic effects

### 7.19 Examples to start with

in our case study:

- football terms: doelpunt/goal, scheidsrechter/referee, strafschop/penalty...
- clothing terms: spijkerbroek/jeans, legging/caleçon, overhemd/hemd/shirt...

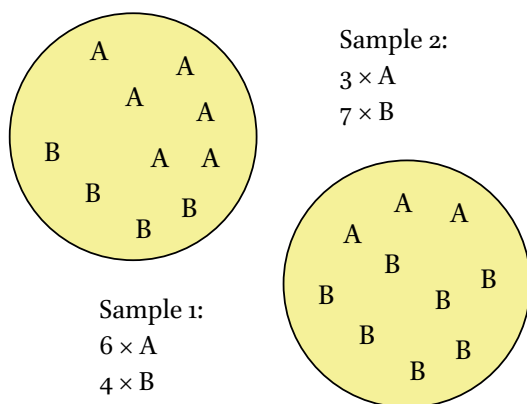
- basic measurement: preference (onomasiological salience) of one name rather than the other
- additional perspective: importance of French, English... names

## 7.20 Uniformity

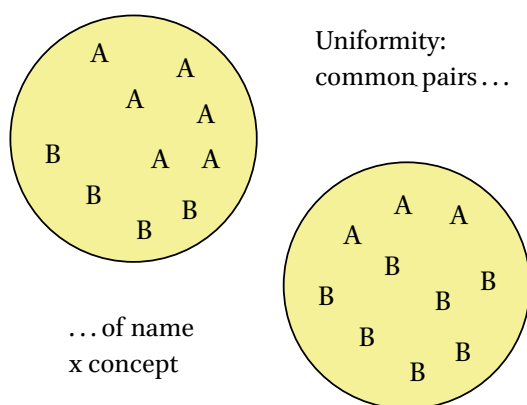
a measure of the correspondence between two sets of usage data, defined in terms of onomasiological profiles

an informal introduction: overlap between usage data

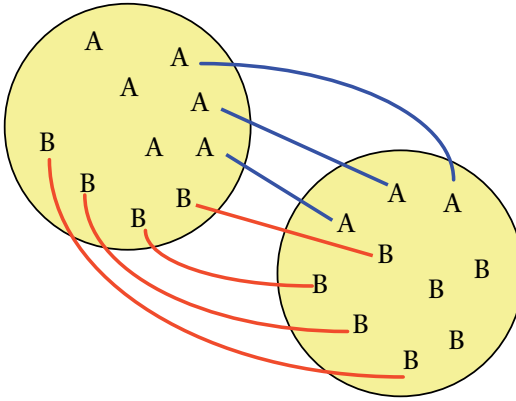
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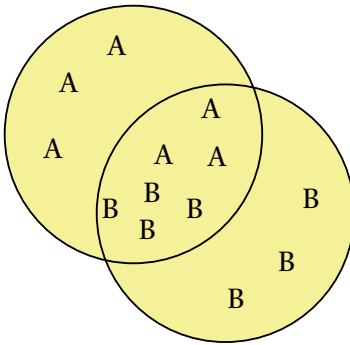
7.22



7.23



7.24



i.e. 70% of naming events is identical in both samples

### 7.25 Uniformity U

Uniformity U for a concept Z between two samples  $Y_1$  and  $Y_2$  =  
 sum of minima  
 of the relative frequencies F  
 of lexical item x  
 in the onomasiological profiles for Z  
 in  $Y_1$  and  $Y_2$

### 7.26 [Formula 1]

$$U_z(Y_1, Y_2) = \sum_{i=1}^n \min(F_{Z, Y_1}(x_i), F_{Z, Y_2}(x_i))$$

**7.27 Uniformity U'**

Uniformity U for a set of concepts Z  
between two samples  $Y_1$  and  $Y_2$  =  
sum of the U-values of the Zs  
weighted by the relative frequency G  
of Z within the total set of Zs

**7.28 [Formula 2]**

$$U'(Y_1, Y_2) = \sum_{i=1}^n U_{Z_i}(Y_1, Y_2) \cdot G_{Z_i}$$

**7.29 Item-specific features**

- the lexical items in the database have specific features  
like being French or English loans
- we may want to check whether these features have an effect on the  
global convergence or divergence of the language varieties

**7.30 Featural measure A**

the proportion A  
of all items x with feature K  
in the onomasiological profile for concept Z  
in the subcorpus Y  
=  
the sum of the relative frequencies of x's  
weighted by a membership value W

**7.31 Featural measure A**

not all items belong to the set K  
(or "have the feature K")  
to the same extent

*blouse*: looks and sounds French,  $W = 1$

*bloeze*: 'Dutchified' spelling,  $W = 0,5$

**7.32 [Formula 3]**

$$A_{K,Z}(Y) = \sum_{i=1}^n F_{Z,Y}(x_i) \cdot W_{x_i}(K)$$



### 7.33 Featural measure $A'$

proportion  $A'$

of all items  $x$  with feature  $K$

in the subcorpus  $Y$

=

sum of all  $A$ -measures,

weighted by  $G$ , i.e. the relative frequency of concept  $Z$  in  $Y$

### 7.34 [Formula 4]

$$A'_K(Y) = \sum_{i=1}^n A_{K,Z_i}(Y) \cdot G_{Z_i}(Y)$$

### 7.35 Step II Belgian Dutch and Netherlandic Dutch: A Case Study

#### 7.36 Background

specifics of Belgian Dutch:

- late standardization
- language policy  
(standard language adoption rather organic growth)
- special relation to French

hypotheses / expectations

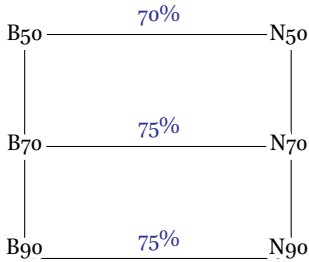
- convergence
- influence of normative tradition
- purism with regard to French

#### 7.37 Diachronic results

- **research question:** convergence or divergence between Netherlandic Dutch and Belgian Dutch ?
- **variables:** clothing terms and football terms
- **materials:** journals and magazines  
1950-1970-1990, Netherlandic and Belgian  
handpicked and extracted data  
40.000 tokens

**7.38 Diachronic results**

- **results:**  
evidence of convergence  
at standard language level, U rises with 10% from 1950 to 1990 (to 80%)

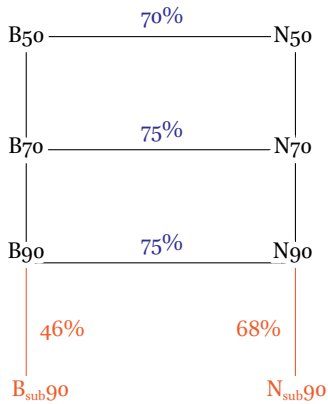
**7.39 Diachronic results****7.40 Synchronic results**

- **research question:** is the synchronic stratification of Netherlandic Dutch and Belgian Dutch identical ?
- **variables:** clothing terms
- **materials:** journals and magazines,  
plus shop window materials  
1950–1970–1990, Netherlandic and Belgian  
handpicked and extracted data  
40.000 tokens

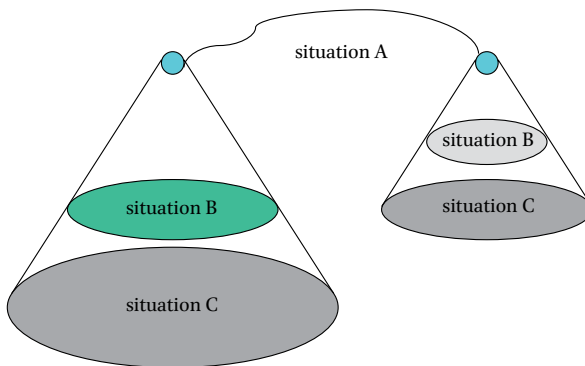
**7.41 Synchronic results**

- **results:**  
evidence of asymmetry in the stratificational structure of the two national varieties  
distance between local and national language is much greater in Belgium ( 46% versus 68%)

### 7.42 Synchronic results



### 7.43 Returning to the graphical format



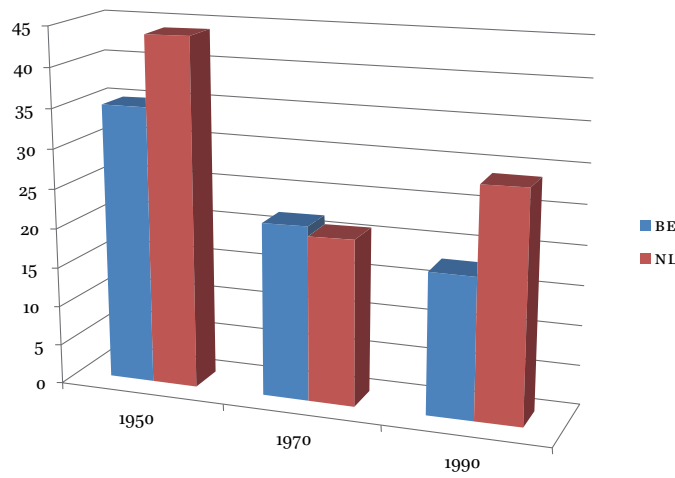
### 7.44 Featural results: French

- hypothesis:  
the influence of French diminishes in Belgian Dutch

largely correct, but French influence is too low in football field to notice an effect

- results for clothing terms:

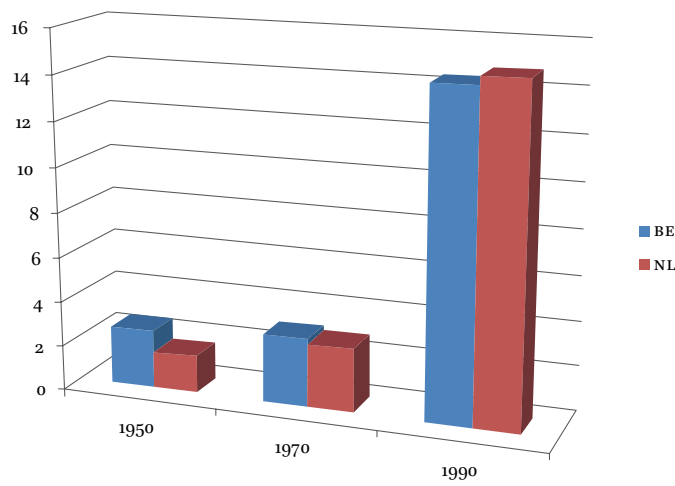
7.45 Featural results: French



7.46 Featural results: English

- hypothesis:  
the influence of English increases both in Belgian Dutch and Netherlandic Dutch
- only correct for clothing terms
- results for clothing terms:

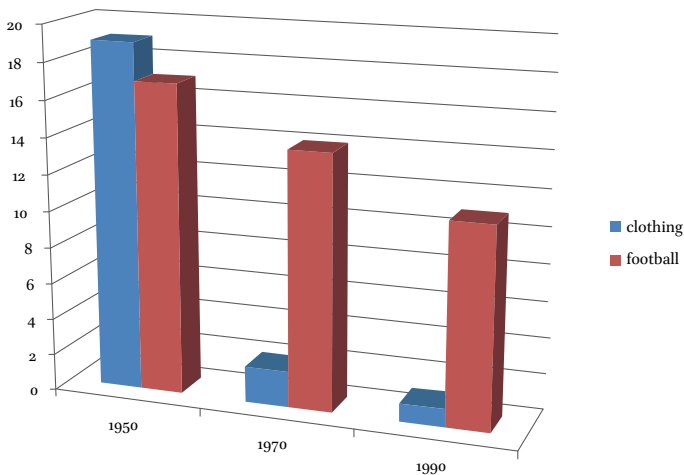
7.47 Featural results: English



### 7.48 Featural results: normative tradition

- disapproved words lose importance  
correct  
transition 50-70 appears more important than 70-90
- propagated words gain in importance  
correct  
but effect is less strong than the effect of negative propaganda
- results for disapproved words:

### 7.49 Featural results: normative tradition



### 7.50 Step III Discussion

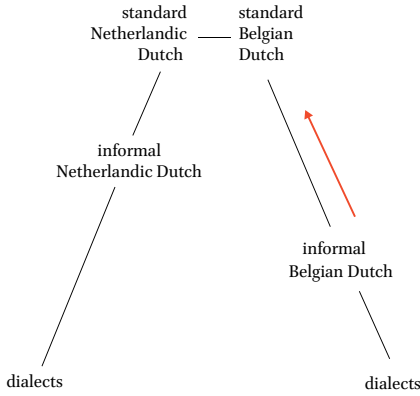
#### 7.51 Scenarios

- is the converging trend a stable one ?
- what are the factors contributing to the further evolution?

three scenarios for further evolution:

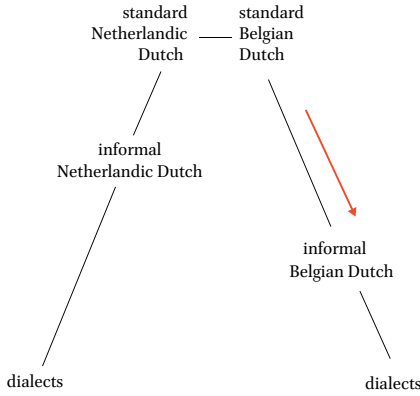
**7.52 Scenarios**  
1 continued  
convergence

the asymmetry is a  
retardation effect

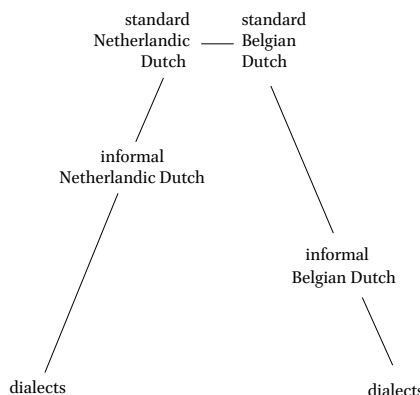


**7.53 Scenarios**  
2 discontinued  
convergence

asymmetry points to  
autonomous  
standardization in B



**7.54 Scenarios**  
3 status quo  
asymmetry reveals a  
specific normative  
attitude in B











All original audio-recordings and other supplementary material, such as any hand-outs and powerpoint presentations for the lecture series, have been made available online and are referenced via unique DOI numbers on the website [www.figshare.com](http://www.figshare.com). They may be accessed via this QR code and the following dynamic link: <https://doi.org/10.6084/m9.figshare.4980545>

## Measuring Lexical Variation and Change

[8.1] For most of you who were there, as I mentioned this morning, this talk is perhaps very demanding. Why? Not because it is technically advanced, but because I have to take quite number of steps to reach my destination. What is that destination going to be? As most of you know by now, we have these various steps to take: semasiological variation, conceptual onomasiological variation, formal onomasiological variation. This morning we saw one method of measuring formal onomasiological variation and trying to see how language structure variation develops when we look at lectal and lexical variation.

[8.2] That was the first step in our study of formal onomasiological variation, synonymy patterns. What we are going to do in this talk and in the next is to move one step forward, and to a certain extent, explore the interaction between conceptual variation, meaning variation and the formal lexical variation that we looked at this morning. In Lecture 8, this lecture, I will ask the question: to what extent do concept features like salience and vagueness or fuzziness influence formal onomasiological variation? We've already seen that the choices that you have between various synonyms may be influenced by lectal factors, by sociolinguistic factors. But we can also ask ourselves the question: what would semasiological variation, and maybe conceptual variation, and the characteristics of variation that we identified with regard to those phenomena—what could all those things have to do with formal onomasiological variation? The first lecture discusses to what extent concept features like salience and fuzziness influence formal onomasiological variation. There is another question to ask when we have a set of near-synonyms in order to do our formal calculations in a correct way. They would have to be really semantically equivalent. Is that always as easy to establish as what we have with clothing terms and football terms? That question is for tomorrow, for Lecture 9.

[8.3] For today, let's ask ourselves the question: how can we measure lexical distances between dialects, and determine the structure of the dialect area? We're talking about dialects in the most basic sense. If you think back of the representation we had earlier this morning, we now are at the bottom level of the pyramid, where we have the local dialects. Specifically then, if we have a look at those things, to what extent should such methods be sensitive to

concept features, the kind of features that I just mentioned, like salience and fuzziness?

[8.4] With regard to the first point, my hypothesis, or my claim if you wish, is of course that a profile-based approach, of the type that I introduced this morning, taking into account the relative frequencies of formal alternatives, yields better results than alternative methods. That's something I want to show.

[8.5] Also with regard to the second point, to what extent should such methods be sensitive to concept features? As a new point I will try to make clear that lexical heterogeneity in a dialect area (let's say, to have a lot, a lot and a lot of variation) is influenced by concept features.

[8.6]–[8.11] The background I am going to pass over quickly, because I've already mentioned it in the context of other talks. The bibliographical references are largely the same as those that I've already given you, so this is a point we can skip, except for mentioning in particular that this study was done in close collaboration with my colleague Dirk Speelman.

[8.12] This is the structure of the talk. I will take a number of steps, the first step is to have a look at the raw material that we will work with and that raw material is a lot of knowledge that dialectologists have compiled about a certain dialect area in the Dutch area. As you know I am mostly doing research on Dutch. So again we will be looking at Dutch. Then I will say something about how to measure lexical distances, that's something we already know, that's what we did this morning. Then I will say something about how to measure concept characteristics. If we assume that there is something like salience or fuzziness effects, how can we measure the fuzziness, for instance? How can we measure the vagueness? And then these two things—measuring distances, and measuring conceptual characteristics—have to come together. We will methodologically join distances and characteristics and see whether our results are of the type that I've just predicted, that they confirm the claims or not.

[8.13] First the raw data: what are we talking about here? There is one tradition in the linguistics of Dutch, in which people do traditional dialect research. They collect materials on the different local dialects. We have, in that context, a collection of very detailed dictionaries of a number of those dialects. Specifically, in our case, those are the dialects of the Limburg area of the Dutch speaking area in Belgium and the Netherlands. Within that dictionary we take

one specific volume viz. the chapter devoted to the human body. There are some further restrictions here, but they are not so important for what we are going to do. What we are looking at here is basically two hundred different (most of them are rural) dialects situated in mostly villages. We are looking at those dialects for just over two hundred different concepts, all of which have to do with the human body. That gives us a database: if we look at how those concepts are being used in the dialects, we get a database of about thirty-two thousand tokens. There are some refinements that you have to do: we have to throw out a number of things, because the material listed is corrupted, or whatever. Ultimately, we get 172 places, 179 concepts and still about almost 32000 tokens.

[8.15] This is the area in question. I've been talking about Dutch, the Netherlands and about Belgium a lot, and now finally you get to see a map. The area that we are talking about is the one indicated by the circle. So it's partly in Belgium and it's partly in Holland. If you go back to medieval times, before the national boundaries that you see here were established, this is basically one cultural area. So there is a lot of similarity between the dialects that you find in the Netherlandic Limburg province and in the Belgium Limburg provinces. The provinces are called the same: *Limburg*, but one is in the Netherlands, the other is in Belgium.

[8.16] Those are the basic materials, now something about measuring lexical distances. That's what we saw this morning, but I will go through it again, add a few things and also add another example. What we have here is a dataset which is slightly more complicated than what we had this morning. This morning we basically had only eight lectal points to compare, Belgium in 1990 in the shop windows for instance, that was one data point, one lectal point and we only had eight of them. That was quite easy to represent in diagrams. But in this case we have 179 points/villages with their own dialectal characteristics. We need special ways of representing this. We have to go one step beyond the methodology we have this morning. How can we do that? We have to take a number of steps here. We have to measure the dissimilarity between two places for a single concept. We've seen how we do that. We have to take into account all concepts. We've also seen how we can do that. And then, that's a new thing, we would take into account all places. We have to analyze the structure of the variation in that geographical area.

[8.17] Let's go through the steps once again. In principle, we will compare 5 different lectometric methods here. I mentioned one this morning, but there

are more. There are for instance ones that are not profile-based. When I say we will compare 5, that means that in the final pictures that I will show to you there are 5 methods. But basically I am only talking about two different methods, the one I presented this morning, the profile-based one, and one that was developed by the Austrian dialectometrist, Hans Goebel. I will mention in a moment where the difference lies.

[8.18]–[8.20] Let's remind ourselves what the profile-based method implies. Let's take an example, and this time not football terms or clothing terms but Maggie Thatcher, the former prime minister of the United Kingdom, whom you all know. But there are different ways of naming her, of referring to her. You can call her *Mrs. Thatcher*; she was also known as the *Iron Lady*; and she was also known quite disrespectfully as *Attila the Hen*. You could possibly call her *Maggie Roberts*, because that was her maiden name. Let's say you have two newspapers. You have two samples; and you have the different references. What does our profile-based method do? We start from the onomasiological profile, i.e. the relative frequencies of the different names. This could be a profile for the material that you saw a moment ago. On the basis of that profile we calculate the overlap. So we determine the relevant frequencies of the elements in the profile and calculate the total overlap between the relative frequencies. In this case between the two set of terms, that would be an overlap of 85%.

[8.21]–[8.24] What does Goebel's method do? Starting from the same material, you start from the onomasiological profile for a given concept in the two samples, but you reduce the two samples in a different way, namely you look only at the most frequent term, i.e. the most frequent elements in the two sets. Then you see if there is a difference or if there is no difference. Obviously, that is more simplified than the profile-based method. There is a nuance that I have to add, to the extent that uniqueness of terms across all samples may be a weighting factor in calculating the similarity or distance. But importantly, this approach is not really profile-based. It's much more simplified, much more reductive than the profile-based method.

[8.25] So now you have two similarities for one concept in two points, and you measure a degree of overlap, profile-based or not. Then you take all the concepts you are looking at, 172 in this case, and you average, and you can have a weighted average or not. That's also something that we saw this morning.

[8.26] And then step three, that's a new thing. Apart from Goebel's method, that's the next new thing in this talk. How are we going to present that in a

single chart? That's the difficulty, because we have these 172 points: it's much more difficult than earlier to draw lines between all the points.

[8.27] We apply a statistical technique here; we apply a multivariate analysis, and specifically a so called multidimensional scaling of the variation that we find. When you do multidimensional scaling, you get an indication of underlying dimensions that structure the variation. The dimensions are not identified. It's not like saying that you have a dimension that has to do with whatever aspect of the human body in this material. That's not the case. It's a statistical measure of the dimensions that you get. But it's a statistical measure that you can use to get a clear view of the variation in your material. Usually, in a multidimensional scaling with three dimensions you already get a very good idea of how the variation is constructed.

And the interesting thing is that when you have three dimensions, you can still represent them graphically in a two-dimensional space, by using extra tricks. The trick that we will be using here is to add color. How can we add color? We can visualize the result of the multidimensional scaling by linking each of the three dominant dimensions that we find in the statistical analysis with a certain color. The statistics tells us we have three underlying dimensions. And then we say, 'ok, program, this is very good.' But now we want the first dimension to appear as red and the second dimension as green and the third dimension as blue. We then have a value for each dialect in our each data point in the variation. For each dialect we have its position on the three dimensions. That's what the statistics gives us. We can translate that position into a color. We can say, for instance, take a data point that is 80% red and 50% green, and 10% blue and mix those colors to that extent. You just take pure red, pure green and pure blue and you mix them for 80 %, 50 % and 10 %. Then you get a specific color for that data point.

[8.28] Have a look at this geographical map: this is what results from this type of analysis. Each point here is a dialect and each dialect has a specific color. The specific color comes from using the technique that I mentioned a moment ago. What's interesting about it is that you can see there is a structure in the data. When the colors are similar, and when they appear in the same neighborhood, then you have a geographical structure. For instance, here we have blue colors and they shift to green over there like that, and then they go to more purplish ones. What does that show? That shows that if you bring together the similarities and dissimilarities between all these dialects, then it's not random. They don't all have the same color. There is a structure and it is a geographical structure. This is the Belgium province of Limburg and this is the Dutch province, the Netherlandic province of Limburg. What you can see

is that there is indeed a kind of separation between the Netherlandic province and the Belgium province, because there is more blue over here and there is more green and red over there. So this is a way of finding structure in this much more complicated data set: similarities, geographical similarities can be plotted on the map. These are similarities that are calculated on the basis of a profile-based method. We do find some lectal structure in here, because we can say these are the Belgian Limburgish dialects, that's one big lect; and the Netherland Limburgish dialects, that's another lect. So we find lectal structure, we find a correspondence between the similarities and dissimilarities and a geographical map, a geographical outline.

[8.29]–[8.30] But the question we are asking here is: if we have that, what is the influence of concept characteristics on this type of structure? Would we find the same type of structure? Would this type of structure be clearer for some concepts than for others? The traditional underlying idea with this type of structure is: what determines the structure is the difference between language varieties, the difference between lects, a social thing. But the question I want to ask is: could it not also be the case that the variation is determined by the kind of concept you have? If we know some concepts are more likely to exhibit variation than others, then we may perhaps filter those concepts, so that we get an even clearer idea of what is the underlying lectal structure. If the variation is determined by different factors, some of which could be social and lectal, and others could be conceptual, then we want to filter out the conceptual factors. That's what we are trying to do.

[8.31] How? The first question is: why do we have that idea and how can we determine those characteristics? Lexical dissimilarities of the type that I have just mentioned may be influenced by concept characteristics. Think of salience, think of the fact that a concept may be more clear in the mind of speakers than other concepts. For which type of concept are we likely to find most variation? The unclear concepts may show a lot of variation in the data, precisely because people don't know them very well. So we might want to see whether less familiar concepts are indeed more likely to be subject to lexical heterogeneity, that is to say lack of structure, than the more salient concepts. It is a hypothesis that we might want to take into account.

[8.32] Similarly some concepts may be vague, may not have clear boundaries, may not be quite distinct in the mind of the speakers. It is not so uncommon to think that when you have a vague concept, it might be subject to more lexical heterogeneity, i.e. to more random variation than concepts that are not potentially confusing.

[8.33] Specifically also in the area of the human body, we get a lot of concepts that are taboo-laden or that have a negative connotation. It's also possible, and perhaps even likely, that concepts with a negative affect, with a negative emotional overtone, are more lexically heterogeneous than concepts that allow more open communication, that are not taboo, for which you don't need euphemism for instance.

[8.34]–[8.35] What we need to do then is to establish whether things like salience and vagueness and negative affect influence the variation that we have. That's what we do in this step. In order to do that we need to be able to measure salience, vagueness and negative affect. We have a number of criteria that we use for that but this is a part of the talk you'll find in the handout. This part of the talk I will go over very quickly. We are using five indicators of the criteria that I mentioned. We are using lack of familiarity, observational gaps, and multiword answers as indicative of salience. We are using lexical non-uniqueness as indicative of vagueness and we are using negative affect as a measure of itself. I won't go into the way in which we implemented these characteristics. I won't do that, because it would be getting too complicated, but just briefly let me discuss two examples.

[8.36]–[8.37] For instance, for lack of familiarity, the reasoning is that concepts that are less familiar increase the risk of uncertainty among language users, and so reduce the chances for uniformity across users and dialects. So less familiar concepts are likely to show more heterogeneity, but we will want to know what the unfamiliar concepts are. One way of doing that is simply to ask people. So we did a very small scale survey on the members of our research team and asked them to score a number of concepts and to tell us whether they were familiar with the concepts or not, i.e. whether they thought the concepts were everyday concepts or not. So on a five point scale, concepts were graded from 'unfamiliar' to 'everyday'. The results that you get on the slide might be offensive because you get a number of taboo areas here, but (as a neutral example) just think of this thing on my hands, i.e. this thing between the knuckles. Between the knuckles you have these little dents. Is that a familiar concept? You know the thing but you would hardly ever talk about it. That's the question we are asking: is this a familiar concept? No, probably not. On the other hand if you take the throat or the knee or the middle finger, those would be familiar concepts. So when we take that survey, we have a scale of familiarity of concepts.

[8.38]–[8.43] The way in which we measured vagueness, observational gaps, and multiword responses can be checked on the slides.



[8.44]–[8.45] Now let us go to the final concept characteristic, negative affect, as a second example. There we have two indications. First, for some concepts the dictionary itself mentioned that it was a negatively connoted concept. So there we had the authority of the dictionary, for instance when the dictionary mentioned that certain names for the nose would be pejorative names (like names for an ugly nose or names that want to express that people have a ugly nose). Second, other types of taboo items clearly come out of a survey, like for fat people and so on: see the examples on the slide. All of this is not really the most tasty part of the talk, so we will quickly move through that.

[8.46] We now have these various indications of the characteristics of the concepts. We think that we have things that point into direction of salience, the familiarity of the concepts, things that point in the direction of vagueness of the concepts, where people don't know very well what is meant by this concept. And we have indications that point to the negative overtones, emotionally negative overtones of the concepts. Now we want to ask ourselves: do those concepts in fact influence the lexical heterogeneity that we find in the data? So the next problem is: how are we going to measure the amount of variation and geographical heterogeneity? We take two indications of geographical variation. First, when we have variation in the geographical dialectal material, we will have many different words for one concept: that's one form of heterogeneity, many different words for one concept. That's what I call here *lexical diversity*: the existence of different words in the total Limburgish area, in this case the existence, not in one specific dialect area but in the whole area, of many words types for one concept, that's one form of heterogeneity. You can imagine that for instance, when you have a taboo concept, you often get very many euphemisms. That is the type of lexical diversity you can expect. If something is negatively connoted, you probably get very many different words of avoiding the connotation. Second, we also consider the geographical distribution of the items. We can say that we have lexical heterogeneity when the different names are spread out unevenly over the geographical area, that's what we call *geographic fragmentation*. When the items are scattered, i.e. when they are not clustered into clear geographical groups, then we get geographically heterogeneity. The measure of heterogeneity, taken together, is simply the product of lexical diversity and geographic fragmentation. (We will not deal here with the question how exactly to do the calculations.)

[8.47] What we now (almost) have is the second main step of the argument. The first main step, you will remember, is that we have ways of establishing

lectual structure by using a profile-based method. The second major step is: do we have indications that concept characteristics might influence lexical heterogeneity? Yes, we have indications or at least we are about to get them. That's what we are going to show now. In order to do so, we have to link our concept characteristics and our measure of lexical heterogeneity, and we have to prove that indeed the concept characteristics that we identified influence this measure of lexical heterogeneity. How do we do that? Here we bring in another statistical technique. We bring in a regression analysis of the material we have here. In this case, we use a multiple linear regression in which the response variable (what we are trying to explain) is heterogeneity in the definition that I just gave, i.e. the product of lexical diversity and geographical fragmentation. The predictor variables are then obviously, as you can expect, the concept characteristics like vagueness and salience that we introduced earlier. (More precisely, I didn't introduce all of them in detail, but I had a closer look only at lack of familiarity and negative affect. The other factors go in the same way, however.)

[8.48]–[8.49] What you get when you do the regression analysis is a thing like this. Most of you are probably not familiar with regression analysis, so let us just look at the important aspects of what this type of analysis tells you. You have here, the five features like negative affect and lack of familiarity and what you get here, the 'estimate', that is basically an indication of the extent to which those factors actually influence our heterogeneity, what we try to explain. As you know, statistics is not just about measuring things, but it is about measuring things that are statistically significant. Whether these factors, these effects are statistically significant? That's something that you can see in the final column, where you see the stars. The stars give you the degree of the significance of the effects, and three stars, that's a very high degree of significance (because as many of you will know, the regular cut-off point for statistical significance in linguistics studies is 0.05). So when you have three stars, it is really significant, so we have a reliable result. One more thing we see in the results is what is called a good Adjusted R-squared. That means: how much of the variation in the heterogeneity measures that we find can we explain by looking at those five factors? We can explain roughly 62%. That's a good result, i.e. it means there is a fairly strong effect of those factors on heterogeneity. We also see that in fact all five of the factors that we look at do have a significant effect (and all have a highly significant effect). So our initial intuition that these factors might influence the heterogeneity is correct. Statistical analysis shows that there is a clear effect on heterogeneity. This has important consequences, viz. that we

are more or less getting to the starting point of this complicated talk. When we want to measure the lectal structure in the profile-based variation, then we might want to filter out the effect of these factors, the effect of the concept factors. So the next step is: can we filter out the concepts characteristics to get a clearer picture of the lectal underlying structure?

[8.50]–[8.51] How are we going to do that? That will mean joining characteristics and distances. We want to know how lexical variation structures the dialect landscape, but we want to be careful with lexical variation that is influenced by concept characteristics rather than just lectal structure. A new methodological problem now arises: how can we establish that? We need two things. First, let me start at the bottom of this slide. We need a way to filter the profile-based calculations on the basis of the concept characteristics that we have. But given what we did this morning in Lecture 7, I think you can understand how we can try to do that: we can do that by giving a weight factor to the results of different concepts. So if we have a concept of which we know that it is highly heterogeneous on the basis of the regression analysis, on the basis of its concept characteristics, then the results for that concept will play a small role in the calculation of the average. (You remember that we average over various concepts.) If we have a concept that scores high on the heterogeneity analysis, then that concept will have less importance in measuring the average. That's the same as what we did this morning with 'bowler hats' when we looked at clothing, when we wanted 'trousers' to be more important in the average than the 'bowler hats'. In this case we say we will want concepts that are conceptual heterogeneous to be less important than the concepts that are lexically not heterogeneous, that do not influence the heterogeneity. That is the second point, and that is conceptually easy enough, because we've seen this the morning how we can do that.

The other point is: when we want to filter out such effects, we can see how you might want to do it, but how can you prove that it works? Then you need some kind of validation, you need a standard to compare the results to. What we want to do is to compare the filtered results with the unfiltered results, i.e. the results where we apply the weight measure with the results where we do not apply the weight measure. But on what features are we going to compare them? What will be our standard for comparing them? Let's have a look at that point.

[8.52] Basically we have two criteria for measuring the success in this case. One criterion, but I am not going to go into that because it's too technical, is what is technically called as the 'stress' of the multidimensional scaling analysis. Remember that in order to arrive at the type of figure illustrated in

8.29 we do a multidimensional scaling analysis. One of the statistical properties of multidimensional scaling analysis is a phenomenon that is known as stress. We can use the stress of the multidimensional scaling analysis as an indication of its success. That's one thing we are going to do. But if you are not familiar with the statistics, it is not so important, but I do have to mention it. The other thing, which is intuitively more clear, is that we might want to compare the lectal results that we get—the results we get with or without a filtered profile-based method—to some standard. We want to recognize lectal structure (in this case: dialectal structure) but how good are the results? One thing we can do is to compare the results in question with an existing classification of the area in question, because that's the thing that dialectologists do. Dialectologists don't just record and describe things. They also try to find the structure with their own methods, not our methods, in the geographical area. What we will do then is to compare our results with the existing classifications, the existing subclassifications, so to speak, of the Limburgish dialect area. Fortunately, (that's one of the nice things here) the dictionary from which we took our raw material has its own classification, so we can compare with that. The interesting thing is that these traditional dialectal classifications are very often based on purely formal features, like correspondence in pronunciation, or correspondence in morphological and syntactic features and much less on correspondence in lexical features. In a sense we are trying to see—this is a little bit of an exaggeration, but in a sense we are trying to see whether we can simulate the result of the non-lexical traditional classification with the lexical classification. Also, you need to see that you can divide this dialect area in different levels. The first level we already know about: that's the level where you have the Belgium province and the Netherlandic province. There is another classification where we have ten traditional regions. You can think them as counties for instance, ten counties. And then even within that there are even smaller areas, so we have an existing classification at three levels. To evaluate our results we can see which of our results corresponds most closely to one of those existing classifications, on the three levels. Fortunately we will be able to say at the end of the talk that the weighted calculation, the filtered calculation that we propose, is the best approximation of the existing classifications and in fact on all three levels.

[8.53] How then can we measure the correspondence with the given classification? That's the next methodological step we have to take. We need a standard, a validation point, but we also need a way of comparing our results with the validation point. Let me not elaborate on this too much, but in a sense what we try to do is this. We take an existing classification, and such an existing classification is a grouping of dialect points. If, e.g. you say 'this is the

Belgium province Limburg', then that means that you know which villages belong there. If we have those villages, we can take our results for those villages and see whether they are very similar among each other. What is the linguistic distance among the points in the grouping and how does it compare to the distance with the points outside the group? When we have those distances (let's say the internal distances within the province and the external distance outside of the province), then we have two measures, two average linguistic distances, and we then take the proportion of those two distances. Imagine that you have all the neighborhoods in Beijing, and you see how linguistically similar or lexically similar they are to each other. Then you compare them to all villages in a periphery of 50 kms outside or maybe 100 km outside of Beijing. You take the distances within Beijing as an urban environmentt and you take the distance of the same points with regard to the rural villages in the periphery, and you divide one by the other.

[8.54] If your proportion is near to one, it actually means that there is not a lot of difference between what you find inside Beijing and what you find outside. If in our case, the average linguistic similarity between the villages in Belgium Limburg is 80%, and the average linguistic similarity of the same villages with the villages in Netherland Limburg is also 80%, then you don't have a linguistic distinction between the Belgium province and the Netherlandic province. When the measure that we have (the linguistic distance ratio) equals 1 or nears to 1, the internal and external distance is the same, i.e. the region is difficult to distinguish from other regions. But our point is precisely to distinguish areas in such a way that we can see that some area is a region on its own, precisely as the traditional classification says. So what you have to remember here is that if our distance ratio is smaller than 1, then internal distance is smaller than external distance, and the specificity of the region is recognized. So the measure we use (that is practically the important point) for interpreting the charts that we will come in a moment is simply like this: the smaller, the better. The result is better, when the figure we get is smaller.

[8.55] How do we take into account concept characteristics? That's what we have already explained. We do it by using a weighting method: concepts that are conceptually heterogeneous in the way in which we analyze in a regression analysis should count for less. That's the weighting factor.

[8.56] What we now do is to compare a number of calculations, a number of calculations of getting back to the first step. We will now do our profile-based analysis again, but we will do it now with a number of additional steps, or

additional factors at least. One calculation will be the one without any weighting, without taking into account concept characteristics. Another one is using the weight factor as just defined. That is where we expect to get the best results, better results than without weighting. And there is another one which we introduce in a sense just for fun, that is to say we will use the inverse of the weighting factor. That's a measure for which we expect the identificational success to decrease. With the third one the success rate should be even less than without weighting.

[8.57]–[8.58] Let's go to the results. Again, we can draw maps and the maps that we can draw intuitively (that's already an interesting observation by itself) show interpretable results. Remember that I said, when we do a multidimensional scaling analysis, the multidimensional scaling as such gives you dimensions but it does not interpret the dimensions. Now when you look at the maps, and you can intuitively interpret the dimensions, then you can say, 'oh, yes, that makes sense.' In our case, intuitively reasonable divisions would for instance correspond to the political division of the area (Belgium versus the Netherlands), or to basic geographical dimensions. Corresponding to the political division, that could be a north-south dimension. But an intuitively plausible division could also be an east-west dimension, because that is a dimension that is important for the overall distribution of the Germanic languages. We are looking at Dutch dialects, but specifically, we are looking at some of the easternmost dialects of Dutch, bordering on the German language area in the east. And because the borderline between German and Dutch is not very strict, it would make sense (from the point of view of language history) to find an east-west dimension in the data.

[8.59]–[8.62] I am showing you a few maps now. This (8.59) is the map that we already saw with the overall structure. What it says here ('dim shown') is that we show the three dimensions together, the three dimensions coming out of the multidimensional scaling at the same time. Here you can already see, if you look at the colors, that we roughly have an east-west division, and then if you look within the eastern part, you see that there is also a north-south dimension. This map (8.60) is based only on the first dimension. That's clearly one that corresponds with the geographical division and the political division between Belgium and the Netherlands. This (8.61) is the second dimension, and the second dimension is the north-south one because the green band is in the south in both provinces. So this cross-cuts the previous one. The third dimension only (8.62) is again rather east-west oriented. So on the basis of these maps, we can indeed see that we get fairly clear structures. But these are not yet the calculations that we want to make.

[8.63] The calculations that we want to make are primarily based on this division of the area in ten basic regions (we mentioned this earlier). How good is our lectal method in recognizing these ten regions which have been identified by dialectologist on the basis of traditional methods of classification?

[8.64] We will show that with yet another technique, but this is a very simple one, technically speaking: a scatterplot. A scatterplot is something that you probably know about: you have two dimensions and you have several points that have a value on each of those two dimensions, and then you plot one dimension with regard to the other. In this case, what are the dimensions? The dimensions are precisely the two indications that we had of identificational success. So you remember that we said: what are our criteria for distinguishing identificational success, i.e. for seeing whether what we find corresponds to an existing classification? One criterion of success was the technical one (the stress of the multidimensional scaling), and the other one is the ratio between the internal and the external distance calculation. You also remember that the smaller the figure, the better.

Let's look at the results. These are the actual results that I want to arrive at. Let's look at them from two perspectives (so I will show the same plots, the same scatterplots twice). The first question is this: does a weighted calculation in which we filter for heterogeneity, give us a better lectal structure, a better lectal solution, than an unweighted calculation? That's the first question. The second question is then, if we do the lectal analysis according to Goebel's method, which I briefly introduced in the beginning, is that giving us a better result than if we do it on a profile-based way? And of course we will want to claim that the profile-based approach is better.

[8.65]–[8.67] So in this chart, you have a number of clusters of three points,  $W$ ,  $N$  and  $I$ .  $W$  is weighted (the results filtered for conceptual heterogeneity);  $N$  is not weighted, the straightforward analysis; and  $I$  is with the inverse weighting measure. Remember that we expect the weighted measure to be better than the non-weighted measure and we expect the invert-weighted measure to be worse than the weighted measure. The stress of the multidimensional scaling is the x-axis, but let us not focus on that. Important here is the measure on the y-axis, which gives us the identificational success in terms of the ratio between internal and external distances. Obviously, the success is bigger when the figure is lower. So what we should see is that overall the  $W$  dots are better placed along the vertical dimension than the other two points. If you look at the clusters of  $W$ ,  $N$  and  $I$ , we can see that  $W$  is predominantly better placed. As I also mentioned, we would do this on three different levels, starting from

a classification in provinces, starting from a classification in ten regions, and then starting from a classification in twenty sub-regions. So the first plot is (you can see that on top) for province; the second plot is for region; the third for subregion. But you get the same results each time: *W, N, I* is the pattern in all cases. So for the three types, for the three standards that we could use, the three different classifications that we could use as our points of comparison and validation, we find that the weighted measures always contribute to a better result.

[8.68] Let's take the other question that we could ask. Namely, is the profile-based method for measuring lexical distances systematically superior to the other methods? You will remember that I said in the beginning that we compared five approaches, but that I am actually looking at only two of them. So specifically, can we say that the profile-based method is better than the Goebel method? In the plots here, our method is represented by green plus-signs (+). The Goebel method (BCW) is represented by red triangles. Throughout, when you go over the slides again, you will see that the pluses perform better than the triangles.

[8.69]–[8.70] Overall, what can we conclude? Let's get back to our research questions, the questions from which we started. First, in general, what is the best method to measure lexical distances between dialects and so determine the structure of the dialect area? Well, we have indications that a profile-based method that takes into account the relative frequency of onomasiological alternatives yields better results than alternative methods. The second question was, to what extent should such methods be sensitive to concept features? We have fairly clear indications that lexical heterogeneity in a dialect area is influenced by concept features; an adequate picture of lexical similarities and dissimilarities requires disentangling lexical structure from concept-induced heterogeneity.

And now I am faced with the strange conclusion that the most difficult talk has also been the shortest one in this series so far. Thank you.



## Handout Lecture 8

### 8.1 Situating the talk

- 1–2 Introduction
- 3–4 Semasiological variation
- 5–6 Conceptual onomasiological variation
- 7–9 Formal onomasiological variation
- 10 Conclusion

### 8.2 Situating the talk

from formal onomasiological variation  
to the interaction between formal and semantic variation:

- Lecture 8: to what extent do concept features like salience and fuzziness influence formal onomasiological variation?
- Lecture 9: given a set of near-synonyms, how can we establish the semantic equivalence that lies at the basis of an onomasiological profile?

### 8.3 Research questions

- 1) in general, what is the best method to measure lexical distances between dialects, and thus determine the structure of the dialect area?
- 2) specifically, to what extent should such methods be sensitive to concept features?

### 8.4 Research questions

- 1) in general, what is the best method to measure lexical distances between dialects, and thus determine the structure of the dialect area?

→ **hypothesis**

a profile-based approach, taking into account the relative frequency of onomasiological alternatives yields better results than alternative methods

### 8.5 Research questions

- 2) specifically, to what extent should such methods be sensitive to concept features?

→ **hypothesis**

lexical heterogeneity in a dialect area (onomasiological variation) is influenced by concept features

#### 8.6 Background

a double line of research pursued over the last 15 years in the QLVL research group

- **lexical categorization research** within the Cognitive Linguistics framework, with specific emphasis on prototype-based phenomena (salience, vagueness)
- **lectometrical research** based on the analysis of onomasiological variation

#### 8.7 Background

D. Geeraerts, S. Grondelaers & P. Bakema 1994 *The Structure of Lexical Variation* Berlin: Mouton de Gruyter

#### 8.8 Background

D. Geeraerts 1997 *Diachronic Prototype Semantics* Oxford: OUP

#### 8.9 Background

D. Geeraerts, S. Grondelaers & D. Speelman 1999 **Convergentie en divergentie in de Nederlandse woordenschat** Amsterdam: Meertens Instituut

#### 8.10 Background

Geeraerts, Dirk and Dirk Speelman. In press. Heterodox concept features and onomasiological heterogeneity in dialects. In Gitte Kristiansen, Dirk Geeraerts and Yves Peirsman (eds.), **Advances in Cognitive Sociolinguistics** Berlin: Mouton de Gruyter.

Speelman, Dirk and Dirk Geeraerts. In press. Concept characteristics and lexical heterogeneity in dialects. In **International Journal of Humanities and Arts Computing**.

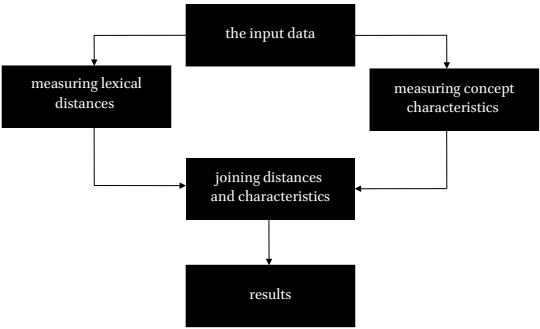
#### 8.11 Background

today's concern:

one way of combining the two lines:

to what extent do concept features (specifically, prototype-based salience and vagueness) interact with lectometrical onomasiology-based measurements?

8.12 Overview



8.13 Materials

the chapter “The human body” of the dictionary of the dialects of the provinces of Limburg in Belgium and The Netherlands (“Woordenboek van de Limburgse dialecten”)

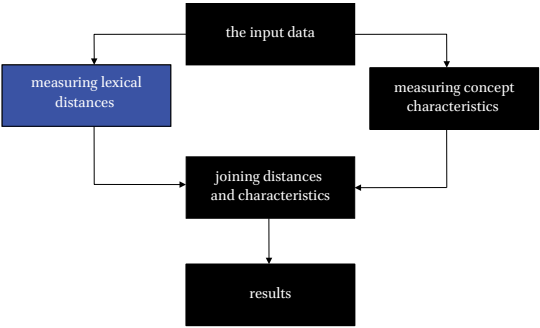
restricting ourselves to the recent, systematically conducted surveys N10, N106, N107, N108 and N109

initially 201 places, 206 concepts, 32591 tokens  
after setting threshold (concepts/places):  
172 places, 179 concepts, 31359 tokens

8.14 Materials

for copyright, diagram 8.14 is deleted

8.15 Overview



8.16 From variation to structure

how do we get from lexical variation to the identification of structure in the dialect landscape ? three steps:

- 1 measure lexical (dis)similarity between two places for a single concept
- 2 taking into account all concepts, get a global measure of (dis)similarity between two places
- 3 taking into account all places, analyze the structure of the variation

8.17 Step 1

measure lexical (dis)similarity between two places for a single concept

we will compare 5 different lectometric methods, but here, we restrict the introduction to the two most relevant ones:

- the profile-based approach (PR)
- the Hans Goebl approach (BCW)

8.18 Step 1

sample A	sample B
Mrs Thatcher	Mrs Thatcher
Mrs Thatcher	Mrs Thatcher
Mrs Thatcher	Mrs Thatcher
Mrs Thatcher	Mrs Thatcher
the Iron Lady	the Iron Lady
the Iron Lady	the Iron Lady
Attila the Hen	Attila the Hen
Attila the Hen	Attila the Hen
Attila the Hen	
Maggie Roberts	

**the profile-based method:**  
starting from the  
onomasiological profile  
for a given concept in  
two samples. . .

8.19 Step 1

	sample A	sample B
Mrs Thatcher	0.40	0.50
the Iron Lady	0.20	0.25
Attila the Hen	0.30	0.25
Maggie Roberts	0.10	

**the profile-based method:**  
. . . determine the relative  
frequency of the elements  
in the profile . . .

8.20 Step 1

	sample A	sample B
Mrs Thatcher	0.40	0.50
the Iron Lady	0.20	0.25
Attila the Hen	0.30	0.25
Maggie Roberts	0.10	

$0.40+0.20+0.25 = 0.85$

**the profile-based method:**  
... and calculate the total overlap between the relative frequencies

8.21 Step 1

sample A	sample B
Mrs Thatcher	Mrs Thatcher
Mrs Thatcher	Mrs Thatcher
Mrs Thatcher	Mrs Thatcher
Mrs Thatcher	Mrs Thatcher
the Iron Lady	the Iron Lady
the Iron Lady	the Iron Lady
Attila the Hen	Attila the Hen
Attila the Hen	Attila the Hen
Attila the Hen	
Maggie Roberts	

**the Goebl method:**  
starting from the onomasiological profile for a given concept in two samples. ...

8.22 Step 1

sample A	sample B
Mrs Thatcher	Mrs Thatcher

**the Goebl method:**  
... reduce the profiles to their most frequent element ...

8.23 Step 1

sample A	sample B
Mrs Thatcher	Mrs Thatcher

**the Goebl method:**  
... and assign a similarity of 1 or 0 according to identity/difference ...

8.24 Step 1

sample A	sample B
Mrs Thatcher	Mrs Thatcher

sample C
Mrs Thatcher

the Goebl method:  
... but in the case of identity, weigh for the uniqueness of the term across all available samples

8.25 Step 2

taking into account all concepts, get a global measure of similarity between two places

→ **average** over the (dis)similarity measures for the individual concepts (further on in the research procedure, we will introduce a weighted average)

8.26 Step 3

taking into account all places, analyze the structure of the variation

step 2 yields a matrix of (dis)similarities between pairs of places → a multivariate analysis (here, **multidimensional scaling**) of the (dis)similarity matrix reveals the lexical clustering of the places

8.27 Step 3

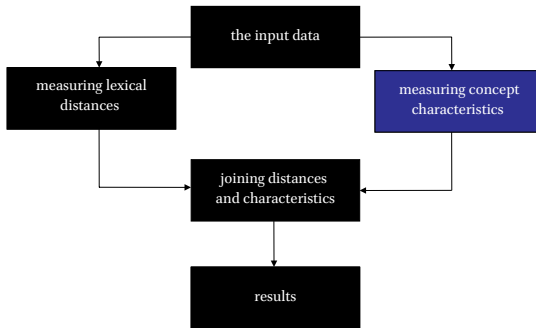
the results of the MDS can be visualized beyond the classical MDS plots, by linking the three dominant dimensions of the MDS analysis to the dimensions of an RGB colour space

each data point can then be plotted on the geographical map with its specific colour, reflecting its position in the MDS results

8.28

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## 8.29 Overview



### 8.30 Concept characteristics

lexical (dis)similarities of the type just mentioned may be influenced by concept characteristics

in general, observed (dis)similarities may be due to

- a) the lexical structure of the area
- b) the nature of the concepts involved

when we want to get a clear picture of a), we will need to get a good grip on b)

### 8.31 Concept characteristics

lexical (dis)similarities of the type just mentioned may be influenced by concept characteristics

e.g. meanings can vary in their degree of **salience**; some concepts have a stronger mental entrenchment than others

→ less familiar concepts are more likely to be subject to lexical heterogeneity than more salient concepts

### 8.32 Concept characteristics

lexical (dis)similarities of the type just mentioned may be influenced by concept characteristics

e.g. the boundaries between meanings are not necessarily sharp; lexical concepts may be **vague**

→ vague concepts may exhibit more lexical heterogeneity than concepts that are not potentially confusing

### 8.33 Concept characteristics

lexical (dis)similarities of the type just mentioned may be influenced by concept characteristics

e.g. lexical concepts may be taboo-laden or otherwise have a **negative emotional connotation**

→ concepts with negative affect may be more lexically heterogeneous than concepts that allow more open communication

### 8.34 Concept characteristics

so, we look at

- lack of familiarity (as indicative of salience)
- observational gaps (as indicative of salience)
- multiword answers (as indicative of salience)
- lexical non-uniqueness (as indicative of vagueness)
- negative affect (measured directly)

### 8.35 Concept characteristics

and ask ourselves whether salience, vagueness, negative affect influence heterogeneity in the lexical geography

### 8.36 Lack of familiarity

logic: concepts that are less familiar increase the risk of uncertainty among language users, and reduce the chances for uniformity across users and dialects

operationalisation: average scores from a small survey among 7 members of the research unit; scores in the survey were on a five-points scale (1 = no risk of unfamiliarity; 5 = high risk of unfamiliarity)

### 8.37 Lack of familiarity

results: some examples of potentially less familiar concepts

knokkelkuiltjes 'little dents between the knuckles'

bloedwei 'blood plasma / the liquid component of blood'

levend vlees onder de huid 'living flesh underneath the skin'

voorvoet 'front part of the foot'



in contrast with keel ‘throat’, knie ‘knee’, middelvinger ‘middle finger’ etc.

### 8.38 Observational gaps

logic: a high number of places without responses may be an indirect indication of lack of familiarity with the concept

but it may also indicate inconsistencies in the survey procedure  
– we have to be careful when interpreting the effect

### 8.39 Observational gaps

operationalisation: the absolute number of places (out of the 201 places) in which no names were given for the concept at hand

results: examples of concepts with many observational gaps are:  
slecht groeien ‘not to grow well’  
geluidloze wind ‘noiseless fart’  
kaakgestel ‘jawbone’  
huig ‘uvula’

### 8.40 Multiword responses

logic: cross-linguistically basic concepts are typically referred to with short words (cf. basic level hypothesis);

additionally multiword answers may indicate that:  
– people given a description because there either is no name for the concept in their dialect or they don’t know the name  
– people creatively invent names on the spot because they don’t know what to answer

### 8.41 Multiword responses

operationalisation: proportion (at the token level) of multiword answers in the total set of answers for a concept

results: for example, for borstelig haar ‘brushy hair’ multiword answers are:

“haar wie een stekelvarken” ‘hair like a porcupine’,  
“haar wie stro” ‘hair like straw’,  
“steil haar” ‘flat, straight hair’,  
“stijf haar” ‘stiff hair’, ...

#### 8.42 Vagueness

logic: if a term for naming the concept at hand can also be used for naming another concept, then this may be seen as an indication that the concept at hand is not always easily distinguishable from the other concept (this would probably even be true if the overlap is an example of classical polysemy)

#### 8.43 Vagueness

operationalisation:

how often do the names for a given concept also occur as a name for alternative concepts ? (a concept with a smaller proportion of unique names is more vague)

note: this is a type-based measure (an alternative operationalisation – not discussed here – would start from the token level)

#### 8.44 Negative affect

logic: taboo concepts typically lead to rich synonymy; this is relevant for “the human body” (procreation and defecation)

extension from taboo to negative affect in general: the dictionary contains many questions in which it is explicitly asked to give pejorative terms for a certain concept, e.g. *neus* (spotnaam) ‘**nose (pejorative)**’, *gezicht* (spotnaam) ‘**face (pejorative)**’, *hoofd* (spotnaam) ‘**head (pejorative)**’

#### 8.45 Negative affect

operationalisation: average scores from a small survey among 7 members of the research unit; scores in the survey were on a five-points scale (1 = no negative affect; 5 = strong negative affect)

results: examples of concepts with strong negative affect are *aarspleet* ‘**anal cleft**’, *geluidloze wind* ‘**noiseless fart**’, *kwijl* ‘**drool**’, *papperig persoon* ‘**fat, plump person**’

#### 8.46 Testing the characteristics

do the concept features indeed contribute to lexical heterogeneity ?

in previous research, we tested the effect of the five characteristics on **heterogeneity**, i.e. the combination of

**lexical diversity**: the existence of different words for naming a concept

**geographic fragmentation:** 'scatter' in the geographic distribution of these different words

#### 8.47 Testing the characteristics

→ a multiple linear regression  
with response variable **HETEROGENEITY**  
= lexical diversity x geographic fragmentation and predictor variables:

<b>MISSING.PLACES</b>	number of observational gaps
<b>LACK.FAMIL</b>	salience (lack of familiarity)
<b>PROP.MULTIWORD</b>	proportion of multiword answers
<b>NON.UNIQUENESS</b>	occurrence in other concepts
<b>NEG.AFFECT</b>	negative affect

#### 8.48 Testing the characteristics

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	1.239403	0.352408	3.517	0.000558 ***
MISSING.PLACES	-0.006887	0.002010	-3.427	0.000764 ***
LACK.FAMIL	0.689544	0.140410	4.911	2.09e-06 ***
PROP.MULTIWORD	2.657735	0.440148	6.038	9.26e-09 ***
NON.UNIQUENESS	0.054218	0.007229	7.500	3.19e-12 ***
NEG.AFFECT	0.525463	0.121352	4.330	2.52e-05 ***

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.183 on 173 degrees of freedom

Multiple R-squared: 0.6321, Adjusted R-squared: 0.6215

F-statistic: 59.45 on 5 and 173 DF, p-value: < 2.2e-16

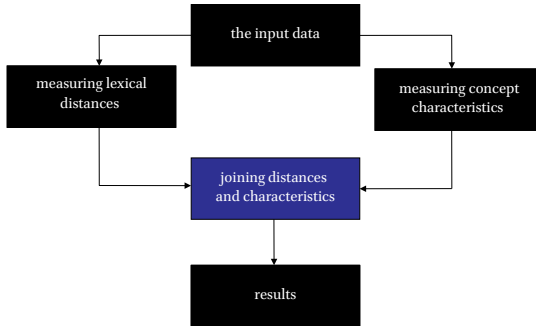
#### 8.49 Testing the characteristics

a statistically successful model:

- excellent p-value (< 2.2e-16)
- good adjusted R-squared (0.6215)
- all predictor variables have a significant effect  
(but **MISSING.PLACES** appears to contribute to homogeneity rather than heterogeneity)

→ we can be confident that overall, the concept characteristics indeed contribute to heterogeneity

## 8.50 Overview



## 8.51 Design

we want to know how lexical variation structures the dialect landscape, but we want to be careful with lexical variation that is influenced by concept characteristics (rather than just lectal structure)

what we need:

- a standard against which we can **evaluate** the structure emerging from our lexical analysis
- a way in which we can **attenuate** the effect of concept characteristics

## 8.52 Evaluation criteria

- 1 the **stress** of the multidimensional scaling, as a measure of goodness of fit of the MDS solution  
(low stress values indicate a good solution)
- 2 the **identificational success** in approximating the classification of the Limburg dialect area as found in the Woordenboek van de Limburgse dialecten  
10 regions, 20 subregions  
plus 2 (3) provinces in 2 countries

## 8.53 Evaluation criteria

how do we measure the correspondence with the given classification?

for any given region distinguished by the dictionary, we calculate the ratio between

- the average lexical distance between the places within the region (**internal distance**)
- the average lexical distance between the places within the region and those outside (**external distance**)

#### 8.54 Evaluation criteria

if the internal/external distance ratio equals 1, the internal and external distance is the same, i.e. the region is difficult to distinguish from other regions

if it is smaller than 1, internal distance is smaller than external distance, i.e. the specific identity of the region is recognized → the smaller, the better

#### 8.55 Attenuating criteria

how do we take into account the concept characteristics?

the heterogeneity of the concepts can be used as a **weighting value** in the calculation of lexical distances:

when summing over concepts in the calculation of distance, heterogeneous concepts count less

(technically, the weighting factor we use is the 'fitted value' of the concept in the regression analysis of heterogeneity)

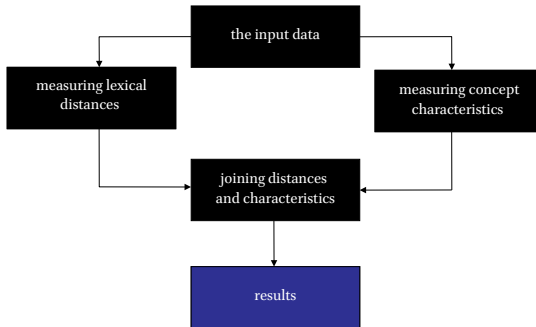
#### 8.56 Attenuating criteria

how do we take into account the concept characteristics?

we compare three calculations:

- without weighting
- using the weight factor as just defined
  - ↳ identificational success is expected to increase
- using the inverse of the weight factor as just defined
  - ↳ identificational success is expected to decrease

### 8.57 Overview



### 8.58 Maps

the maps that are drawn on the basis of the MDS analysis, show interpretable results

dimension 1: East-West  
 dimension 2: North-South  
 dimension 3: East-West

### 8.59

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### 8.63

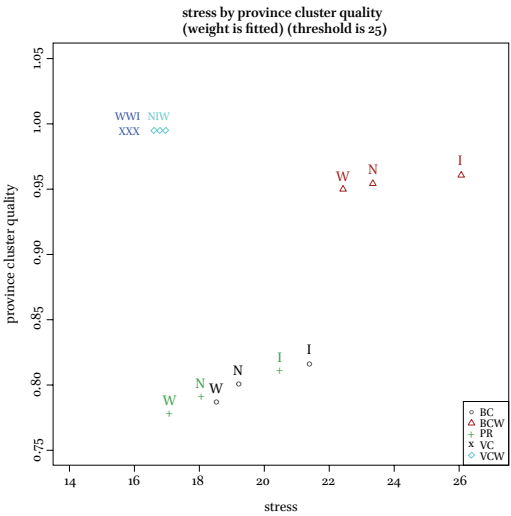
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### 8.64 Scatterplots

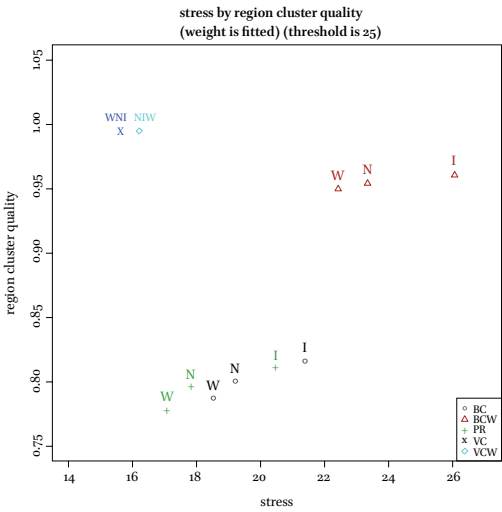
for each of the three levels of lectal structure (province, region, sub-region), we draw a scatterplot for stress x identificational success the plots show:

- 1 the weighted calculations are systematically superior to the non-weighted ones and the invertly weighted ones  
 $W > N > I$

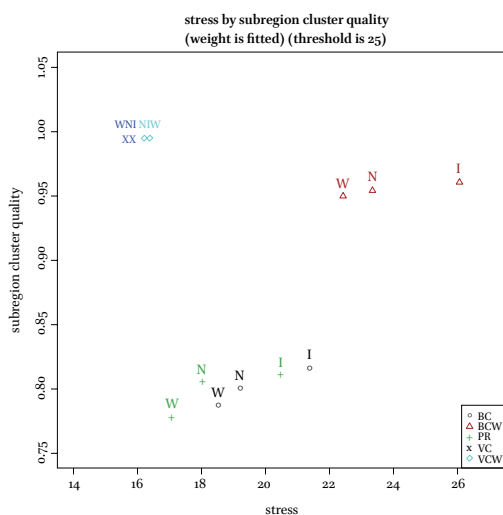
8.65



8.66



## 8.67



## 8.68 Scatterplots

for each of the three levels of lectal structure (province, region, subregion), we draw a scatterplot for stress x identificational success  
the plots show:

- the profile-based method for measuring lexical distances is systematically superior to the other methods, and specifically to the Goebel-method  
PR > BCW

## 8.69 Research questions

- in general, what is the best method to measure lexical distances between dialects, and thus determine the structure of the dialect area?

**conclusion:**

a profile-based approach, taking into account the relative frequency of onomasiological alternatives yields better results than alternative methods

## 8.70 Research questions

- specifically, to what extent should such methods be sensitive to concept features?



**conclusion:**

lexical heterogeneity in a dialect area is influenced by concept features; an adequate picture of lexical (dis)similarities requires disentangling lexical structure from concept-induced heterogeneity





All original audio-recordings and other supplementary material, such as any hand-outs and powerpoint presentations for the lecture series, have been made available online and are referenced via unique DOI numbers on the website [www.figshare.com](http://www.figshare.com). They may be accessed via this QR code and the following dynamic link: <https://doi.org/10.6084/m9.figshare.4980548>

## Multivariate Models of Linguistic Variation

[9.1] This is the ninth lecture in this series, and I want to give a kind of double introduction, an introduction for those of you who have witnessed the previous eight talks and an introduction for those who have not. Let me start with the newcomers. What we have been doing in the previous talks is to have a look at the importance of social variation, and that's a very broad concept that includes cultural variation and also to some extent, historical variation. Studies in Cognitive Linguistics are to a large extent involved with meaning; meaning is what they concentrate on. So one of the things that I have been doing systematically in the previous talks is to have a look at the way in which lectal structure correlates with meaning variation. Meaning variation we can study from a polysemy point of view, from a 'semasiological' point of view, as I called it, i.e. starting from a category, from a word and then looking at its meanings. But we also can study it from the other perspective, when language use comes down to choosing different categories, or choosing different words for expressing the same category. That's what we have been calling 'onomasiological' variation. So from that point of view, what we have been doing is to see to what extent and in which ways social variation is meaningful. It's meaningful because meaning itself varies, but it's also meaningful because different social categories express certain meanings, express group identity or whatever it could be. I still have to add something about this word *lectal structure* that I have used: *lectal*, that's a cover term use to refer to all forms of dialects, sociolects, regiolects, but also registers, text types and so on.

Now what we have reached this point, we can start looking at some of the more intricate questions that have to do with this set of problems. We have looked at variation of meaning from a social perspective, variation of categorization from a social perspective, variation of lexical choice from a social perspective, and we have looked at those things separately, but there is a bit of problem. (Now I am so to speak starting the introduction for those who have witnessed the previous talks.) In the two talks yesterday we looked at the variation that can exist among referential synonyms—words like *subway* and *underground* that basically have the same denotational meaning. But they do have different social meanings because they belong to different lects: *subway* and *underground* are a simple example of American English and British English. But the precondition for recognizing that difference in lectal value is that we can establish clear synonymy on the denotational level. In a case like *subway*

and *underground* we're probably willing to accept that we have a clear case of denotational synonymy. But it's not always so easy. In a number of cases, it can take us a long way to try to establish exactly if there is a real synonymy. This has consequences for the method that I have been presenting the previous days, i.e. the method of measuring distances on the basis of lexical choices. It's a method that may not always be applicable because the strict synonymy that is a requirement for the application of the method is not always there. Let me mention at this point that this is one of the basic things that we are working on at the moment in our research group: how can we have a look at forms that are at the same time sociolinguistically, lectally variable, and at the same time semantically variable when the situation is less clear than in the football terms and clothing terms that we looked at earlier? How do we deal with the variation? We are working on that, but I'm not going to present our current attempts at solving the problem. I think I've said before that what I'm presenting is not finished products, it's a line of thought, a line of research that is developing.

I also want to add a methodological remark at this point. As you may have noticed, we have been moving towards more and more technical approaches, approaches that require good material, lots of corpus material, or materials that have otherwise been collected, and appropriate techniques for analyzing those materials. And like yesterday, it sometimes gets fairly complicated with the work we can do. That has a consequence and I do want to say something about that. It's a consequence of the kind 'don't try to do this at home', that is to say, if you want to do this sort of analysis and you want to do it in an appropriate way, it's not something that you on your own can sit down for and just do, you need statistics, as is traditionally the case for sociolinguistics. You need a certain acquaintance with the appropriate techniques, and that will require training and learning how to do it. These lectures are not meant for learning how to do that kind of thing; that's not what we can do in this set of lectures. They can illustrate the usefulness of certain approaches, but if anyone of you would think 'oh, the study of lexical distances or lectal distances in Chinese, for the Chinese languages or dialects, or whatever, that might be interesting for me', then you will need some more information and training that I cannot provide in these lectures alone.

So what I'm doing today is to have a look at a more refined way of trying to establish complete synonymy and that will lead us to, on the one hand, to the use of, again, a specific type of quantitative techniques, on the other hand also to a certain model of a linguistic description, a grammar if you wish. That's what I hint at in the title of the talk as a 'Multivariate Model of Linguistic Variation': multivariate in what sense? In the sense that the choice, the selection of a

certain linguistic form will be determined at the same time simultaneously by factors of different kinds, by the meaning you want to express, but also by the contexts which you are talking, or speaking, or writing and the overall lectal background of the forms in question.

[9.2] What we have for today is a case study on the question: do the two causative auxiliaries that we find in Dutch mean the same thing? Dutch has two causative auxiliaries, auxiliaries in which it can express causative meaning. It has a *doen* auxiliary and a *laten* auxiliary, which is more or less like *make* and *let* in English. It's not exactly the same case, but it's more or less like that, to give you a first approximation. The questions will be: do these causative auxiliaries express the same meaning? Do they just express causation in general? They probably don't. But then if they do not, what exactly is the difference between them? See how we are moving from a method where we measure lectal difference on the basis of lexical variation with strict synonyms to a study where we look at the differences, semantic and all others, between near-synonyms.

[9.3] In our treatment of formal onomasiological variation, we have assumed that synonymy (semantic equivalence) is easy to establish. But what method could we follow to establish whether that is indeed the case? So we will zoom in on near-synonyms to study the extent of their semantic equivalence, and the role played by lectal factors in distinguishing between those items.

[9.4] Let me now first introduce the question further. I have already said that we are looking at the alternation or the differences between *doen* and *laten* in Dutch. Also, I've already told you about Belgian Dutch and Netherlandic Dutch. At some points in this talk, in the slides, you may see that I'm referring to 'Flemish'. 'Flemish' is shorthand for 'Belgian Dutch' because it's spoken in the region of Flanders. As I've also explained, the notion 'lectal variation' is also a kind of shorthand. It involves all kinds of dialects, regiolects, idiolects, sociolects and so on.

[9.5] Now there have been several scholars already who discussed the differences between *doen* and *laten*, specifically Suzanne Kemmer and Arie Verhagen. At one point, they put forward a hypothesis that the choice for *laten* is determined by what they call 'indirect causation'. So they make a distinction between direct causation and indirect causation and then assume that indirect causation is predominantly expressed by *laten*.

[9.6]–[9.7] Now what does that involve? This idea of indirect causation has been further developed in a PhD thesis by Ninke Stukker in 2006. What Stukker says is roughly like this: in the case of direct causation, *‘The causer produces the effected event directly; there is no intervening energy source “downstream”’*. This is maybe difficult to understand, but this refers to a certain model of causation, formulated by Leonard Talmy, where causation is seen in terms of a flow of energy, a flow of energy from a source to a target. What Kemmer and Verhagen mean by direct causation is that the flow of energy from source to target is relatively direct. There is nothing in between that helps as a transmitter of the causation. As for indirect causation, on the other hand, Stukker says that, *‘Besides the causer, the causee is the most immediate source of energy in the effected event. The causee has some degree of “autonomy” in the causal process’*. There is some specific terminology here, which we may explain with an example, *The policeman made the car stop*. Then the *policeman* is the causer; the *car* is the causee, and *stopping* is the effected event. That’s the terminology they use. So in this example you have an intransitive predicate *stop*; there is another case where you can have a construction with a transitive predicate, *The policeman made the car driver stop the car*, or *made the driver stop the car*, and in such a case the intermediate entity, the causee, can be seen as an intermediate source of energy. In that case, when the causee, the intermediate entity, has a role in the causative process, then we would have indirect causation, and when the causee does not have such a role, then it’s direct causation. That is, with some simplification, the semantic hypothesis about the role of the causer, the way the energy flows and the role the causee plays in that flow of energy.

[9.8] Notice that this view can be tested as a hypothesis. You have a clear idea and a clear formulation of what it is that influences the presence of *doen* and *laten*: *doen* indicates direct causation; *laten* indicates indirect causation. That’s a hypothesis that could be tested, but how? A traditional way of doing it in linguistics would probably be to sit down, to read or think up a number of sentences that exhibit either the *doen* verb or the *laten* verb and then establish for yourself intuitively, introspectively, ‘OK, in this case I feel it is indirect causation and in that case I feel that it is direct causation’, ‘According to me, it’s this or that’. From a methodological point of view, that is a fairly weak approach, because what are your criteria for saying that it is so and so? If you could spell out the criteria, and if everybody else could follow them, then we take a further step; we could say, ‘OK, now we can perhaps do a survey and ask a hundred people whether it’s this or whether it’s that and see how much inter-rater comparability we have, how much agreement we have.’ In that way, we can get

closer to a more objective methodology. There is also another way to get a more objective methodology and that's what I will try to illustrate here: let's look into a corpus and think about the phenomena in the corpus that might correlate with one of the interpretations or with the other. So instead of just looking at the sentences, trying to understand intuitively the subtle differences between indirect causation and direct causation, we go to the corpus, and we code the sentences that we find for a number of features, features of which we assume on the basis of the theoretical approach that we have, that they would correlate either with indirect causation or direct causation.

[9.9] What we need then is, if we follow this approach, is a representative corpus of language data, a set of potentially relevant factors coded in the corpus and a statistical technique analyzing the relevance of the corpus. Let me go through this. What in this case study are the various steps here?

[9.10] The corpus that I'm using for this case study is the so-called *Corpus of Spoken Dutch*, or Spoken Dutch Corpus. For a spoken corpus, it is really large. It's 900 hours of tagged Dutch material; 2/3 of it is Netherlandic Dutch and 1/3 is Belgian Dutch, or Flemish. It includes quite a bit of registers and text style variations, so it's quite interesting from a sociolinguistic point of view. We use this corpus to retrieve our *doen* and *laten* sentences. We automatically retrieve the forms *doen* and *laten*, but then there is quite a bit of manual correction you have to do because there are a number of things that you want to throw out. There are for instance, a number of *laten* sentences that have a totally different meaning; there are also a few *doen* sentences that have a totally different meaning (because they are not causatives, let me put it that way). So you do need some manual filtering.

(As a remark, note that throughout these lectures, I've been going from a more traditional form of semantic analysis to the more technically supported kind of analysis illustrated here. The latter does not only require a statistical background, good material, and a specific type of training, but it also requires time. Some people sometimes think that corpus linguistics is fast and easy. Forget about it: it's difficult. You have to spend a lot of time checking your corpus, checking your data, coding your quotations, etc. etc. It's not the easy way. You can leave this room and you can leave these lectures tomorrow thinking: it may be nice what he is presenting to us but it's certainly not an easy way. I'm aware of that. I plead guilty. But I think we have to do this if we want to get a few steps ahead towards better methodologies in the study of language.)



[9.11] The statistical technique we use in this case study is again a regression technique. Yesterday we used a multiple linear regression analysis, today I will be using a stepwise logistic regression analysis, which is a bit similar to the analysis that we presented yesterday. We will come to that in a couple of moments. Again, why we choose this technique is because (it's the same type of question as what we had yesterday) we are looking at the impact of a multitude of possibly relevant factors on observed variation and we are trying to see which of the possibly interesting factors is statistically significant. On the basis of the factors that are statistically significant, we can then try to come at a more traditional interpretation of what the meaning differences between *doen* and *laten* are. We will see how it works.

[9.12] Now then the set of relevant factors. For the sake of clarity, I will make a distinction between external factors and internal factors. The external ones are the ones that have to do with the lectal variation, and all of this is wired in construction of the Corpus of Spoken Dutch, of the CGN, for instance, in the corpus of CGN we have traditional social linguistic factors like speaker characteristics, gender, age, educational level; there is obviously, the national variation between Belgian Dutch and Netherlandic Dutch; and there is quite interestingly, register variation, because the Corpus of Spoken Dutch is built up 15 *components*, as they are called, so 15 sub-corpora, and the sub-corpora, in a sense, are divided along three dimensions. So you have dialogues and multi-logues versus monologues; you have private speech versus public speech and you have spontaneous speech versus prepared speech. These dimensions interact, so you get sub-corpora with a combination of these dimensions.

[9.13] The overview that you have here of the corpora, is divided according to the distinction between spontaneous and prepared speech, because that will turn out to be fairly interesting for our question. For instance, to just give you a brief example of what we have there, we have face-to-face conversations, we have interviews, spontaneous telephone conversations, another set of spontaneous telephone conversations, simulated negotiations, and broadcast television debates, classroom lessons. On the basis of what we know about these components, we can then add something to the interpretation of the variation that we find.

[9.14] While the external factors have to do with the sociolinguistic, lectal structure of the material, the internal factors are those that are situated at sentence level. What do we find? And what do we expect? I should mention that this study is to a large extent a pilot study. One of our PhD students is currently elaborating this into a full PhD, so this is not the final word on the *doen* and

*laten* variation, and the factors that I mention here are not all of the factors that you might want to include from a semantic or a syntactic point of view. But the set of materials that we've coded for this case study has been coded for just this number of features.

[9.15] First, the syntactic construction type basically involves the distinction between transitive and intransitive constructions: is the effected event (as Kemmer & Verhagen and Stukker would name it) of the intransitive or transitive type? What would our expectation be if we start from the indirect causation hypothesis? If *laten* expresses indirect causation, then you wouldn't expect *laten* in intransitive constructions, because in intransitive constructions, there is no intermediate entity, there is the causer and then there is the causee, but the causee does not mediate between the causer and the third party, because there is no third party, because you have an intransitive sentence. So in that sense, you could say, i.e. you can formulate a hypothesis: if *laten* expresses indirect causation you don't expect it in intransitive constructions. Notice how this will work. If this is the case, then this is a prediction that we get from the theory, and so what we will be doing is to test the prediction. We have a theory and we think of something that might be a natural consequence of the theory, and then we see whether this consequence obtains or not. That is the type of methodological thinking that is crucial for this type of research, and up to a point understanding the methodological process is maybe more important in this case than actually understanding the details of the causatives. The message which I want to bring is this: this is a way in which we can make semantic analysis a bit more objective than has traditionally been the case.

[9.16] The second factor is the co-referentiality between the matrix subject and then either the subject or the object of the infinitive. Think about it in this way, if *doen* expresses direct causation, then co-referentiality should favor the use of *doen*. *I made myself laugh*, that's co-referentiality. It's very hard to imagine something that is more directly causative than when you influence yourself. So I am tempted to say here, on theoretical grounds, co-referentiality should favor *doen*, because it's a very direct form of influencing something when you influence yourself.

[9.17] Then there is the animacy of the matrix subject. If *doen* expresses direct causation, you will expect more *doen* with animate matrix subjects because the animate subjects have more control over the flow of energy. If you think of the wind as doing something, well, maybe the wind has a form of control but only if you personify the wind, but if a kitchen table does something, causes something, you can't attribute agency to that kitchen table, or not easily. It's

much more easy to attribute agency to agents, to animate beings, and so, it would seem that *doen*, expressing direct causation, will occur more with animate agents. I should say that here there is a bit of a gap in the coding: I think we should also have coded for the animacy of the causee, of the other entity. That is one of the things that still needs to be done but that is not yet included in this study.

[9.18] Then we have two fairly complex factors that may require some extra explanation. First, collocational strength: why is that important in this case? You can imagine that maybe the presence of *doen* and *laten* is not semantic, but is idiomatic, i.e. it might have something to do with fixed expressions, in the sense that one verb would always take *laten* regardless of the meaning of the total construction and where another verb would always take *doen* regardless of the meaning of that other verb. You know that as a 'fixed expression': in itself that is not a novelty, but it does mean if we have a semantic hypothesis about the distribution of *doen* and *laten*, of direct and indirect causation, then we would not expect that kind of fixed expression, because the fixed expression is just formally fixed and it would not have a semantic background. So what we want to do is to see if there is any collocational effect, where *collocation* in this case is a technical term for the existence of fixedness between two items. So what we will need is a method for measuring that fixedness. I will come back to that in a moment. How do we establish whether something is a fixed expression or not, whether the link between the causative auxiliary and the verb, the infinitival of verb, whether that link is fixed or not? We will need a technique for doing that, and as we are doing quantitative corpus research, we will use a quantitative corpus technique for establishing that. As an addition to this, note that we will be distinguishing between lexical collocational strength and conceptual collocational strength. In general, if the relevant factors are purely semantic ones, you don't expect collocational idiomatization. Conceptual collocational strength, then, measures fixation at the conceptual level rather than the purely lexical one. But for you to see what is happening there, I will first have to explain how we measure lexical fixation.

[9.19] These are a few examples of construction types that we have, so that was the first factor we mentioned, which is here combined with the second factor, co-referentiality. Shall we go through this? Let me perhaps just take one example, this one for instance: *ik... iemand mij verrassen*. As you can see in the table it's a case of co-referentiality, which is expressed in the presence of *mij* (that's *me* in English). The syntactic pattern consists of the subject of the matrix sentence, then *doen* or *laten*, and then the subject of the embedded

sentence in a transitive construction, and so you also have an object in the embedded sentence. The example contains the following elements: *ik*, which is *I*, then three dots for the auxiliaries that you might choose, then *iemand*, which is *someone*, *mij* which is *me*, and *verrassen*, which is *to surprise*. So literally the example would be *I . . . someone surprise me*.

[9.20] As I mentioned, we have a few cases that we need to weed out. Again let me just give you one example of such cases. *Laat ons hopen*, 'let us hope': this is an optative, not a causative. With optatives you express a wish rather than a causation, so that's not included in the analysis.

[9.21] Before we go to the actual analysis, I should now say something about collocations and collocational strength. Measuring collocational strength is a very standard form of corpus analysis. The terminology that you use is to distinguish a certain *node* from a *collocate*, so the node is the element that you are interested in, which in this case could be, for instance, *doen* or *laten*, and the collocate is a word that you find within a certain span, a certain distance in the text, away from your collocate (like five words to the left or right). If you have a node and a collocate, you can distinguish between four situations. Those are the situations that are here mentioned in a formal fashion. C together with N, that's when you find a certain form C as a collocate of node N. The C, for instance, in the example that I gave a moment ago, would be *surprise*, *verrassen*, if you would want to know if *to make* or *to let surprise* is a fixed collocation or not. So *doen* or *laten* would be the node, and *surprise* might be the C, the collocate. (It could also be the other way around; you could also take *surprise* as a node and see what items it collocates with, but for illustration, let's say the auxiliary is the node and *surprise* is one of the Cs.) So the first thing you can measure in the corpus is the number of times that *surprise* occurs in the environment of, let's say *doen*, to keep it simple. That's CN. Then you have ~CN. Those would be the occurrences of all other words except *surprise* in the neighborhood of *doen*. That's ~CN: 'not C' in the vicinity of N. Then you have C~N. That's the occurrence of *surprise*, the verb, *verrassen*, in the neighborhood of all the other verbs except *doen*. And then you have all the rest, ~C~N, any combination that is not *doen* and that is not *surprise*. That's easy enough, it's just a question of distinguishing various combinations of words. To avoid misunderstanding, when we say *in the neighborhood of*, that could be in the direct neighborhood of, so to the left or the right, but of course when we say 'in the neighborhood of something within a span of ten words or five words', then it doesn't to be in the immediate neighborhood, and there can be intermediate words. How you do this (whether you take the immediate collocations, to

the left or the right or not, or whether you take a broad span) depends on the analysis that you decide on doing.

[9.22] When we have that, how do we calculate collocational strength? When we have CN, ~CN, C~N, ~C~N, then we can calculate a number of ratios. So we have the frequencies of CN and so on, and we can then compare the popularity of C as a collocate of N, as occurring in the neighborhood of N, with the popularity of C as a collocate of anything else apart from N; it's easy to calculate that if we take the ratio CN over ~CN versus C~N over ~C~N. Those are two ratios. Then we compare those two ratios and we use a statistical test to see whether there is a significant difference between those two ratios. The normal thing people will do here is to use a chi-square test to see whether there is a difference. This is just to explain a fairly well established method of collocation analysis. In our case, the specific statistic we use here, so the statistic that we use to evaluate whether there is a statistically significant collocational measure, is the so-called log likelihood ratio.

[9.23] This is the general schema that you have for a collocation analysis. So as I said, we start from CN, ~CN, C~N, ~C~N, and then you take the proportion in the left hand column and you take the proportion in the right hand column, and you let the statistical program see whether the difference between the two is statistically significant or not. That's easy enough to understand, but now we get another point which we already hinted at: if you start with either *doen* or *laten* as your node, you could fill out this schema in several ways. You can manipulate or vary the search domain and the selection of the contrast sets. That's where the difference will come in between lexical collocation and conceptual collocation. Let me try to explain this.

[9.24] Lexical collocation is fairly simple; that's what people would mostly do when they do collocational analysis. But note that you can ask different questions. You can ask: 'how typical is a given verb as a collocate of *doen* in the entire material we have?', but you can also ask the question: 'how typical is it of *doen* in Flemish?' (that is the same as Belgian Dutch), or in Netherlandic Dutch, and analogously for *laten*. Depending on the question, you fill out the schema in different ways. For instance, you can take the Netherlandic Dutch part of the corpus and you fill out the overall pattern: you take *doen* and you take any other verb that it's combined with, because we are interested in the combination of verbs, and you do the calculation, and then we would know, for instance, whether there is a collocational fixation of *doen* with that specific verb, the verb *surprise* for instance. And we can do the same thing for

the Belgian Dutch part of the corpus and see whether we have the same effect there. That's lexical collocation. Is the combination of a given verb and the auxiliary a fixed expression or not? That's what we are trying to measure, but note that fixation is a gradual, not a binary notion: we get a degree of fixation, of collocational strength.

[9.25] As I mentioned, you can vary on the basic approach in various ways. One possibility (which I am only going to mention without further details, because it's not so important for the present study) is to determine lexical distinctness, where you ask the question: how typical is a given verb as a collocate of *doen* in comparison with *laten*? In this case, the 'V ~*doen*' condition would be interpreted as 'V in combination with *laten*' rather than 'V in any context except *doen*'.

[9.26] Now that we know about the variations on the basic schema, we can define the notion of 'conceptual collocation'. Here we could ask the question: how typical is a given verb, not just as a lexical combination of *doen* or *laten*, but as a verb that takes a causative, regardless of whether it's *doen* or *laten*? How typical are certain verbs for the causative construction as such, where the causative construction is determined by the presence of either *doen* or *laten*? And you can see that we can implement that in the same schema, if we say: our node in this case is not *doen* alone or *laten* alone, but it's either of both. In a sense you can think of this as making a new corpus, where all the instances of *doen* and *laten* are collapsed in one new verb, the verb *doen/laten*, and then we ask the question: what are the main verbs that are typical for that causative auxiliary? Does it have an effect on the auxiliary choices that we have, whether a verb is typically construed in a causative way?

[9.27] So, that's conceptual collocation, and here in this slide, you get some background on how some of the things I have mentioned are present in the recent literature on Cognitive Linguistics.

[9.28] Now that we have all the factors, you have an idea of what we feed into the analysis. Now what's the analysis going to do? As I already said, as you also saw yesterday, a regression analysis constructs a statistical model that explains the variation in the data. So in our case the variation is the choice for *doen* or *laten*, and in this case we do a stepwise logistic regression which means that step by step, the statistical program adds the factors that contribute most to the reduction of the variation. It's like saying, if you look at the presence of *doen* or *laten*, the program can analyze for you whether it is the syntactical

construction type, or any of the other factors, that explains most of the variation or that correlates highly with the choice of *doen* or *laten*. So the analysis in a sense looks at the question: does the transitivity of construction play a role in the choice of *doen* or *laten*? Does the co-referentiality play a role? Does the animacy of the subject play a role and so on? That's what the analysis looks at and then the analysis tells you, 'yes, it does or it doesn't, to such an extent.' It is the same thing as what we saw yesterday: does familiarity play a role in the heterogeneity of items? Does vagueness play a role in the heterogeneity of items, and so on?

[9.29] What we have to look at in a regression model of this kind are the following things: what are the factors that are retained in the model; what is the predictive accuracy of the model; in what direction do the factors work; in what order are they added; and what are the significant values?

[9.30] Now I should also tell you that we didn't just do one regression analysis basically, we did three. We did one on the total materials but then we also did a separate analysis on just Belgian Dutch data and Netherlandic Dutch data. There are a few more nuances on the slide here but I need not to go into those.

[9.31]–[9.33] What are the results? We have about 4000 observations, but the first striking result is that we only get 10% of *doen* cases, so *laten* is massively dominant in the data. So if there is something we can explain, it's not going to be very much, because *laten* is so much present in the data anyway. What I can do now informally is to have look at various results and go over various factors and see whether what we found corresponds to the original hypothesis or not. What we found for construction type is that in contrast with the intransitive condition, transitives promote the presence of *laten*. With regard to animacy we find that inanimate matrix subjects (so inanimate subjects on the highest level of the sentence) massively support the presence of *doen*. The example here is *The wind made him shiver*. That's an inanimate subject, and *deed* is the past tense of *doen*. Note that I'm mentioning the factors in the order in which they are taken up by the statistical analysis. That means that construction type, the first one mentioned, has the biggest effect on explaining the variation. Animacy is the second factor. The third factor is country: lectal variation does play a role, in the sense that Belgian Dutch has more *doen* than Netherlandic Dutch. Register plays a role: the majority of non-spontaneous, prepared texts significantly support *doen*. The collocational measures also seems to have an effect in the following sense. Significant

conceptual collocation (so if you have a conceptual collocational measure that is significantly high) promotes *laten*. That is to say, in informal terms, the more a verb is typically used in a causative construction, the more *laten* is used. To put it very simplistically, *laten* is the default verb for the causative construction. That's also confirmed by the fact that you have so many cases of *laten* in terms of raw frequencies. But on the other hand, lexical collocation seems to favor *doen*; if there are verbs that typically associate with one infinitive, then the causal auxiliary is more often *doen* than *laten*. So it seems to be that as a more or less marked form, given the predominance of *laten*, *doen* is a somewhat of a lexical exception.

[9.34] These are the factors that appear to be important. What's the success that we get with this type of model? Of course, if we had no model at all, we already know that we have 90% chance of finding *laten*, because that's the raw frequency. So to do better than that, to do better than 90%, you do not have a lot of opportunity to do better than 90%. Still, the best model we get with statistical techniques gives us an improvement from 90% to 95% of accuracy, so that's still a quite relevant increase. That means we can be happy with this model; we can say that "yes, we can affirm that actually something extra is explained that we cannot explain when we simply say *laten* is the default case that gives us a good prediction in 90% of cases". So it's a strong and reliable model. (There are other statistical measures that you can use to establish this but let me not bore you with those.)

[9.35]–[9.36] Given the factors that come out of an analysis of the total material, Belgian Dutch and Netherlandic Dutch together, we now have a very interesting question, namely: suppose that we separate the two corpora, are the statistical models that we get the same? Because by looking at the two sub-corpora together we might be misleading ourselves. We might think that there is one set of factors that influences the presence of *doen* or *laten*, but we also find that lectal variation, the difference between Netherlandic Dutch and Belgian Dutch, plays a role in the results. So what happens if we do separate analyses of the two lects? Suppose that we find that the factors that are relevant in one region are totally different from the factors that are relevant in the other region. Then you could say we have two separate systems, Netherlandic Dutch as a separate system from Belgian Dutch. On the other hand, if the factors are largely the same, then we can say, 'OK, there is just a difference of degree, rather than a difference of system, between the two lects.'

And actually, what we find is this: the two models, if we separate them (a model in this case is the set of factors that are statistically significant in the



regression analysis) are more or less the same. The set of factors is the same, and the order of inclusion in the factors in the model is also the same. So this is the model: construction, animacy, significant semantic collocation, significant lexical collocation, component (of the Spoken Dutch Corpus). The same factors, the same registers, the same order—so overall it's a question of a difference of degree, not a question of really separate systems. There are a few differences that might be interesting, but let me just go over this quickly. An interesting one is the effect of the collocation measures: they are more outspoken in Netherlandic Dutch than in Belgian Dutch. I will come back in a moment to the interpretation of these effects.

[9.37] Let's summarize what we find and then go on to a further interpretation. The default form for causatives is *laten*, to the extent that the more typically causative a construction is, the more readily it uses *laten*. We've seen that *laten* is the default case, and it's a default case specifically with the default causative constructions. *Doen* is a marked form, and it is triggered by constructional factors, like inanimacy of the matrix subject, or intransitivity of verb and it can also be triggered by lexical collocations. From a lectal point of view, *doen* is more formal, given its distribution over the registers that we find than *laten*, and the restrictions on the use of *doen* are less outspoken in Belgian, in Flemish than in Netherlandic Dutch.

[9.39] So these are the basic observations. But what does this tell us about hypothesis testing, because we have this hypothesis about direct and indirect causation? What is left of our direct, indirect causation hypothesis? The direct/indirect causation hypothesis (at least in the way we interpreted it) is not completely adequate, because a majority of the predictions that we started off with is simply not confirmed. We predicted that intransitivity would disfavor *laten*, but that's not correct; conversely, intransitivity would favor *doen*, and that seems to be correct. Co-referentiality would favor *doen*, but that is not the case, and so on. Most of the predictions that we derive from the initial model are not confirmed. This is scientific methodology at its best: this is taking a hypothesis, deriving testable, observable consequences for it, seeing whether the consequences obtain or not, and then on the base of the consequences, of the presence or absence of the consequences, say, 'OK, we can believe in the initial hypothesis or not.' In this case, we have reason to believe that the initial hypothesis is probably not the very best one, to the extent that semantic factors are involved, they are of a different kind than what is predicted and what is said by the direct and indirect causation hypothesis.

Another question that we should discuss is to what extent are *doen* and *laten* synonymous? Well, they are both causative auxiliaries, but we can see that there is quite a bit of variation in the choice of one over the other. If only lectal factors distinguish between the two, the choice between the two would be of the same kind as what interested us yesterday. But as we can see, it is not only external factors, it's also other factors that distinguish between the two, and that makes it difficult to make use of the alternation between *doen* and *laten* for the type of lectometrical study that we illustrated yesterday with clothing terms and football terms.

Those are quite important conclusions. We can see that we have a method here for maybe establishing strict synonymy, but this example is not an illustration of that: there is no pure semantic denotational synonymy with only lectal variation between the items. That's a first major conclusion. Second thing, we can also see that it is possible to employ standard forms of hypothesis testing on lexical and semantic materials.

[9.40] We are left with one more question now, do we have an alternative hypothesis? Do we have one that would seem to fit better with the observations that we've made, and one that could be used for further testing—because that's the way it goes in scientific inquiry: you go from a theory to observations to a refutation of the theory, or perhaps rather to a modification of the theory and then to more observations and testing and so on. So do we have another one? Yes, I want to present one, namely, that *doen* is essentially an archaic form, a form that is on its way out in the language. Most of the phenomena that we seem to find fit in with the idea that *doen* is an old form, let me call it an archaic form. So first, archaic forms are usually typical for formal registers; you wouldn't find the archaisms in informal registers, that's where you find the innovations. Second, when a form goes out of the language, it usually stays in the language but in very restricted circumstances, so if we find lexical collocations with *doen*, that's also something that could point to the fact that the free use of *doen* is disappearing and now it is becoming more and more (though maybe not entirely) a lexically fixated form, an idiomatic form. Third, the fact that *doen* occurs more in Belgian Dutch may also point to its archaic status, because as you know already (we discussed that earlier), the standardization of Belgian Dutch came later than the standardization of Netherlandic Dutch, so the older forms of the language, in which *doen* was still more freely used, would be found more in Belgian Dutch. To put it simplistically, Belgian Dutch, well, let me not say 'is still acting as if we were still in the Middle Ages', but in general terms you could say that the stage of the language that you find in

Belgian Dutch is a slightly older one than the stage of the language that you find in Netherlandic Dutch.

In addition, we do get a semantic effect. All of the things that I have pointed at up to now are not really semantic factors, but note that in archaisms you also may tend to get a restriction to a very specific meaning. So, if there is anything left of the direct causation hypothesis, it would be that *doen* expresses direct material causation with inanimate subjects (but certainly not direct causation with animate subjects, on the contrary). Such a semantic restriction might also be an indication of the archaic nature of the *doen* formation.

[9.41]–[9.46] In this set of slides, I indicate a number of further steps that should be taken, but I'm not going to go into that, for the sake of time, and also because, as I've already mentioned, we are developing this into an even more extended study by taking in more materials and taking in more factors in the coding schema. Let me just skip over that and come to the conclusions.

[9.47] First, bottom-up corpus based analysis, where you take your corpus and try to analyze what you've found in the corpus, pays off. If you have schematic and only vaguely substantiated hypotheses based on the direct/indirect causation type, (hypotheses, so to speak, that you can think of by leaning back in your armchair), then those can be tested by having a good look at corpus data. 'Having a good look', that means trying to find objectifiable, operational, operationalizable correlates of your hypotheses in the corpus and then testing them.

[9.48] Second, lectal variation again seems to play an important role in the construction of the language, in this case, the choice for *doen* and *laten*. Lectal variation in this case study is not just relevant in terms of region (Netherlandic Dutch versus Belgian Dutch), but also in terms of register (in the example, spontaneous versus prepared components of the Spoken Dutch Corpus). So to conclude, and to confirm what was already clear to those of you who followed the rest of lectures, we do need a lectally enriched multifactorial corpus grammar as part of Cognitive Sociolinguistics. Thank you!

## Handout Lecture 9

### 9.1 Situating the talk

- 1–2 Introduction
- 3–4 Semasiological variation
- 5–6 Conceptual onomasiological variation
- 7–9 Formal onomasiological variation
- 10 Conclusion

### 9.2 Background

Speelman, Dirk and Dirk Geeraerts. In press. Causes for causatives: the case of Dutch 'doen' and 'laten'. In Ted Sanders and Eve Sweetser (eds.), **Linguistics of Causality**. Berlin: Mouton de Gruyter.

### 9.3 Questions

in our treatment of formal onomasiological variation, we have so far assumed that synonymy (semantic equivalence) is easy to establish

but what method could we follow to establish whether that is indeed the case?

→ zoom in on near-synonyms to study the extent of their semantic equivalence, and the role played by lexical factors in distinguishing between the items

### 9.4 What?

1° is there a significant distinction between Belgian Dutch and Netherlandic Dutch re the distribution of *doen* and *laten* ?

terminological shorthand:

- Belgian Dutch : **Flemish**
- Netherlandic Dutch: **Dutch**
- variation involving dialects, regiolects, idiolects, sociolects, register, national varieties etc.: **lectal** variation

### 9.5 What?

2° is the distribution of **laten** determined by **indirect causation**?

Kemmer & Verhagen 1994; Stukker 2006:

direct causation: **doen**

indirect causation: **laten**

### 9.6 What?

2° is the distribution of **laten** determined by **indirect causation**?

Kemmer & Verhagen 1994; Stukker 2006:

direct causation: **doen**

indirect causation: **laten**

“The causer produces the effected event directly; there is no intervening energy source ‘downstream’”  
(Stukker 2006: 50)

### 9.7 What?

2° is the distribution of **laten**

Kemmer & Verhagen 1994; Stukker 2006:

direct causation: **doen**

indirect causation: **laten**

“Besides the causer, the causee is the most immediate source of energy in the effected event. The causee has some degree of ‘autonomy’ in the causal process”  
(Stukker 2006: 50)

### 9.8 Why?

to offer support for the specific methodological claims developed within variational Cognitive Sociolinguistics:

- a) the necessity to include lectal variation in the analysis
- b) the necessity to employ advanced corpus techniques

cp. José Tummers, Kris Heylen & Dirk Geeraerts. 2005. “Usage-based approaches in Cognitive Linguistics. A technical state of the art”. *Corpus Linguistics and Linguistic Theory* 1(2).

### 9.9 How?

what we need:

- a representative corpus of language data
- a set of potentially relevant factors coded in the corpus
- a statistical technique analysing the relevance of the factors

**9.10 How ?**

what we need:

- a representative corpus of language data
  - a set of potentially relevant factors coded in the corpus
  - a statistical technique analysing the relevance of the factors
- CGN – Corpus of spoken Dutch, release 1.0  
900 hrs, tagged  
2/3 Dutch, 1/3 Flemish  
register and text type variation (see below)  
automatic data selection with manual correction

**9.11 How ?**

what we need:

- a representative corpus of language data
  - a set of potentially relevant factors coded in the corpus
  - a statistical technique analysing the relevance of the factors
- stepwise logistic regression:  
what is the impact of a multitude of  
possibly relevant factors on the variation  
observed in the (categorical) data?

**9.12 The external factors**

variation wired in into the CGN:

- speaker characteristics: sex, age, educational level
- regional variation: Flemish vs. Dutch
- register variation: 15 'components', divided along three dimensions

dialogues and multilogues vs. monologues

private speech vs. public speech

spontaneous vs. prepared speech

### 9.13 The external factors

- |  |   |
|--|---|
| • spontaneous:   | prepared:   |
| • A face-to-face conversations                                   | G (non-broadcast) political discussions and debates |
| B interviews (with teachers)                                     | J broadcast newsreports and reportages              |
| C spontaneous telephone conversations (recorded via switchboard) | K broadcast news                                    |
| D spontaneous telephone conversations (recorded locally)         | L broadcast commentaries and reviews                |
| E simulated business negotiations                                | M ceremonious speeches and sermons                  |
| F broadcast interviews/discussions/debates                       | N lectures and seminars                             |
| H classrooms lessons   | O written texts read aloud                          |
| I live (sports) commentaries                                     |   |

### 9.14 The internal factors

- syntactic construction type
- coreferentiality between matrix subject and infinitival subject/object
- animacy of matrix subject
- lexical collocational strength
- conceptual collocational strength

PS why these ? for theoretical reasons, and on the basis of an exploratory scanning of the data; it is customary in regression analysis to start with a broad set of parameters, and then to reduce it, automatically as a result of the regression, and manually by considering different ways of coding

### 9.15 The internal factors

- syntactic construction type
  - coreferentiality between matrix subject and infinitival subject/object
  - animacy of matrix subject
  - lexical collocational strength
  - conceptual collocational strength
- PS why these ? for theoretical scanning of the data; it is customary to start with a broad set of parameters, and then to reduce it, automatically as a result of the regression, and manually by considering different ways of coding

if laten expresses indirect causation, you don't expect laten in intransitive constructions, where there is no intermediate entity

### 9.16 The internal factors

- syntactic construction type
- coreferentiality between matrix subject and infinitival subject/object
- animacy of matrix subject
- lexical collocational strength
- conceptual collocational strength

if *doen* expresses direct causation, coreferentiality should favour the use of *doen* (you cannot get more direct)

PS why these? for theoretical reasons, scanning of the data; it is customary in regression to start with a broad set of parameters, and then to reduce it, automatically as a result of the regression, and manually by considering different ways of coding

### 9.17 The internal factors

- syntactic construction type
- coreferentiality between matrix subject and infinitival subject/object
- animacy of matrix subject
- lexical collocational strength
- conceptual collocational strength

if *doen* expresses direct causation, you expect more *doen* with animate matrix subjects (animate subjects have more control over the flow of energy)

PS why these? for theoretical reasons, scanning of the data; it is customary in regression to start with a broad set of parameters, and then to reduce it, automatically as a result of the regression, and manually by considering different ways of coding

### 9.18 The internal factors

- syntactic construction type
- coreferentiality between matrix subject and infinitival subject/object
- animacy of matrix subject
- lexical collocational strength
- conceptual collocational strength

if the relevant factors are purely semantic ones (a model of causation), you don't expect any collocational idiomatization (lexical fixation)

PS why these? for theoretical reasons, scanning of the data; it is customary in regression to start with a broad set of parameters, and then to reduce it, automatically as a result of the regression, and manually by considering different ways of coding



### 9.19 Construction type / Coreferentiality

	– coreferentiality	+ coreferentiality
x doet/laat ysubj Vintrans	ik ... iets vallen	ik ... mij vallen
x doet/laat ysubj Vtrans	ik ... hem doen	ik ... mij doen
x doet/laat zobj Vtrans	ik ... iets zien	ik ... mij verrassen
x doet/laat ysubj zobj Vtrans	ik ... iemand iets zien	ik ... iemand mij verrassen
x doet/laat zsubj door ypp Vtrans	ik ... de boom door hem vellen	ik ... mij door iemand verrassen

### 9.20 Construction type / Coreferentiality

discarded cases:

- verbs that do not pattern independently: laten betijen
- optatives: laat ons hopen
- nominalizations: het laten varen van alle hoop
- grammaticalized idiomatic expressions: laat ons zeggen, laat staan dat (and, of course, straightforward spurious hits)

### 9.21 Collocational measures

general introduction:

**N**        **node:** the element of interest

**C**        **collocates:** words within a certain span of N

**C N**        number of occurrences of C as collocate of N

**~C N**        occurrences of ~C (all other words) as collocate of N

**C ~N**        occurrences of C as collocate of ~N

**~C ~N**        occurrences of ~C as collocate of ~N

### 9.22 Collocational measures

**the ratio  $C N / \sim C N$**  quantifies the popularity of C as a collocate of N

**the ratio  $C \sim N / \sim C \sim N$**  quantifies the popularity of C as a collocate of all other nodes apart from N

comparing the two ratios tells you whether C is more typical as a collocate of N than as a collocate of any other node

specific statistics used here: **log likelihood ratio**

9.23 Collocational measures

general schema:

	+ N	~ N
+ C	+ C + N	+ C ~ N
~ C	~ C + N	~ C ~ N

starting with N as either **doen** or **laten**, the general schema can be filled out in several ways (through the selection of search domains and the selection of contrast sets)

9.24 Collocational measures

**lexical collocation:** how typical is a given verb as a collocate of **doen** (in either Flemish or Dutch)? and analogously for **laten**?  
e.g.

Dutch	
+ V + <b>doen</b>	+ V ~ <b>doen</b>
~ V + <b>doen</b>	~ V ~ <b>doen</b>

¬¬where + V ~ **doen** = any other occurrence of V within CGN

9.25 Collocational measures

**lexical distinctness:** how typical is a given verb as a collocate of **doen** in comparison with **laten** (in either Flemish or Dutch)?  
e.g.

Dutch	
+ V + <b>doen</b>	+ V ¬¬~ <b>doen</b>
~ V ¬¬+ <b>doen</b>	~ V ¬¬~ <b>doen</b>

¬¬where ~ **doen** = + **laten**

9.26 Collocational measures

**conceptual collocation:** how typical is a given verb as a collocate of either **doen** or **laten**, i.e. how typical is it for causative construction?  
e.g.

Dutch & Flemish	
+ V + <b>doen/laten</b>	+ V $\neg\neg$ <b>doen/laten</b>
$\sim$ V $\neg\neg$ <b>doen/laten</b>	$\sim$ V $\neg\neg$ <b>doen/laten</b>

$\neg\neg$  where + V  $\sim$  **doen/laten** = any other occurrence of V within CGN

### 9.27 Collocational measures

some context:

**lexical collocation:** the traditional form of collocational analysis, popularized within CL circles as ‘collostructional analysis’

**lexical distinctness:** introduced by Gries/Stefanowitsch as ‘distinctive collexeme’ analysis - not used here, statistically less reliable than lexical collocation

**conceptual collocation:** a novel type of collocation analysis

### 9.28 Regression analysis

intro: what it does, what we have to look at, which regressions we’ll consider

#### 1 what it does:

construct a model explaining the variation in the data (in our case: the choice between **doen** and **laten**),

by stepwise adding the factors (as coded in the database) that contribute most to the reduction of the variation

### 9.29 Regression analysis

#### 2 what we will have a look at:

what are the factors that are retained in the model ?

what is the predictive accuracy of the model ?

in what direction do the factors work (for or against **doen/laten**) ?

in what order are they added to the model ?

what are the significant values of the factors ?

### 9.30 Regression analysis

#### 3 which regressions we will consider:

a) the dataset as originally coded, for the material as a whole

b) as in a), but separately for Flemish and Dutch

(we also looked at recoded datasets, but these results will not be presented here; they confirm the initial analysis)

(also: no attention to statistical interaction of factors in this presentation)

### 9.31 Global logistic regression

3975 observations, of which less than 10% **doen**  
relevant factors, in order of importance:

– **construction type**

in contrast with the intransitive condition, transitives boost the presence of **laten**

### 9.32 Global logistic regression

– **animacy**: inanimate matrix subjects massively support **doen**, e.g.  
**de wind deed hem huiveren**

– **country**: Flemish has more **doen** than Dutch

– **register**: the majority of non-spontaneous, prepared text types significantly support **doen**

### 9.33 Global logistic regression

**collocational measures**

a) significant conceptual collocation enhances **laten**: the more a verb is typically used in a causative construction, the more **laten** is used, i.e. **laten** is the default verb for causatives

b) significant lexical collocation enhances **doen**: some verbs typically associate with **doen** (more than inanimacy of subject etc. predict); as a marked form, **doen** tends to be a lexical exception

### 9.34 Global logistic regression

– **predictive accuracy**

e.g. if the overall distribution is 90% **laten**, 10% **doen**, how much can you gain on the basis of the regression model?

accuracy of dummy model is 92%

best accuracy of fitted model is 95%

→ a very strong and reliable model

### 9.35 Regional logistic regressions

- overall models are the same, and so is the order of inclusion of the factors:  $V_1 \sim \text{constr} + \text{anim} + \text{comp} + \text{sig.sem.col} + \text{sig.lex.col}$ , i.e. the difference is one of degree rather than principle
- no marked differences within register factor  
(unlike many other typically Flemish forms, *doen* is not a marker of informality)

### 9.36 Regional logistic regressions

- the effect of the collocation measures is more outspoken in Dutch than in Flemish (see the estimates and the odds ratio's):  
the existence of either a lexical or a conceptual association is more extreme in Dutch  
this may be an indication of a more stabilised linguistic situation

### 9.37 Summary

- the default form for causatives is *laten*, to the extent that the more typically causative a construction is, the more readily it uses *laten*
- *doen* is a marked form, triggered by constructional (inanimacy of matrix subject, intransitivity of verb) and lexical factors
- *doen* is more formal, given its distribution over registers, than *laten*
- the restrictions on the use of *doen* are less outspoken in Flemish than in Dutch

### 9.38 Summary

is it possible to find a unifying interpretation for these results ?

the direct/indirect causation model is not completely adequate:  
a majority of the predictions that we started off with is not confirmed

### 9.39 Summary

- |   |             |
|---|-------------|
| – intransitivity halts <b>laten</b> :   | not correct |
| – intransitivity boosts <b>doen</b> :   | correct     |
| – coreferentiality boosts <b>doen</b> : | not correct |
| – animacy boosts <b>doen</b> :          | not correct |
| – idiomaticity plays no role:           | not correct |
| – lectal effects are not expected:      | not correct |

### 9.40 Summary

→ an alternative interpretative hypothesis:

**doen** is an **archaic** form; this ties in with all the relevant observations, i.e.

a) that it is typical for more **formal registers**

b) that it is sensitive to **lexical associations** (idiomatic effects as a form of relics)

c) that it occurs more in **Flemish** (which is known to be the more archaic variety in a number of respects)

d) that, semantically speaking, it seems to be retracting to one core form of causation, i.e. **direct material causation**

(the directness explains the intransitivity effect: transitives involve an intermediate entity)

(the material aspect relates to the inanimacy of the subjects, as opposed to the volitional causation of human subjects)

### 9.41 Refinements

further steps to take:

- expanding the descriptive basis
- refining the coding schema
- finetuning the collocational measures

### 9.42 Refinements

further steps to take:

- expanding the descriptive basis
- refining the coding schema
- finetuning the collocational measures

- the present data set is skewed towards spoken language, while at the same time, written language (component o) is significantly different
- there is an effect of register, but some registers (CGN components) are underrepresented
- **expand the database**

### 9.43 Refinements

further steps to take:

- expanding the descriptive basis
- refining the coding schema
- finetuning the collocational measures

#### 1 refining the animacy parameter

animals have now been coded as animate, but do they behave differently than people, i.e. do we need a cline from human to inanimate?

and what would be the position of human collectivities on the cline (from **the team** over **the government** to **the nation**)?

### 9.44 Refinements

further steps to take:

- expanding the descriptive basis
- refining the coding schema
- finetuning the collocational measures

#### 2 refining the argument description

so far, only the matrix subject has been semantically classified, but what about the other arguments?

e.g. **de bloemen laten hun kopjes hangen**, 'the flowers let their heads hang low' – intransitive, inanimate subject, but **doen** seems unlikely

### 9.45 Refinements

further steps to take:

- expanding the descriptive basis
- refining the coding schema
- finetuning the collocational measures

#### 3 refining the verbal classification

do semantic predicate classes (verbs of cognition, perception etc.) play a role?

should we have a separate code for verbs that are potentially ambiguous between a transitive and an intransitive reading (**let the potatoes boil**)?

does French have an influence on the Flemish data?

#### 9.46 Refinements

further steps to take:

- expanding the descriptive basis
- refining the coding schema
- finetuning the collocational measures



how can we detect **multiword** collocational patterns, beyond the Aux Verb slot ?

#### 9.47 Conclusions

1 bottom-up analyses pay off: schematic and only vaguely substantiated hypotheses of the direct/indirect causation type have to be refined when you look carefully at the data

#### 9.48 Conclusions

3 lectal variation plays an important role in the choice for **doen** or **laten**, both  
in terms of region (Dutch vs. Flemish)  
and in terms of register (spontaneous vs. prepared sources)

→ we need to develop a **lectally enriched multifactorial corpus grammar** as part of **Cognitive Sociolinguistics**





All original audio-recordings and other supplementary material, such as any hand-outs and powerpoint presentations for the lecture series, have been made available online and are referenced via unique DOI numbers on the website [www.figshare.com](http://www.figshare.com). They may be accessed via this QR code and the following dynamic link: <https://doi.org/10.6084/m9.figshare.4980554>

## The Linguistic System in a Usage-Based Model of Language

[10.1] This is only the tenth lecture in the series, and there would be much more to say, but it is also already the tenth lecture, and those of you who have witnessed the previous nine ones must be exhausted. So let's try to wrap up today. Those of you who attended the full series may remember that I started off with an introduction about the history of linguistics and about the role that decontextualization and recontextualization play in the history of linguistics. I have shown in the rest of the talks how that form of contextualization—specifically, social, cultural and historical contextualization—can play a role in the study of meaning. Today I want to come back to the question of the history of linguistics and then also to the question: what is the linguistic system? In the course of these talks I've tried to be as non-repetitive as possible. I've tried to bring something new to every talk—which is probably one of the reasons for your exhausted state at the moment. In this talk, however, I will have to repeat something of what I said earlier. I also want to do that to the benefit of those of you who haven't witnessed the previous talks, and specifically those who haven't witnessed the second talk in the series, because in the second talk we already talked about a certain conception of what the linguistic system could be.

[10.2] As usual, I'm giving a reference to a published version of the materials that I'm presenting now.

[10.3]–[10.4] The basic question for today is: if usage is variable (that has been the starting point of what we have done), then there is another question to ask, namely: what is left of the linguistic system? If usage is variable, how systematic is the system? I want to deal with that question in three steps. I will first try to give a theoretical analysis of the question: what kind of a question is this, what does it imply? Second, we will do (as we've often done in the course of the talks) a descriptive study: what do the facts of language actually tell us? Then I'm coming back to the question of the history of linguistics, and I will be ending with the same topic with which I started on the metatheoretical level: what is the wider context of all this?

[10.5] The first step is: what exactly is the question? Let me take two steps: first I want to remind you that in a usage-based conception of language, linguistic systems are inevitably non-homogeneous. Then we automatically get to the question: if variation in usage, the heterogeneity in usage, is lectally structured, then how systematic is that variation? You can think of it in this way: we have been talking a lot about *lects* (which, as you remember, is a cover term, a general term, a generic term I use for all kinds of language varieties, like dialects, regiolects, sociolects and so on). But how certain can we be that lects exist? What would it be for a lect to exist? When can we speak of a 'lect'? So that's the question we are going to address today.

[10.6] The first step: in a usage-based conception of language, linguistic systems are inevitably non-homogeneous. Let's repeat why. Let's go back to the question: what is 'the system' in a usage-based conception of language? *This* is 'the system' in a usage-based conception of language, as I said in Lecture two.

[10.7] To repeat, the primary fact of linguistics is the behavior of the language users: people talking. Again, as in the second talk, I am highlighting the parts of the graphical representation here that are relevant for the specific steps I am taking. So, the primary fact of linguistics is the behavior of the language users.

[10.8] What we call 'the system', what we traditionally call a linguistic system, for instance a dialect or a language, is a secondary abstraction over the regularities in the primary behavior of the language users. We can say that there is a system if what people do at the bottom level of the graphical representation has a specific form of regularity. We, as linguists, are the ones who deduce (or induce) that regularity on the basis of what we find in our observations and descriptions.

[10.9] Third, now think of the question: where do language users get their knowledge of the system from? Going back to the previous slide, we assume there is a system, and it's also, to some extent, in the head of the language users. The head of the language users, that's this thought cloud in the picture. In the thought cloud, you have a representation of the system, and the representation that language users have in their heads influences the way they use language. But the question is then: where does the thing that language users have in their head; where does it come from, where does knowledge of the language come from? Language users do not have direct access to the abstract description of the system that is on top of the picture. What they have access to is language use by other people. It is of course true that there is formal schooling

in language, and that we have grammars and dictionaries. They help, to some extent, to get knowledge of what is considered to be the system. But in general, overall, the primary source of information and the primary source of linguistic knowledge for an individual language user is his or her interaction with other language users. Language users do not align with 'the system' directly, but they align with each other. They learn language in a very simplistic way, or putting it simplistically, they learn by imitating others.

[10.10] These alignments, the way in which language users talk to each other and interact with each other, these alignments are incomplete in the sense that each individual language user does not interact with all members of the linguistic community, with all the speakers of the language. So your scope, your individual scope of interaction is limited. It is socially limited, because it has to do with your position within the linguistic community. So the incomplete alignments have a social structure. You will notice that in the representation here, I have in a sense two overlapping social groups. I have the social groups of the speakers who wear skirts, and I have the social group of the speakers who are shaded; these two social groups are represented by the ovals, and they overlap. So in the interactions, in the symbolically rendered interactions that you have here, there is a social structure.

[10.11] As a consequence, if we bring these steps together, we can see that lectal variation in usage is an integral part of a usage-based conception of the linguistic system. The usage-based conception has its starting point in the recognition that the interactions between language users lead to knowledge of the language; it is what language users do on the usage level that actually gives us as linguists our basis for saying 'this is a language'. But then, if we accept that, the incompleteness of the interactions between all the members of the linguistic community has the inevitable consequence that we will have to look at the structuring of the interactions and how they influence the structure of the system. That's the basic idea about the non-homogeneity of our notion of linguistic system in a usage-based model of language. It's non-homogeneous because you may assume that the different interactions lead to a different cluster of subsystems in our abstract description of the language.

[10.12] This was the part that I wanted to rehearse from the second lecture, specifically for those of you who are new to this. Let's take the following question now. If we assume that indeed we have that kind of structure in our abstract description of languages, if we assume that there is non-homogeneity, that there is heterogeneity, how far does it go? How unsystematic is the linguistic

system? Or conversely, how systematic is the variation? Is it as simple as I suggest by this picture (10.11)? Is it as simple as the picture that says, 'OK, you have clear social groups and we will find overlapping subsets or subsystems in our description'? It's an empirical question. It is not a question you can answer *a priori*, but it is a question that we want to submit to descriptive research.

[10.13] Notice that when we ask that question, we are implicitly moving further and further away from the idea that 'the system', the language is homogeneous. We know already (that is also what we discussed in the second lecture), that taking this sociolinguistic approach, the variational approach to language, we move away from the idea of homogeneity that was implicit in the Saussurean and Chomskyan conception of language. In those two theories, you have the notion of a homogeneous structure within the language, within the linguistic community. Remember Chomsky's 'ideal speaker/hearer, who knows the language perfectly'. That's the idea of homogeneity. So we are moving away from that, in the same way in which classical sociolinguistics, let's say, Labov's sociolinguistics moves to a conception of language as a heterogeneous system, specifically as a cluster of dialects, sociolects and other language varieties. That's the first step in getting away from the idea of homogeneity.

I now once again come back to the picture (10.11). If you take the upper part of the picture, the Chomskyan or Saussurean approach would simply have the thing in the middle here. We would only have that. But instead, we now see, in our sociolinguistic view of heterogeneity, that we would probably have subsystems that form a cluster. But obviously, we can now ask the same question that we raised with regard to the traditional view of the language: we can ask the same question with regard to each of those subsystems, with regard to each of our dialects or lects more generally. Are those dialects, are those lects internally homogeneous? The language may not be homogeneous but are the lects homogeneous? That's the question we ask at this point. So we are going from a language system as heterogeneous in a classical sociolinguistic sense as a cluster of lects to the language as heterogeneous in an even more radical sense. That would be the case, if lects are just as virtually homogeneous as the old-time system used to be.

[10.14] This is a graphical representation of the steps we are taking. A homogeneous view of the classical type would say, 'this is only one language and it's one and the same for all members of the linguistic community'. A more classical sociolinguistic approach would say, 'no, it's not that homogeneous. The language is a polylectal system or a multilectal system; it is a cluster of individual lects'. We can go one step further and we could ask ourselves: but maybe it's even worse than that, maybe it is even more challenging or dynamic

than that. Maybe language is a complex dynamic system in which, to put it very radically in a very extreme form, each expression, each type of expression, each construction, more generally each form of the language, could have its own lectal distribution. That's what's expressed below in this picture: instead of constructions that have the same distribution over the social space, you would get separate characteristics for each expression (so to speak), so the way in which the expressions pattern together would be much more complex than what you get when you have a polylectal system. In a polylectal system, we have dialects and maybe they overlap in some cases, but generally, dialects exist. Now we want to ask ourselves the question if it is not more extreme than that: to what extent do we maybe have a very complex structure in which each word (if we only think of words) does its own thing, in which each word has its own values on the social or lectal dimensions that are relevant in this linguistic community? That's a very radical view.

[10.15] We don't know yet whether the situation patterns that way or not, but the question now is rather: how on earth are we going to establish that? What essentially does it mean that there is such type of heterogeneity? If heterogeneity has this radical form, how would you go thinking about that and researching that? That's not such an easy question. So let's bring in the specialists, people who thought about this before. Here they are. You are probably not familiar with them, or only to a very small extent. These are two people who in their own days, that's the second half of the 19th century, studied dialectal variation in German. These people were instrumental in defining the so-called *Rhenish fan*. Let me explain to you about the Rhenish fan. It's part of the history of the Germanic languages, and it's a fairly important concert. Why? What did Wenker and Schmidt have to say about all of this and what does the Rhenish fan do? It describes the distribution of the High German consonant changes in the border area between High German and Low German. What you have to know here is that if you look at the dialect level, then the geographical area where they now speak what we call German, that geographical area is split up into two major parts, the High German part and the Low German part. High German has a number of consonant changes, a number of sound laws, that are not present in Low German. High German is the historically innovative part. Low German and Dutch (at dialect level, Low German and Dutch form one continuous area) retain a number of old features that in High German have been replaced by others. High German is the basis of what you might know as contemporary Standard German. But we are not talking about standard languages here, we are talking about dialects and their historical evolution.

[10.16] The question is: how does the transition from the High German area to the Low German area happen? There are a number of changes that are involved there, a number of consonant changes, and if you have a very clear boundary between the two areas, then the lines that you can draw on the map will coincide. You can indeed draw lines on the map; you can say, 'Above this line, they have the Low German consonant, and below the line, they have the High German consonant.' So you can draw what in dialectology are known as 'isoglosses'. When the borderline between High German and Low German is very clear, then all the isoglosses, all the lines that you can draw for the individual elements, will all coincide and then you get a strict borderline. In actual fact, what these linguists found was that there is not one borderline, but that for the various individual consonants, for the various linguistic phenomena that they were looking at, the lines more or less have different distributions. That distribution is what we call *the Rhenish fan*. Why? *Rhenish*, because this is the area of the river Rhine in Germany, and it is a fan because if you look at the lines, it is more or less like a fan. That is why it is called *the Rhenish fan*.

[10.17] Let's have a look at how that goes and what it looks like. Then we will come back to the question what this has to do with our problem. You may not see that yet, but I am coming to that. This is an example of the kind of phenomenon that we have. The first line: *ik, maken, dorp, dat, appel*, that is what corresponds to Low German and Dutch, i.e. to the Low German and Dutch distribution of the consonants. The No. 6 line: that is what corresponds to the High German distribution. So look, for instance, at the *k* in *ik* (that means *I*). *k* in Low German / Dutch is a plosive, but in High German it is a fricative *ch*, *ich*. Each of these columns, the *ich* one, the *maken* one, the *dorp* one, the *dat* one, the *appel* one, each of these columns corresponds to one of the changes, one of the consonant changes that together make up the High German consonant shift. Strictly speaking, if the borderline between High German and Low German is very strict, then what you would expect is that you would only have situations 1 and 6. Those would be the only configurations of the consonant changes that you find in the dialects. But in actual fact, you find all the dialects. You find dialect like No. 2 that only have the change in the *k* of *ik*, and not in the other forms. You have dialects like No. 3 that have two out of five possible changes. You have dialect like No. 4 that have three out of five possible changes. And you have dialects like No. 5 that have four out of five possible changes. Actually, there are more than just five changes. But these five is to give you a good idea of what's going on.

[10.18] If we map that onto a geographical map, you get this. The red line (the one that passes left of Luxemburg) marks the distinction between the

Romance language area where they speak French and the Germanic language area. What's to the left of the red line is of no interest to us. The Rhine is here (running through Cologne and Frankfurt), and there are some more rivers running on the map. Then the dialects boundaries are in thick blue lines. So as I said, you can draw these lines for each phenomenon separately. We had these numbers for the different configurations of the phenomenon, one, two, three, four, five, and six. If you now look at the distribution of those areas over the linguistic area, you will see a gradual transition from a totally Low German situation to a totally High German situation. From north to south, you go from one, to two, to three, to four, to five, and to six. As you can see, it roughly takes the form of a fan, if you look at the lines.

[10.19] What does this have to do with our problem here? What we should do, I think, is to use the same method that the dialectologists used to establish if there is unsystematicity in our lects. The basic question they ask from a methodological point of view can be translated like this: if I have these different configurations of linguistic phenomena, can I then map, can I then correlate these different configurations with clear lectal factors, with clear external factors? Yes, that is the case, because in the Rhenish fan we have clear geographical areas for each of the different configurations. How do we implicitly define a dialect in this case? (I must say *implicitly* because this is something that is not very often analyzed in theoretical terms.) We define it as the correlation between a cluster of co-occurring linguistic features and a number of external factors. In dialectology, it's the co-occurrence of linguistic features on a certain geographical area. That's how we define a dialect. Ultimately, that's a simple idea. You have external factors which in traditional dialectology are of geographical nature, and within that set of external factors, you expect a systematic co-occurrence of a number of linguistic features, and those features then constitute your linguistic system for that dialect. So you can say that the linguistic system for a dialect of the type No. 3 is that it has the High German form in the word final position for the *k* and so on.

[10.20]–[10.21] Here you have a summary statement of what I want to say. Lects exist if there is a systematic correspondence between bundles of linguistic variables and external, sociostylistic, lectal parameters. So we will be looking for that systematic correspondence: in one slide, a number of linguistic features (represented as part of the abstract system of the language, on top of the figure) correspond nicely with clear lectal features (one of the groups at the bottom). In the other slide, we find a similar correspondence, for a different social group.



[10.22] Now our situation. Our situation, a hundred and (let's say) twenty years after those dialectological pioneers, is much more difficult. Why? We don't believe in the linguistic system as necessarily homogeneous, but we wonder whether the variation is structured on the basis of (internally homogeneous) lects, or on a more fragmented basis. We can try to check that by looking for systematic correspondences between bundles of linguistic variables and socio-linguistic parameters.

[10.23] Now here is another pioneer of linguistics that I need to mention, viz. Hugo Schuchardt. (I will come to our specific difficulty in a moment. Don't worry.) Should we take a position with an unmitigated vindication of variation, gradience, contact, and even creolization, with a stress, in a sense, on impureness and unsystematicity? Why am I putting it in this way? I don't know if you are familiar with that, but in the nineteenth century, you had this dominant position of the so-called *neo-grammarian theory* in the study of historical linguistics. The neo-grammarians had the idea that languages just change in a very systematic way. They introduced this notion of the 'absence of exceptions' in sound laws: sound laws do not accept exceptions. Now Hugo Schuchardt was one of the few voices in the late 19th century who opposed that position and who said things like: 'each word has its own history'. If you say, from a historical point of view, that each word has its own history, then that's roughly the same thing as what we are investigating now from a synchronic point of view, when we wonder whether each form, each expression, each construction may not have its own lectal distribution. So the extreme position that we are investigating, if we think of it in terms of the history of linguistics, would be a Schuchardt-like position. Keep this in mind, because as I said in the beginning, I will be coming back to the history of linguistics at the very end of the talk.

Let us come back to the methodological question now. When we look at lectal variation from the point of view of the correlation of specific phenomenon with external factors, do we get internal homogeneity of lects or not? So what do the facts of language tell us? We have a difficulty, because our situation is more complicated than it was for the 19th century dialectologists. Why? Basically, we want to have a look at much more lectal factors, much more external factors than the dialectologists did. We don't just look at the geographical distribution, but we look at all forms, all possible forms of lectal distribution at the same time. We would want to know (to the extent that it is possible): what the role is of social factors, traditional speaker characteristics, stylistic registers, and also geographical differences. That means that we have a specific methodological problem. What we cannot do is simply to draw maps in the way in which the dialectologists in the 19th century did, because our conception of what the

external factors of the language look like, the relevant factors, is much more complicated. Notice for those of you who were present at yesterday's lecture, that this is basically of the same kind as what we discussed yesterday. Again we are faced with a problem of multifactoriality, a methodological problem that arises from the fact that we want to have a look at various factors at the same time. That is like what we did with our regression analysis yesterday: looking at various factors at the same time. Here we basically have a similar problem: in contrast with Wenker and Schmidt, we can't just look at one dimension, the geographical one, but we want to look at various dimensions at the same time.

[10.24]–[10.25] Let me show you very briefly how we can do that. I'm going to present a study that we did in our research team on the morphological markers of Colloquial Belgian Dutch. (Specifically, this is PhD research by Koen Plevoets.) You may remember that we already talked about Belgian Dutch. We saw in Lecture 7 that the distance between Colloquial Belgian Dutch and the standard Belgian Dutch language is bigger than the corresponding distances in the Netherlands. (You may remember we used the shop window material we had for the clothing terms to establish this.) Now, we are going to focus on Colloquial Belgian Dutch only and basically ask ourselves the question: is it a homogeneous lect or not? To what extent is it in general homogeneous? We know there is a substandard, informal, colloquial form of spoken Dutch in Belgian, but how clearly does it constitute a lect or dialect?

What I want to do now (but this is something I will do very quickly because it's not all relevant for this talk) is to go through a number of steps to introduce the material. First I'll say something about what the external parameters are, but basically, those of you who witnessed the other talks are basically familiar with those. Then I'll say something about the linguistic variables, and then (this is interesting, because that's the solution to the problems I just sketched) I will say something about the method. Of course, we get the results to round off.

[10.26] The sociostylistic parameters. Again we are using the Spoken Dutch Corpus which I've already introduced in another context. As we know already, it's differentiated according to stylistic components but we have other forms of variation there too: province, generation, gender, educational level, and occupational level. So it is, lectally speaking, a highly structured corpus, or at least, a corpus with various lectal factors that might be interesting from the point of view of the question we are asking.

[10.27]–[10.29] These are the different register components, but we've already seen those in the previous talk. Since we are only looking at Belgian Dutch, we

have four provinces here, or at least four provincial areas: the Vlaams-Brabant, the Oost-Vlaanderen, the West-Vlaanderen and the Limburg area. We already know about the Limburg area. We looked at it from another perspective in Lecture 8. Then there is gender, that's clear. Then generation, and what is nice here is that we have five generations with curious names. These we take from sociological research; we didn't invent them. We have the 'pre-war' generation. We have the so-called the 'silent' generation which was born between 1930 and 1939. We have the 'protest generation', the 1968 generation if you wish, which was born between 1940 and 1954. Then the 'lost' generation, which was born between 1955 and 1970, and the 'pragmatic' generation, born after 1970. Note the abbreviations: I will be showing plots in which you will find the same abbreviations. Then the educational level: higher education, middle, low. Occupation: this gives us a sort of hierarchy of different levels of status.

[10.30] Now, as to the linguistic variables, we have a very large collection of morphological phenomena from the nominal and verbal morphology of Dutch that are often considered to be typical of colloquial Dutch in Belgium. I'm giving you only one example because it's not really necessary for this talk to go into the details here. Take the formation of diminutives. Dutch has the possibility of making diminutives of nouns. So if you have a word like *chair*, *stool* in Dutch, and you want to express *small chair*, then in standard Dutch you would say *stoeltje*. That's a regular form of making a diminutive in standard Dutch. In colloquial Belgian Dutch, the form of the diminutive morpheme is different. There is not *-tje*, but in the case of *stool*, it would be *stoeleke*. Obviously when we have this spoken material, and we analyze the material, then we can establish whether the diminutive that we hear is the colloquial diminutive or not. Once you have that, you can judge and analyze whether the distribution of the diminutive corresponds to certain lectal factors or to combinations of lectal factors.

[10.31] The method then. As I already indicated, in contrast with the Rhenish fan, we deal with a multidimensional space of variation. Not just the geographical space is important, but all those things we mentioned: provinces, gender, generation, register components, etc. All of those could together be the foundation, form the basis for defining lects as homogeneous language varieties. So what we are going to use as a method of analysis? In this case, we again use a specific statistical technique, an exploratory technique, which is known as Correspondence Analysis. We have already gone through a number of statistical techniques. If you ever wonder why statistics is necessary, I hope I can show that this is useful. Once you get to deal with complex data sets of the kind that we are dealing with, then it's necessary to resort to statistics, because you can't

do the analysis just by yourself. When you do the analysis in an informal way, without quantification, it's bound to be superficial and we want to go further than that. What is the kind of technique that you can use for this kind of material? The technique that we use here is known as Correspondence Analysis. It's one of the less known forms of statistical analysis. For those who know a bit about statistics, it's quite interesting for linguistic research, because it's very useful for dealing with so-called categorical data, whereas similar types of analysis that are better known like Principal Component Analysis are actually more geared towards the analysis of numerical data. (That is technical background. Don't worry if you have no affinity with that.)

[10.32] Now what does the statistical analysis do? It tries to see if there is a correlation between the presence of one of our linguistic variables and one of our lectal variables, one of our external variables. What do we expect? That's the crucial point here. If we have homogeneous lects, what do we expect? We will expect that a number of linguistic features cluster together in the neighborhood of one or more lectal variables. We get clear lectal structure if the Correspondence Analysis shows a correlation between bundles of linguistic features and bundles of lectal/external features. If we have a clear lectal structure, a number of linguistic variables cluster together in vicinity of one or more external, lectal variables. But nothing of the sort happens.

[10.33] Just look at the overall picture here. (I have quite a number of similar graphs here but we don't need to look at all of them.) The black abbreviations refer to the linguistic variables, like the diminutive. The red ones refer to the lectal variables. For instance, the symbol letters like *f, j* refer to the stylistic components of the corpus; and here we have, for instance, the province *Lim*, which is Limburg, the province we already came across. What we see in the overall structure of this Correspondence Analysis, is that things do cluster together in the middle, but otherwise, it is not a very clear structure. We can't say very well that things really form a clear architecture of different lects. It's not the case, for instance, that if you take, let's say *f*, that you find a number of linguistic features that are situated in the immediate neighborhood of *f*. So try to think of this as a contemporary translation of the kind of map that we saw of the Rhenish fan. In the Rhenish fan we saw that in spite of the apparent heterogeneity, there is a fairly clear geographical structure in the way in which the heterogeneity is distributed over the geographical area. So here we're asking the same question: if we are doing a Correspondence Analysis, can we see whether the various linguistic forms are nicely distributed over the lectal space of variation? Well, that's not the case. There is no clear stratification, but we get various positions in the space of variation.

[10.34] That does not mean that there is no structure at all, however. The overall picture does seem to contradict the idea that lects are clearly homogeneous structures, but that does not mean that there is no structure at all: we can identify a number of underlying dimensions. In fact, we can now zoom in on separate external dimensions. We can zoom in, for instance, on register, that is to say in this case, on the components of the Spoken Dutch Corpus. You will remember from the other time that the components of the Spoken Dutch Corpus are themselves situated on a number of dimensions like public speech vs. private speech, prepared speech vs. spontaneous speech, and dialogues vs. monologue. If we zoom in in that way, do we now find structure? Again, we don't find a clear stratification, but we do find continuous dimensions. How do we see that? You have to look here at the position of the various register components of the Spoken Dutch Corpus. So they are labeled as *b, h, l, c, d*, and so on. And you can see in the picture that there is at least some kind of horizontal dimension here on which *o, b, h, l, i, j, k, c* are situated: there is a dimension in which the components are ordered. Can we interpret that dimension, and is it a meaningful dimension? If we look at what *o, b, c, d* and so on represent, then we can see that the horizontal dimension is precisely the distinction between public and private speech, with public speech to the left and private speech to the right. Does that correspond with a linguistic difference?

[10.35] If we look at the linguistic variables that we find to the left and to the right, does it make sense that we have this distribution? Yes, because what I'm doing now is to use a green color for the informal variants and a blue color for the standard Dutch variants. What we find is a dimension of public vs. private speech in terms of lectal variables. In terms of linguistic variables, on the side of the private speech, we find the colloquialisms: this is precisely what we expect. We find that the specific markers of Colloquial Belgian Dutch go together with the 'private' lectal dimension. We illustrate that here by zooming in on the central area of the plot. It's not a totally clear-cut picture, in which you can simply draw a line, but in general, the pattern is there.

[10.36] We could do this again and again for other external variables, but let me just show the plot for the regions. Given the plot, there are just a few things of which we can say that they are typical for specific provinces, for instance, for the provinces of Western Flanders, this linguistic variable ('je.inv') seems to be typical, but that's only one. I'm not going to explain what it involves, but note that this one is just one typical variable. That doesn't give you a lect: one variable doesn't constitute a lect. For generation, for gender, for educational level and for professional level, the picture is always the same.

[10.37] The lectal parameters, the external parameters, roughly reveal the same pattern. Lectal dimensions do play a role as expected, but there is no Rhenish-fan effect, that is to say, the linguistic variables do not cluster into discrete lects or strata. Rather, there are underlying dimensions and each form may seem to have its own position on the various dimensions. There are some refinements that you could apply here, some critical questions that you could ask. One of them is whether we might not be defining our lects too broadly: what happens if we break down the lects by considering interactions between lectal dimensions? So far we've looked at the components separately. But what if the relevant lect is not the register component or the province as such, but for instance, the speech of highly educated female speakers in one of the provinces? That's a more restricted definition of lects, but that doesn't really help.

[10.38] I can give you a few examples here, for instance, *praf*, that would be the female speakers of the so-called pragmatic generation. But the picture is again roughly the same. I could go to hundreds of charts like these with the same materials, but it's always the same picture that emerges.

[10.39] So we can say that the entire picture turns out to be rather of the Schuchardt type than of the neo-grammarian type. Lectal dimensions play a distinct role, but the values that linguistic variables occupy on the lectal dimensions are ordered along a continuum rather than by categorical stratification. If we turn the perspective round, we can now say that, if the lects exist at all, they would exist with prototype structure, (as Professor Kristiansen has emphasized in a number of publications), that is to say, linguistic variables may be more or less characteristic of a lect, and each variable may seem to have its own position.

[10.40]–[10.41] We should probably take into account more variation than we tend to do with taking the step from thinking about language as a homogeneous system to thinking about language as a cluster of lects, but we should probably go even further. What does all of that mean in the wider context of the history of linguistics? Remember that in the first talk I took a look at the history of 20th century linguistics, but here I've already brought in a few ideas from 19th century linguistics. Now let me try to do that more systematically, and say a bit more about the relationship between 19th century linguistics and 21st century linguistics. We find evidence for a fairly extreme deconstruction of the notion of a linguistic system: if 'the language' exists as a system, then probably only as what is sometimes called a Complex Dynamic System, and if lects

exist as separate entities within such a Complex Dynamic System, then only to the extent that they have prototype structure.

[10.42] But what does that mean for contemporary linguistics? If lectal variation is as Schuchardt-like as suggested here, then all constructions (say, all expressive forms in the language) may have their own lectal distribution, and then of course the lectal distribution of the constructions should be included in the study of such constructions. You can no longer simply say: I am looking at Colloquial Belgian Dutch as something internally homogeneous, and I'm looking within that linguistic system and I don't have to bother with the variation because within that linguistic system there is no variation; linguistic systems at lectal level are homogeneous. No, that's not what you can do if this is correct. So we have to include variation in the study of linguistic forms. Again, it's the same conclusion that we reached yesterday: we need *a lectally enriched multivariate usage-based grammar*.

[10.43] The de-systematization of the linguistic system from a variational point of view seems to be accompanied in Cognitive Linguistics by another form of de-systematization of the linguistic system. What I've been talking about so far is the de-systematization of the system from the point of view of variation. It's the distribution of 'the system' over lectal variables. But if you think about it, you could also say that we move away from a certain systemic view of the linguistic system in another respect in Cognitive Linguistics—from the point of view of grammar, that is. I am coming to that, but note already that in both cases, what we can see is like a mirror image, or perhaps better a reflection, a repetition almost, of something that happened in the 19th century linguistic debates.

[10.44] What is the standard view in the 19th century of language from the point of view of the internal structure of the language and from the point of view of language variation? That's what I'm calling here the *external* perspective and the *internal* perspective. The external perspective has to do with language variation, i.e. with questions like: what do you call 'a language' and what do you call 'a lect'? The internal perspective has something to do with: what's the grammar; what's the internal architecture of the grammar? In the 19th century, we get a standard view on both levels, and an oppositional view. The standard view with regard to language variation is the so-called 'family tree model', Schleicher's view, which presupposes internally homogeneous languages. That's the view that we have a mother language which splits up in daughter languages and each of the daughter languages is its own system. As

opposed to that, we have the view of Schmidt and Wenker, which we referred to, namely, between languages or language areas like High German and Low German, there is no strict separation, but there are borderline cases, and there are transitional zones, so the structure is much more confusing or at least, much more fuzzy than what the family tree model presupposes.

With regard to the internal structure of grammar, the neo-grammarians, as we mentioned, put forward the idea of the exceptionlessness, the high systematicity (in German, it's *Ausnahmslosigkeit*) of sound change. You can call that, in contemporary terminology, a 'rule-based approach'. One phoneme changes to another in all circumstances, with no exceptions. That's the way it happens, with clear and neat rules. Compared to that, people like Schuchardt proposed a rather lexicon-based model of change, where each word may have its own history. What I mention here is *Ueber die Lautgesetze: Gegen die Junggrammatiker*. That's the title of a work by Schuchardt, 'About the sound laws: against the neo-grammarians'. So you get, on the one hand, the idea of clear lectal structure vs. the idea of lectal fuzziness. On the other hand, you get the idea of a rule-based approach vs. a lexicon-based model.

[10.45] Now if we look at what's happening in the 20th and 21st century, we find clear reflexes of these 19th century positions. With regard to the external perspective, that is precisely what we discussed: we get this idea of internal homogeneity of language in the Saussurean and Chomskyan approaches vs. (what I am calling in this talk) the Complex Dynamic System approach to language, i.e. a more fuzzy approach. With regard to the internal perspective, we have to explain something, because that's something that we haven't discussed yet.

[10.46] The question here is: can the picture be filled out with regard to the internal perspective? A traditional system-oriented view of the grammar implies that rules and patterns on the one hand, and lexical items on the other hand are strictly separate classes of linguistic forms. The systematicity of the language is embodied in the rules, and the irregularities and exceptions are lexical. (You probably know this famous dictum that the vocabulary is the repository of all the exceptions in the language.)

[10.47] A contemporary Cognitive Linguistic view holds, by contrast, that there is a continuum of forms, with hybrid constructs intermediate between rules and items. As you will know, that is one of the basic ideas of so-called construction grammar. Another aspect of this position is that if you think about the rules, the question is how they apply to words. So if you measure the productivity or the scope of rules in terms of their lexical scope (i.e. to what



items they can apply), then in recent Cognitive Linguistics research you would say that there is a continuum of regularity. The actual lexicalization of syntactic patterns, for instance, is part of their structures. Some of them are applied to large areas of the vocabulary; others are more collocationally restricted.

[10.48] So, what we see in this sense is that recent grammatical theory, at least within the confines of Cognitive Linguistics, is also moving in the direction of the (if we can put it that way) anti-neo-grammarians position that Schuchardt had, viz. the position that we have to take into account the lexicon even when we have a look at the structure of the language. That means, to fill out the chart in an aphoristic way, that with regard to the internal perspective, the conventional late 20th century view of grammar would be ‘rules rule OK’, or if you want to put it in another way, ‘pure rules, poor lexicon’. In contemporary approaches, it’s rather like we are saying ‘no rules, great constructions’. If you have enough affinities with Cognitive Linguistics to see that these are all things that are happening in the Cognitive Linguistic environment these days, then you also see that we are reaching a position at the beginning of the 21st century, which is reflecting the same type of contrast with the previous, more strict approaches as what we had in the 19th century.

[10.49] So let me conclude. First, if lectal variation is as Schuchardt-like as suggested here, then all constructions may have their own lectal distribution, and lectal variation should be included in the study of any construction. Second, you can couple this—this form of de-systematization of our thinking about language in terms of systems and variation—to what’s happening in the grammatical models of Cognitive Linguistics. The grammatical models of Cognitive Linguistics, like construction grammar, and the variational model of usage-based linguistics, belong closely together, because both embody complementary aspects of the de-systematizing trend in contemporary linguistics. And that may well be the bottom line of what I’ve tried to show in these ten lectures. Thank you again!

## Handout Lecture 10

### 10.1 Situating the talk

- 1–2 Introduction
- 3–4 Semasiological variation
- 5–6 Conceptual onomasiological variation
- 7–9 Formal onomasiological variation
- 10 Conclusion

### 10.2 Background

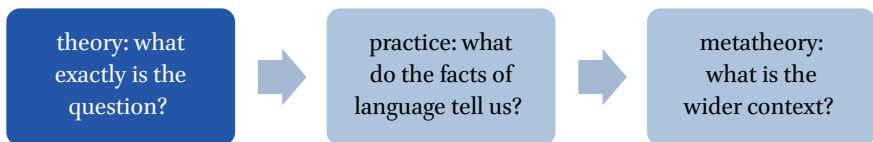
Geeraerts, Dirk. In press. Recontextualizing grammar: Underlying trends in thirty years of Cognitive Linguistics. In Elzbieta Tabakowska (ed.), **Cognitive Linguistics in Action: From Theory to Application and Back**. Berlin/New York: Mouton de Gruyter.

### 10.3 Questions

if usage is variable, how systematic is the system?

- **theory:** what exactly is the question?
- **practice:** what do the facts of language tell us?
- **metatheory:** what is the wider context?

### 10.4 Overview

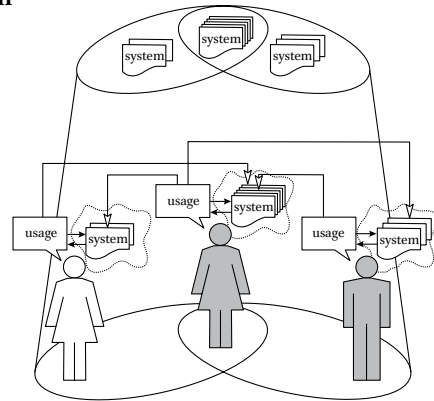


### 10.5 Theory: Specifying the question

- **step 1**  
in a usage-based conception of language, linguistic systems are inevitably non-homogeneous
- **step 2**  
but if variation in usage is lectally structured, how systematic is that variation?

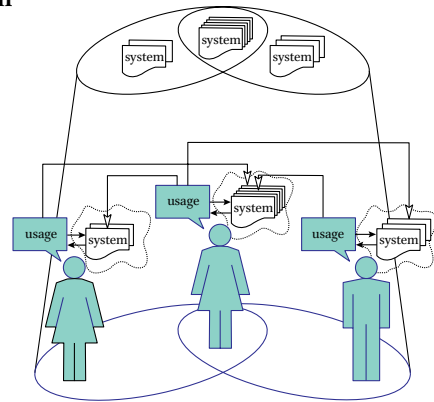
### 10.6 Theory: Specifying the question

what is 'the system'  
in a usage-based  
conception  
of language?



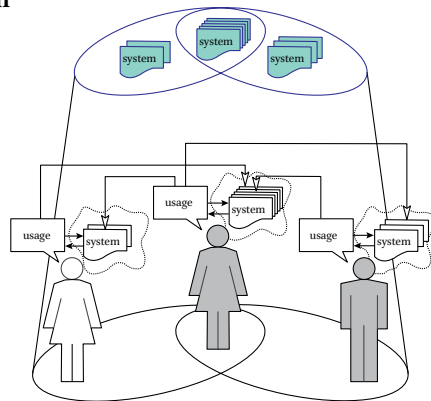
### 10.7 Theory: Specifying the question

1  
the primary fact of  
linguistics is the  
behavior of the  
language users



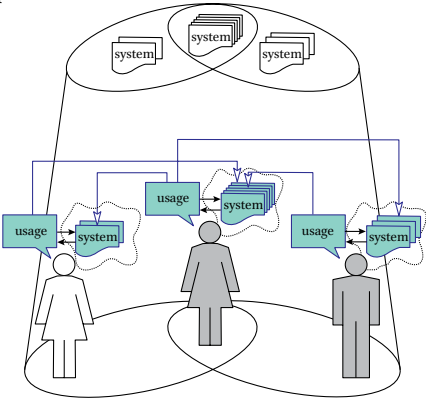
### 10.8 Theory: Specifying the question

2  
what we call 'the system'  
is a secondary abstraction  
over regularities in the  
primary behavior



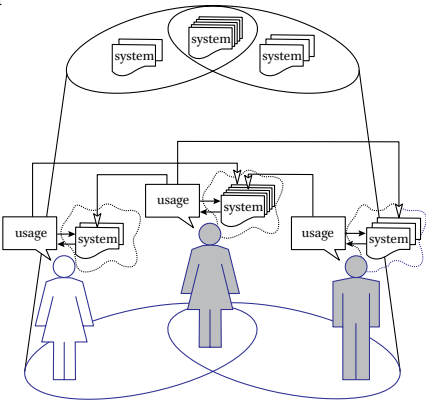
10.9 Theory:Specifyingthequestion

3  
language users do not  
align with ‘the system’,  
they align with each  
other;  
these alignments are  
necessarily incomplete



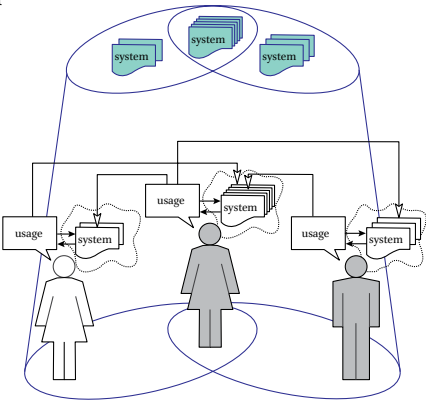
10.10 Theory:Specifyingthequestion

4  
the incomplete alignments  
have a social structure



10.11 Theory:Specifyingthequestion

5  
hence, lectal variation is an  
integral part of a usage-based  
conception of the linguistic  
system



### 10.12 Theory: Specifying the question

- **step 1**  
in a usage-based conception of language, linguistic systems are inevitably non-homogeneous
- **step 2**  
but if variation in usage is lectally structured, how systematic is that variation?

### 10.13 Theory: Specifying the question

moving further and further away from 'the system' as homogeneous:

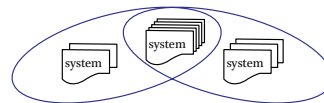
- from the language system as homogeneous in the Saussurean or Chomskyan sense
- to the language system as heterogeneous in a classical sociolinguistic sense, as a cluster of lects
- to the language system as heterogeneous in an even more radical sense, if 'lects' are just as virtual as the old-time system used to be?

### 10.14 Theory: Specifying the question

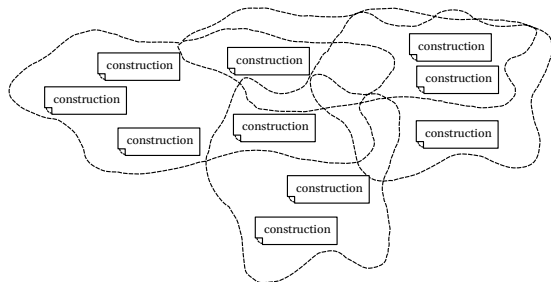
homogeneous system:



polylectal system:



complex  
dynamic system:



**10.15 Theory: Specifying the question**

→ what method can be used to establish such heterogeneity?

let's bring in the specialists:



Georg Wenker  
1852–1911



Johannes Schmidt  
1843–1901

**10.16 Theory: Specifying the question**

the Rhenish fan:

- tracking the distribution of High German consonant changes in the border area between High German and Low German / Dutch
- deconstructing the assumed homogeneity of the two linguistic areas
- defining (dia)lects by the systematic co-occurrence of linguistic variables (bundles of isoglosses)

**10.17 Theory: Specifying the question**

1	ik	maken	dorp	dat	appel
2	ich	maken	dorp	dat	appel
3	ich	machen	dorp	dat	appel
4	ich	machen	dorf	dat	appel
5	ich	machen	dorf	das	appel
6	ich	machen	dorf	das	apfel

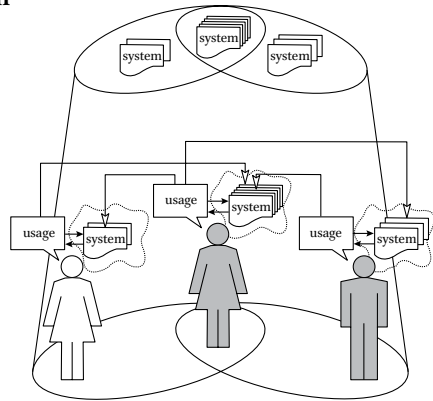
**10.18 Theory: Specifying the question**

for copyright, diagram 10.18 is deleted

**10.19 Theory: Specifying the question**

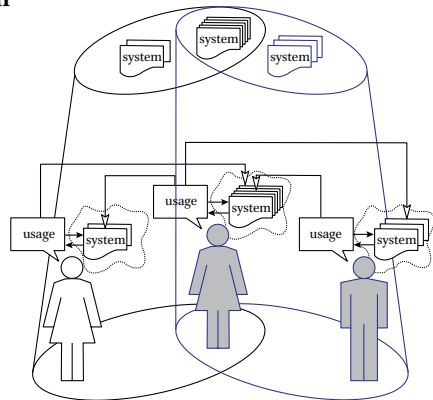
the method for a  
usage-based model  
is the same:

lects exist if there a  
systematic correspondence  
between bundles of  
linguistic variables and  
external, sociostylistic  
parameters

**10.20 Theory: Specifying the question**

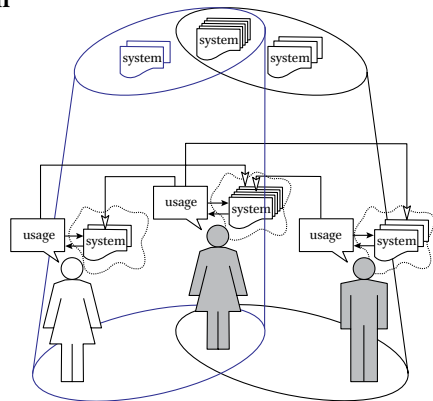
the method for a  
usage-based model  
is the same:

lects exist if there a  
systematic correspondence  
between bundles of  
linguistic variables and  
external, sociostylistic  
parameters

**10.21 Theory: Specifying the question**

the method for a  
usage-based model  
is the same:

lects exist if there a  
systematic correspondence  
between bundles of  
linguistic variables and  
external, sociostylistic  
parameters



**10.22 Theory: Specifying the question**

so

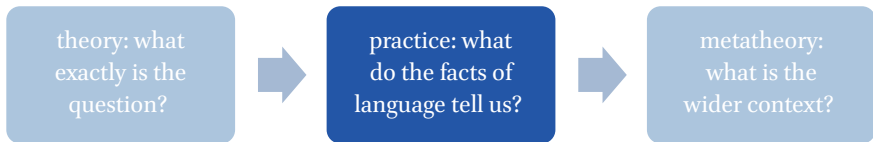
- we don't believe in the linguistic system as homogeneous
- but we wonder how the variation is structured: on the basis of (internally homogeneous) lects, or on a more fragmented basis
- we can check by looking for systematic correspondences between bundles of linguistic variables and sociostylistic parameters

**10.23 Theory: Specifying the question**

or in other words,  
should we take a Schuchardt-like position, with an unmitigated vindication of variation, gradience, contact, and creolization—of impureness and unsystematicity?



Hugo Schuchardt  
1842–1927

**10.24 Overview****10.25 Practice: The case study**

morphological markers of Colloquial Belgian Dutch, as studied in the PhD thesis of Koen Plevoets (2008)

steps to take:

- the sociostylistic parameters
- the linguistic variables (briefly)
- the method
- the results



**10.26 Practice: The case study****the sociostylistic parameters**

Spoken Dutch Corpus (10 mio tokens, 1/3 Belgian Dutch)

differentiation according to

- register: 15 stylistic components, relevant dimensions  
(prepared vs. spontaneous speech; private vs. public speech)
- province
- generation
- gender
- education level
- occupation level

**10.27 Practice: The case study****register components**

- a: Spontaneous conversations ('face-to-face')
- b: Interviews with teachers of Dutch
- c: Spontaneous telephone dialogues (recorded via a switchboard)
- d: Spontaneous telephone dialogues (recorded on MD via a local interface)
- e: Simulated business negotiations
- f: Interviews/discussions/debates (broadcast)
- g: (political) Discussions/debates/meetings (non-broadcast)
- h: Lessons recorded in the classroom
- i: Live (sports) commentaries (broadcast)
- j: Newsreports/reportages (broadcast)
- k: News (broadcast)
- l: Commentaries/columns/reviews (broadcast)
- m: Ceremonious speeches/sermons
- n: Lectures/seminars
- o: Written text read aloud

**10.28 Practice: The case study****province**

- brab: Flanders, central region (Antwerpen and Vlaams-Brabant)
- ovl: Flanders, transitional region (Oost-Vlaanderen)
- wvl: Flanders, peripheral region 1 (West-Vlaanderen)
- lim: Flanders, peripheral region 2 (Limburg)

**gender** M/F

**generation**

- pre: the pre-war generation, born between 1910 and 1929
- sil: the 'silent' generation, born between 1930 and 1939
- pro: the protest generation, born between 1940 and 1954
- los : the 'lost' generation, born between 1955 and 1970
- pra: the pragmatic generation, born after 1970

**10.29 Practice: The case study**  
**educational level**

hie (high); mid (middle); low (low)

**occupation**

- occA: occupation in higher management or government
- occB: occupation requiring higher education
- occC: employed on the teaching or research staff in a university or school
- occD: employed in an administrative office or a service organisation
- occE: occupation not requiring any specified level
- occF: self-employed
- occG: politicians
- occH: employed in the media, entertainment or artistic sector
- occI: student, trainee
- occJ: having no job

**10.30 Practice: The case study**  
**the linguistic variables**

a large collection of phenomena from the nominal and verbal morphology of Dutch

e.g. diminutives

**dim.k** CBD: *stoeleke, bomeke, tafelke, pakske*

**dim.j** Standard Dutch: *stoeltje, boompje, tafeltje, pakje*

**10.31 Practice: The case study**  
**the method**

in contrast with the Rhenish fan, we deal with a multidimensional space of variation

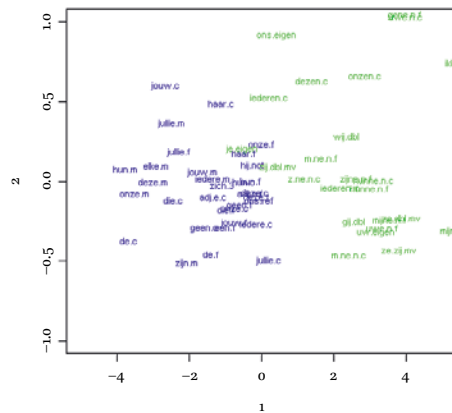


these lectal dimensions  
correspond with linguistic  
variables, but in a  
non-stratal way

### 10.35 Practice: The case study register

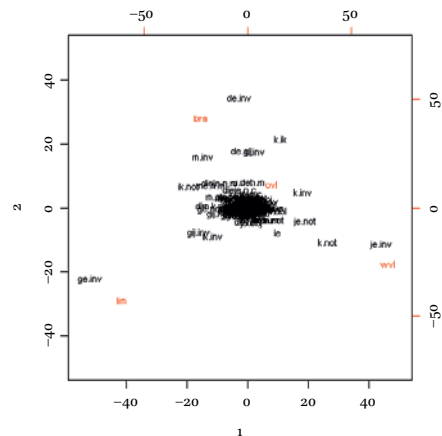
zooming in on the central cluster further illustrates the continuum

(the CBD variables are duly situated on one side, but there is a continuum, no gap with regard to the standard variables)



### 10.36 Practice: The case study region

a few isolated variables appear to be typical for one of the provinces, but again, there is no major diversification



### 10.37 Practice: The case study

we conclude that all the lectal parameters reveal the same pattern:  
lectal dimensions do play a role, as expected  
but there is no Rhenish fan-effect, i.e. the linguistic variables do not  
cluster into discrete lects or strata

however, perhaps we define our lects too broadly:  
what happens if we break down the lects by considering interactions  
between lectal dimensions?



what are the consequences, and how can we situate these findings in the context of current developments in linguistics?

**10.42 Metatheory: The wider context**  
consequences for the study of linguistic variables  
(like e.g. constructions):

if lectal variation is as Schuchardt-like as suggested here, then all constructions may have their own lectal distribution, and lectal variation should be included in the study of any construction

practical form: **lectally enriched multivariate usage-based grammar**,  
as in QLVL work by Grondelaers, Heylen, Glynn, Levshina a.o.

**10.43 Metatheory: The wider context**  
consequences for Cognitive Linguistics in the wider sense:

- the de-systematization of the linguistic system from a variational point of view is accompanied by a de-systematization of the linguistic system from a grammatical point of view
- in both cases, these developments mirror 19th century debates

**10.44 Metatheory: The wider context**

	the 19th century standard view	the 19th century oppositional view
the external perspective (the language)	Schleicher: the familiy tree model, presupposing internally homogeneous languages	Schmidt: the wave model, embodying lectal heterogeneity
the internal perspective (the grammar)	the neogrammarians: Ausnahmslosigkeit of sound change (a rule-based approach)	Schuchardt: ‘Ueber die Lautgesetze: gegen die Junggrammatiker’ (a lexicon-based model)

**10.45 Metatheory: The wider context**

	the conventional 20th century view	the emerging 21st century view
the external perspective (the language)	Saussurean / Chomskyan homogeneity of language	language as Complex Dynamic System
the internal perspective (the grammar)		

**10.46 Metatheory: The wider context**

can the picture be filled out w.r.t. the internal perspective?  
the traditional system-oriented view of the grammar implies:

- rules/patterns and lexical items are strictly separated classes of linguistic forms
- systematicity is embodied in the rules, whereas irregularities and exceptions are lexical

**10.47 Metatheory: The wider context**

a contemporary view holds:

- there is a continuum of forms, with hybrid constructs intermediate between rules and items (syntactic entities may contain lexical material)
- if productivity is measured in terms of the lexical scope of a pattern, there is a continuum of regularity (the actual lexicalization of syntactic entities is part of their structure)

→ two cornerstones of grammar research in Cognitive Linguistics  
(e.g. construction grammar)

10.48    **Metatheory: The wider context**

	the conventional 20th century view	the emerging 21th century view
the external perspective (the language)	Saussurean / Chomskyan homogeneity of language	language as Complex Dynamic System
the internal perspective (the grammar)	“rules rule OK” “pure rules, poor lexicon”	“no rules, great constructions”

10.49    **Metatheory: The wider context**

to conclude:

1.    if lectal variation is as Schuchardt-like as suggested here, then all constructions may have their own **lectal distribution, and lectal variation should be included in the study of any construction**
2.    the grammatical models of Cognitive Linguistics,like construction grammar, and the variational model of usage-based linguistics belong closely together, because they embody complementary aspects of the **de-systematizing trend in contemporary linguistics**





## Further Reading

After the presentation of the Ten Lectures in Cognitive Sociolinguistics at the 7th China International Forum on Cognitive Linguistics in 2009, the lines of research covered in the talks were further pursued by the author and his associates in the Quantitative Lexicology and Variational Linguistics research team at KU Leuven. Without in any way being exhaustive, the following references list key publications developing the various dimensions of the framework presented in the talks. (In each of the sections, the publications are listed chronologically.)

*Cognitive Sociolinguistics* in general, including its position in the wider context of the history of linguistics, is illustrated by the following.

- Geeraerts, Dirk, Kristiansen, Gitte and Peirsman, Yves (eds.) (2010). *Advances in Cognitive Sociolinguistics*. Berlin / New York: De Gruyter Mouton.
- Geeraerts, Dirk (2010). Schmidt redux: How systematic is the linguistic system if variation is rampant? In Kasper Boye and Elisabeth Engberg-Pedersen (eds.), *Language Usage and Language Structure* 237–262. Berlin/New York: De Gruyter Mouton.
- Kristiansen, Gitte and Geeraerts, Dirk (eds.) (2013). Contexts and usage in Cognitive Sociolinguistics. *Journal of Pragmatics* 52, 1–104.
- Geeraerts, Dirk and Kristiansen, Gitte (2014). Cognitive linguistics and linguistic variation. In Jeannette Littlemore and John Taylor (eds.), *The Bloomsbury Companion to Cognitive Linguistics* 202–217. London: Bloomsbury.
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- Geeraerts, Dirk (2015). From structure to context. Modern linguistics from a distance. *Μελέτες για την Ελληνική Γλώσσα*. Studies in Greek Linguistics 35, 35–51.
- Geeraerts, Dirk (2016). The sociosemiotic commitment. *Cognitive Linguistics* 27, 527–542.

The theoretical views on *meaning and categorization* that constitute the conceptual framework for Cognitive Sociolinguistics as exemplified in the lectures are expanded in the following.

- Geeraerts, Dirk (2010). *Theories of Lexical Semantics*. Oxford: Oxford University Press.

- Geeraerts, Dirk (2010). The doctor and the semantician. In Dylan Glynn and Kerstin Fischer (eds.), *Quantitative Methods in Cognitive Semantics: Corpus-Driven Approaches* 63–78. Berlin/New York: De Gruyter Mouton.
- Geeraerts, Dirk (2010). Lexical variation in space. In Peter Auer and Jürgen Erich Schmidt (eds.), *Language in Space. An International Handbook of Linguistic Variation. Volume 1: Theories and Methods* 821–837. Berlin / New York: De Gruyter Mouton.
- Geeraerts, Dirk (2015). Sense individuation. In Nick Riemer (ed.), *The Routledge Handbook of Semantics* 233–247. London: Routledge.
- Heylen, Kris, Wielfaert, Thomas, Speelman, Dirk and Geeraerts, Dirk (2015). Monitoring polysemy: Word space models as a tool for large-scale lexical semantic analysis. *Lingua* 157, 153–172.
- Geeraerts, Dirk (2016). Entrenchment as onomasiological salience. In Hans-Joerg Schmid (ed.), *Entrenchment, memory, and automaticity. The psychology of linguistic knowledge and language learning* 127–144. Berlin: De Gruyter Mouton.

Advances in the *synchronic study of lexical variation* (including lectometrical research into the relationship between language varieties) are found in:

- Geeraerts, Dirk and Speelman, Dirk (2010). Heterodox concept features and onomasiological heterogeneity in dialects. In Dirk Geeraerts, Gitte Kristiansen and Yves Peirsman (eds.), *Advances in Cognitive Sociolinguistics* 23–40. Berlin / New York: De Gruyter Mouton.
- Zenner, Eline, Speelman, Dirk and Geeraerts, Dirk (2012). Cognitive Sociolinguistics meets loanword research: Measuring variation in the success of anglicisms in Dutch. *Cognitive Linguistics* 23, 749–792.
- Levshina, Natalia, Geeraerts, Dirk and Speelman, Dirk (2013). Towards a 3D-Grammar: Interaction of linguistic and extralinguistic factors in the use of Dutch causative constructions. *Journal of Pragmatics* 52, 34–48.
- Asnaghi, Costanza, Geeraerts, Dirk and Speelman, Dirk (2014). Geographical patterns of formality variation in written Standard California English. *Literary and Linguistic Computing* 31, 244–263.
- Ruette, Tom, Geeraerts, Dirk, Peirsman, Yves and Speelman, Dirk (2014). Semantic weighting mechanisms in scalable lexical sociolectometry. In Bernhard Wälchli and Benedikt Szmrecsanyi (eds.), *Aggregating Dialectology, Typology, and Register Analysis. Linguistic Variation in Text and Speech* 205–230. Berlin: De Gruyter.

- Tummers, José, Speelman, Dirk, Heylen, Kris and Geeraerts, Dirk (2015). Lectoral constraining of lexical collocations. How a word's company is influenced by the usage settings. *Constructions and Frames* 7, 1–46.

Finally, the following are studies of *semantic change and diachronic variation* of metaphorical and metonymical construal (and vocabularies at large):

- Geeraerts, Dirk (2012). Cognitive approaches to diachronic semantics. In Claudia Maienborn, Klaus von Heusinger and Paul Portner (eds.), *Semantics: An International Handbook of Natural Language Meaning* 2652–2675. Berlin: de Gruyter.
- Geeraerts, Dirk, Gevaert, Caroline and Speelman, Dirk (2012). How 'anger' rose. Hypothesis testing in diachronic semantics. In Kathryn Allan and Justyna Robinson (eds.), *Current Methods in Historical Semantics* 109–132. Berlin: De Gruyter Mouton.
- Zenner, Eline, Speelman, Dirk and Geeraerts, Dirk (2014). Core vocabulary, borrowability, and entrenchment: A usage-based onomasiological approach. *Diachronica* 31, 74–105.
- Geeraerts, Dirk (2015). Four guidelines for diachronic metaphor research. In Javier Enrique Díaz-Vera (ed.), *Metaphor and Metonymy across Time and Cultures. Perspectives on the Sociohistorical Linguistics of Figurative Language* 15–28. Berlin: De Gruyter Mouton.
- Geeraerts, Dirk (2015). How words and vocabularies change. In John Taylor (ed.), *The Oxford Handbook of the Word* 416–430. Oxford: Oxford University Press.
- Zhang, Weiwei, Geeraerts, Dirk and Speelman, Dirk (2015). Visualizing onomasiological change: Diachronic variation in metonymic patterns for 'woman' in Chinese. *Cognitive Linguistics* 26, 289–330.

# Websites for Cognitive Linguistics and CIFCL Speakers

All the websites were checked for validity on 30 June 2017

## PART I

### *Website for Cognitive Linguistics*

1. <http://www.cogling.org/>  
website for the International Cognitive Linguistics Association, ICLA
2. <http://www.cognitivelinguistics.org/en/journal>  
Website for the journal edited by ICLA, *Cognitive Linguistics*
3. <http://cifcl.buaa.edu.cn/>  
Website for China International Forum on Cognitive Linguistics (CIFCL).
4. <http://cosebrill.edmgr.com/>  
Website for the journal *Cognitive Semantics* (ISSN 2352-6408/ E-ISSN 2352-6416), edited by CIFCL
5. <http://www.degruyter.com/view/serial/16078?rskey=fw6Q2O&result=1&q=CLR>  
Website for the Cognitive Linguistics Research [CLR]
6. <http://www.degruyter.com/view/serial/20568?rskey=dddL3r&result=1&q=ACL>  
Website for Application of Cognitive Linguistics [ACL]
7. <http://www.benjamins.com/#catalog/books/clsc/main>  
Website for book series in Cognitive Linguistics by Benjamins
8. <http://www.brill.com/cn/products/series/distinguished-lectures-cognitive-linguistics>  
Website for Distinguished Lectures in Cognitive Linguistics (DLCL)
9. <http://refworks.reference-global.com/>  
Website for online resources for Cognitive Linguistics Bibliography
10. <http://benjamins.com/online/met/>  
Website for Bibliography of metaphor and Metonymy
11. <http://linguistics.berkeley.edu/research/cognitive/>  
Website for Cognitive Program in Berkeley
12. <https://framenet.icsi.berkeley.edu/fndrupal/>  
Website for Framenet
13. <http://www.mpi.nl/>  
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## PART II

*Websites for CIFCL Speakers and Their research*

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The blog of the UB Semantic Typology Lab: <https://ubstlab.wordpress.com/>
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