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Word Order Typology and Comparative Constructions

Paul Kent Andersen

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WORD ORDER TYPOLOGY

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To my parents
Milton and Vera Andersen

PREFACE

This monograph is a thoroughly revised version of my 1979 doctorate thesis. I am particularly greatful for the criticism made by two anonymous reviewers of the thesis; although I did not agree with the majority of their comments, it was extremely useful for me to see where my argumentation was either not clear enough or not convincing enough. It has been these portions of the original thesis where my revision has been most intensive.

Since I was majoring in Indo-European linguistics at the University of Freiburg i.Br., my original interest was directed toward the work done by W. P. Lehmann on word order typology and its application to Indo-European studies; hence my emphasis on this author. My comments, however, are applicable not only to Lehmann and Indo-European linguistics but even more so to word order typology in general linguistics. For this reason the book should be of interest to a much wider audience. Eventhough I was concerned in pointing out some severe shortcomings in current theories on and methodologies of word order typology, a number of proposals for further research have been made. Although there are many areas of disagreement between Lehmann and myself, I would like to express my thanks to him for directing our attention to syntax--a most neglected area of investigation in Indo-European linguistics--and for emphasizing the use of modern syntactic theories for this purpose.

I would now like to take this opportunity to thank a number of people for their help and support. First and foremost, my sincer thanks go to my teacher Professor Oswald Szemerényi who guided my studies not only in Indo-European linguistics but also in general lin-

guistics. He always emphasized that I should never merely accept claims made by others when there is a possibility of checking these claims myself; my thesis arose out of one such claim that he had asked me to check. Throughout the writing of the thesis he had given me numerous suggestions which have helped me considerably. With Michael Back, a fellow student at Freiburg, I had discussed almost daily various aspect of my work; his extremely critical approach to my theories helped me to see my own mistakes and shortcomings. When I could finally convince him I was then certain that I was on the right path. I am also very thankful to Professor Ulrich Schneider and Docent Ruprecht Geib for guiding my studies in Old and Middle Indic philology at Freiburg. In the past three years at Bielefeld, I have profited greatly from Professor Werner Kummer, with whom I am currently engaged in typological research. A special thanks must go to Joel Erikson who first introduced me to Sanskrit and linguistics at the University of Colorado in Boulder while I was still studying physics; he was the one who originally suggested that I go to Germany to study Indo-European and Sanskrit. Of course without the support of my parents my studies in Freiburg would not have been possible; I will always be greatful to them for giving me this opportunity to continue my education. My dear wife Gunne deserves a special *tack ska du ha* for all that she has done for me during the time I spent on the preparation of my manuscript and away from my duties at home. And finally, I would like to express my thanks to Professor E.F.K. Koerner not only for accepting my book in his series but also for all of the help and suggestions he gave me for the preparation of the final manuscript.

Bielefeld, June 1983 Paul Kent Andersen

ABBREVIATIONS

A	Adjective
A	Anuṣṭubh meter
Adv	Adverb
AN	Adjective + Noun
Ant	Antonymical quality in comparative constructions
AP	Adjective phrase
APS	Adjective + Pivot + Standard in comparisons
AS	Adjective + Standard in comparisons
ASP	Adjective + Standard + Pivot in comparisons
At	Atyaṣṭi meter
B	Bṛhatī
Comp	Comparative adjective
Conj	Conjunction
Fig. Etym.	Figura Etymologica
G	Genitive
G	Gāyatrī meter
GN	Genitive + Noun
IE	Indo-European
J	Juxtaposition
J	Jagatī meter
M	Marker in comparative constructions
N	Noun
NA	Noun + Adjective
Neg	Negative marker
NG	Noun + Genitive
NP	Noun phrase

Abbreviations

O	Object
o	Pronominal object
O_a	Accusative nominal object
o_a	Accusative pronominal object
O_d	Dative nominal object
o_d	Dative pronominal object
O_p	Pronominal object
O_n	Nominal object
OV	Object + Verb
P	Paṅkti meter
P	Pivot in comparative constructions
PAS	Pivot + Adjective + Standard in comparisons
Pcl	Particle
PIE	Proto-Indo-European
Po	Postposition
PP	Prepositional phrase
Pr	Preposition
Pr	Pragāṭha meter
prep	Preposition/postposition
PSA	Pivot + Standard + Adjective in comparisons
Q	Qualifier = verbal modifier
S	Subject
S	Standard in comparative constructions
SA	Standard + Adjective in comparative constructions
SPA	Standard + Pivot + Adjective in comparisons
SOV	Subject + Objective + Verb
SPA	Standard + Pivot + Adjective in comparisons
SVO	Subject + Verb + Object
T	Triṣṭhubh meter
U	Greenberg's universal
Us	Uṣṇih meter
V	Verb
Vi	Virāṭ meter

Abbreviations

VO	Verb + Object
VSO	Verb + Subject + Object
I	Greenberg's language type VSO
II	Greenberg's language type SVO
III	Greenberg's language type SOV
#	Sentence boundary
<	developed from
>	developes into
*	unacceptable, reconstructed

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1.0. WORD ORDER TYPOLOGY

The purpose of the present chapter is to make a few pertinent remarks on linguistic typology in general and to give a brief historical account of some more important work on word order as a means of classifying languages leading up to the current theory. After this a comprehensive statement of word order typology, which will be the central theme of the entire study, will be given. It should also be added here that attention is focussed on the formal aspects of typology.

1.1. *Typology as a method of classifying languages*

Typology, as developed by the Prague School, has two basic goals: (a) the classification of the languages of the world by means of certain *types* and (b) the investigation and determination of certain *typical* mechanisms of language.[1] As a method of classifying languages, typology competes with two other methods: the genetic method and the areal method. *Genetic* classification is based on form-meaning correspondences between different languages. Of the three methods the genetic method

> is the only one which is at once non-arbitrary, exhaustive, and unique. By 'non-arbitrary' is here meant that there is no choice of criteria leading to different and equally legitimate results. This is because genetic classification reflects historical events which must have occurred or not occurred. If the classification is correct, it implies events which did occur. By 'exhaustiveness' of a classification is meant that all languages are put into some class, and by 'uniqueness' that no language is put into more than one class (Greenberg 1957:66).

Areal classification is based on effects of languages upon one another, whether they are related or not. In contrast to the groups obtained

from the other two methods the areal groups are necessarily geographically continuous. Areal classifications are arbitrary within limits but are neither exhaustive nor unique. *Typological* classification is based on "criteria of sound without meaning, meaning without sound, or both" (Greenberg 1957:66). Typological classifications are arbitrary, the classes of which are geographically discontinuous.[2] In summing up we can say that

> the genetic method operates with kinship, the areal with affinity, and the typological with isomorphism (Jakobson 1958:19).

The particular aspect of typological theory at issue here is word order.

1.2. *Weil*

Although word order had been the topic of investigation since antiquity and especially in Europe in the 18th Century,[3] Weil's views on word order as presented in his book *De l'ordre des mots dans les langues anciennes comparées aux langues modernes* (Paris 1844)[4] will serve as the starting point of this brief historical account. One of the more important reasons for starting with Weil is the fact that he is one of the very first scholars who was "in a position to look at a broad range of languages, from French and English to Chinese and Turkish" (Scaglione 1978:xii) and hence able to view word order not only language specifically but also generally. The following points are just a few of the more important aspects of his theory which will be of interest for the discussion of the current typological theory.

1.2.1. *The basic principle of word order*

At the very beginning Weil states his basic principle of word order as follows:

> ... the order of words ought to reproduce the order of ideas; these two orders ought to be identical (Weil 1978:21).[5]

He then proceeds to differentiate between the *syntactic progression (marche syntaxique)* and the *progression of ideas (marche des idées)*. The syntactic progression is the language specific order of such syntactic entities as "the being that acts, the action, the being that re-

ceives the impuls of the action, that which is affected by it in the most indirect manner, time, place of action, etc." (Weil 1978:25). The progression of ideas, on the other hand, starts with that which is known and moves on to that which is unknown.[6] His principle of word order, therefore, is this progression of ideas indepent of syntax which, I believe, is illustrated quite convincingly by the following passage:

> For example, the fact that Romulus founded the city of Rome, can ... be stated in several different ways, preserving all the while the same syntax. Suppose that someone has related the story of the birth of Romulus and the marvellous events that attach thereto, he might add, *Idem Romulus Romam condidit*. While showing a traveller the city of Rome, we might say to him, *Hanc urbem condidit Romulus*. Speaking of the most celebrated foundings, after mentioning the founding of Thebes by Cadmus, that of Athens by Cecrops, we might add, *Condidit Romam Romulus*. The syntax is the same in the three sentences; in all three the subject is *Romulus*, the attibute [i.e. predicate]*founded*, the direct object *Rome*. Nevertheless, three different things are said in the three sentences, because these elements, though remaining the same, are distributed in a different manner in the introduction and the principle part of the sentence. The point of departure, the rallying point of the interlocutors, is Romulus the first time, Rome the second, and the third time the idea of founding. And so the information that is to be imparted to another, the goal of the discourse, is different in the three forms of expression (Weil 1978:29-30).

From this passage we see that Weil proposes a theory of word order based not on syntax but on pragmatics, i.e. word order for him is the progression of ideas from the initial notion (*la notion initiale*) to the goal (*le but*).[7]

In comparing the word order of Greek and Latin with that of the modern European languages, Weil finds that in the older languages the syntactic progression and the progression of ideas are different and consequently refers to these as languages with a *free construction*. In the modern languages, on the other hand, there is a tendency for the syntactical progression to be identical to the progression of ideas, and hence they are languages with a *fixed construction*.

1.2.2. *Classification of languages based on word order*

In his investigation of word order Weil takes as his sample the following four groups of languages: (i) the modern European languages French, German and English, (ii) the Classical languages Greek and Latin, (iii) the Chinese language, and (iv) the Turkish language. He then uses the following five parameters in his classification of these languages:

(a) the position of adjective with reference to its substantive, i.e. adjective + substantive or substantive + adjective,

(b) the position of governed substantive (*le substantif régi*) with reference to the governing substantive (*le substantif qui régit*), i.e. governed + governing or governing + governed,

(c) the relative order of the verb and its complement, i.e. verb + complement or complement + verb,

(d) the use of prepositions or postpositions, and

(e) the relative order of the subordinate proposition and the principle proposition.[8]

The results of his investigation are summarized as follows:

> ... there are two [systems] which are diametrically opposed and which furnish the extreme points between which languages may oscillate. It is, on the one hand, the order parallel to grammatical *de*composition and that which places the qualifying word after the word qualified (le complément aprés [*sic*] le terme complété); on the other, the order which places first the governed word, then the governing word, and which is the exact counterpart of the analytical order (Weil 1978:56).

Consequently, Weil introduces the two terms *ascending construction* and *descending construction*:

> The complement follows the word or term on which it depends (*avidus gloriae*); this is what we have named the *descending construction*. The complement precedes the word on which it depends (*vini plenum*); this is the *ascending construction* (Weil 1978:70).

1.2.3. *Conclusions*

Weil is one of the first to attempt a classification of a number of

different languages based on word order. Although in his investigation of seven languages he does use five parameters, his results lead to only two different classes of languages, i.e.: (a) those languages which place the modifying (qualifying) word after the modified (qualified) word, and (b) those languages which show the opposite order modifying before modified.

1.3. *P.W. Schmidt*

Whereas Weil took only seven different languages as his sample for the investigation of word order, P.W. Schmidt (1926) was by far more ambitious by attempting to classify most of the known languages of the world. Among the different grammatical parameters used by him to classify these languages word order played the most important rôle.[9] In his investigation Schmidt set up - just as Weil did[10] - five different word order parameters:[11]

(a) the position of the genitive with reference to the noun which it modifies,
(b) the position of the possessive personal pronoun,
(c) the position of the personal pronoun as subject,
(d) the position of the accusative with reference to the verb, and
(e) the position of the adjective with reference to the noun which it modifies.

In contrast to Weil, Schmidt additionally sets up a hierarchy among the parameters in such a way that the position of the genitive becomes the most fundamental.[12] Consequently, the following implicational rule is formulated:

> Steht der affixlose Genitiv v o r dem Substantiv, welches er näher bestimmt, so ist die Sprache eine Suffixsprache eventuell mit Postpositionen, steht der Genitiv n a c h, so ist sie eine Präfixsprache eventuell mit Präpositionen (Schmidt 1926:382).

In other words, Schmidt has formulated the following correlations:

(i) if the order genitive + noun, then suffixes as well as postpositions, and
(ii) if the order noun + genitive, then prefixes as well as prepositions.

Further correlations noted by Schmidt are

(iii) if genitive + noun, then accusative + verb,

(iv) if noun + genitive, then verb + accusative,[13]

(v) if genitive + noun, then adjective + noun,[14] and

(vi) if noun + genitive, then noun + adjective.

It is also interesting to note that Schmidt (1926:382-3) regards exceptions to his correlations as being the result of the change of language from one type to another:

> ... wenn Abweichungen von dieser Regel erscheinen, etwa: Vorkommen von Postpositionen mit Nachstellung des Genitivs, oder umgekehrt: Vorkommen von Präpositionen mit Voranstellung des Genitivs, so liegt ein Übergangsstadium entweder im ersteren Falle von der Präfigierung in die Suffigierung oder im zweiten Falle die umgekehrte Entwicklung vor.

1.4. *Greenberg*

The next - indeed most important - milestone in the investigation of word order typology is Greenberg's contribution to the Dobbs Ferry conference on language universals in 1961. The proceedings of this conference were published under the editorship of Greenberg in 1963 - the second edition from 1966 will be cited here - in which Greenberg writes in his general introduction:

> The usefulness of typologies ... may be illustrated from my own paper on which a typology based on the order of elements in certain major constructions appears as a virtually indispensable tool in the search for cross-linguistic regularities. ... It is perhaps not overstating the case to say that one of the values of this conference was the realization that typological classification finds its sought-for justification in the investigation of universals (Greenberg [ed.] 1966:xii-xiii).

The general notion of universals at the conference was formulated by Greenberg ([ed.]1966:xii) as follows:

> There was general agreement that it was necessary and completely legitimate to include as universals in addition to statements of the simple type 'all languages have a given feature x', likewise implicational relations, universal frequency distributions, statistically better than chance correlations, and other logic types ... From a purely logical point of view this might be summarized

> as follows. All statements of the form ... 'for all x, if x is a language, then ...'. are permitted.

In other words, two different kinds of universals were proposed by Greenberg, i.e. (a) the so-called statistical or absolute universals ('all languages have a given feature x')[15] and (b) the so-called implicational or relational universals ('if a language has x, then it will have y').[16] Greenberg used implicational universals for the most part for the following two reasons:

> First, the lowest-level laws as described in manuals of scientific method take precisely this form. Second, what seem to be non-implicational universals about language are in fact tacitly implicational since they are implied by the definitional characteristics of language (Greenberg 1966:73).

1.4.1. *Word order universals*

Greenberg's contribution to the conference - "Some universals of grammar with particular reference to the order of meaningful elements" - is divided into the following five sections.

(a) *Introduction* The reason for choosing questions concerning morpheme and word order was "that previous experience suggested a considerable measure of orderliness in this particular aspect of grammar" (73). The primary data used in his investigation is taken from a sample of 30 languages:

> This sample was selected largely for convenience. In general, it contains languages with which I had some previous acquaintance or for which a reasonably adequate grammar was available to me. Its biases are obvious, although an attempt was made to obtain as wide a genetic and areal coverage as possible. This sample was utilized for two chief purposes. First, it seemed likely that any statement which held for all of these 30 languages had a fair likelihood of complete or, at least, nearly complete universal validity. Second, less reliably, it serves to give some notion of the relative frequency of association of certain grammatical traits (Greenberg 1966:75).

(b) *The basic order typology* Greenberg sets up his basic order typology using the following three parameters:

(i) the existence of prepositions (Pr) or postpositions (Po),

(ii) the relative order of subject (S), verb (V) and object (O) in declarative main clauses with nominal subject and object. Since the orders VOS, OSV and OVS "do not occur at all, or at least are excessively rare" (76) one is left with the three orders: I (VSO), II (SVO) and III (SOV), and

(iii) the position of qualifying adjectives (A) in relation to their nouns (N): AN or NA.

Theoretically then, there are 12 different types which can be distinguished by these parameters; these are shown in table I in which the 30 languages are distributed (77):

TABLE I

	[VSO]	[SVO]	[SOV]
	I	II	III
Po, AN	0	1	6
Po, NA	0	2	5
Pr, AN	0	4	0
Pr, NA	6	6	0

The most important criterion for setting up an *implicational universal* is the occurrence of a zero in such a table. In taking another look at table I, we can see that there is a zero entry under type I languages with Po; from this Greenberg deduces his universal 3:

(U3): VSO→Pr.[17]

Likewise universals 4 and 17 follow directly from table I:

(U4): SOV→Po.

(U17): VSO→NA.

Another parameter not incorporated into this table is the position of the genitive with respect to its governing noun: GN/NG. After an investigation of the 30 languages Greenberg is led to postulate the following universals incorporating this parameter:

(U2): Pr→NG,[18]
Po→GN.

(U5): SOV+NG→NA.

(c) *Syntax* In his section on syntax Greenberg investigates the relationship between the order of specific syntactic constituents

and the *four* parameters discussed under 'the basic order typology'. In turning to the position of the question markers whose order is fixed either by reference to some specific word or by position in the sentence as a whole, Greenberg lists the distribution of the 12 languages (from the 30 language sample) which have such particles as follows (81):

TABLE II

	I	II	III
Initial particle	5	0	0
Final particle	0	2	5

The fact that the two type II languages have Pr leads Greenberg to his universal 9:

(U9): Pr→initial particles,
Po→final particles.

Some of his other universals involve

(i) the position of auxiliary with respect to the main verb using the parameter I/II/III (U16),

(ii) the position of demonstratives with respect to their nouns using the parameter NA/AN (U19),

(iii) the order of adjective, marker and standard in comparative constructions using the parameter Pr/Po (U22), and

(iv) the order of common noun with respect to proper noun using the parameter NG/GN (U23).

These examples show that Greenberg's implicational universals are based on the *four* parameters listed above and not on only one.

(d) *Morphology* Greenberg's fourth section deals with the order of inflectional categories and sets up universals 26 to 45, the majority of which state relationships between various affixes for person, number and gender. Only the following two universals relate these affixes to 'the basic order typology':

(U27): "If a language is exclusively suffixing, it is postpositional; if it is exclusively prefixing, it is prepositional" (93).

(U41): "If in a language the verb follows both the nominal subject and nominal object as the dominant order, the lan-

guage almost always has a case system (96).

(e) *Conclusion: some general principles* In the concluding section Greenberg proposes two general principles which underlie a number of different universals and from which they may be deduced, i.e. the notions of the *dominance* of a particular order over its alternative and that of *harmonic* relations among distinct rules of order. In elucidating these notions Greenberg recalls his universal 25:

(U 25): "If the pronominal object follows the verb, so does the nominal object" (91).

From his data one can set up the following table to facilatate his argumentation (Op = pronominal object, On = nominal object):

Table III

	I	II	III
Op+V	2	3	2
V+Op	1	0	0
Both	0	2	0
On+V	0	0	1
V+On	3	5	0
Both	0	0	1

> Since the nominal object may follow the verb whether the pronoun object precedes or follows, while the nominal object may precede the verb only if the pronoun precedes, we will say that VO is dominant over OV since OV only occurs under specified conditions, namely when the pronominal object likewise precedes, while VO is not subject to such limitations. Further, the order noun object-verb is harmonic with pronoun object-verb but is disharmonic with verb-pronoun object since it does not occur with it (97).

Harmonic relations then are those which have the tendency to occur together. The notion of *dominance*, however, is based on the logical factor of a zero in the tetrachoric table:

> Dominance and harmonic relations can be derived quite mechanically from such a table with a single zero. The entry with zero is always the recessive one for each construction, and the two constructions involved are disharmonic with each other (97).

Returning to the four parameters Greenberg sets up the following relationships:

(i) Pr, NG, VS, VO and NA are directly or indirectly *harmonic* with each other.

(ii) Po, GN, SV, OV and AN are directly or indirectly *harmonic* with each other.[19]

(iii) Pr is *dominant* over Po.

(iv) SV is *dominant* over VS.

(v) VO is *dominant* over OV.

(vi) NA is *dominant* over AN.[20]

It should be pointed out now that those parameters which are harmonic are not all dependent on one parameter alone, but may instead be dependent on one or more other parameters, i.e. there is no hierarchy among the parameters.[21] This fact enables Greenberg to account for inconsistencies in various languages. As we have seen, the parameters Po, GN, SV, OV and AN are harmonic and should be expected to occur together as in Turkish (and other languages of this very widespread type); the general dominance of NA order, however, tends to maké languages of the Basque type (i.e. III/Po/NA/GN) very nearly as common as the Turkish type (100). It should also be pointed out that Greenberg's universals are unidirectional: (U3) VSO→Pr does not entail Pr→VSO.

1.5. *VO/OV typology*

In the early seventies a modified version of Greenberg's typology was developed by Lehmann.[22] Two important steps led to this new typology:

(a) The *subject* was found to have little bearing on the word order typology. This meant then that Greenberg's three types VSO/SVO/SOV were reduced to VO/VO/OV, or simply VO/OV.

(b) A *hierarchy* was imposed upon Greenberg's four parameters in such a way that all orders in a language were dependent upon the order of the *verb* and *object*.

Thus Greenberg's original 24 types differentiated by the four parameters were suddenly reduced to only two types. Subsequently, lists of

various characteristics for the two types were made which, for the most part, were based on the universals of Greenberg:

(c) VO = Pr/NA/NG ...

(d) OV = Po/AN/GN ...

In other words, many of Greenberg's unrelated implicational universals are now related to the one parameter, namely the order of verb and object.

At the start exceptions to this new typology were found, e.g. VO languages with Po etc. Accordingly, two qualifications to this new typology were given to account for these exceptions: exceptions arise (i) in languages undergoing typological change and/or (ii) in marked patterns. This new typology was then applied to diachronic linguistics and research was carried out to reveal the processes of language change in terms of word order change. In the following sections this new typology will be presented in detail.

1.6. *Lehmann's explanatory syntax*

In viewing syntax from an Indo-European standpoint, Lehmann points out that syntactic research in this area had reached a certain plateau of accomplishment and interest half a century ago. The attitude of linguists toward syntax at that time was summed up by Hirt in the following way:

> In many instances we find no explanation in the area of syntax. One assembles a series of facts but doesn't know what to do with them (Lehmann 1975a:46).[23]

The stage is now set for a revival and improvement of Indo-European syntax:

> An explanatory syntax is now possible because of two recent developments in linguistics: the study of syntax for its underlying patterns, which owes much of its impetus to the work of Noam Chomsky (1965), and the typological framework for syntax, which is based in great part on an important essay of Joseph Greenberg (1966). While our data are taken from surface manifestations, syntactic study is concerned with the abstract patterns underlying these - in Ferdinand de Saussure's term with *langue*; in Chomsky's, with a theory of competence. When studied for their underlying patterns, the 'series of facts' that Hirt and his predecessors

> could not handle can be interrelated; a syntax can be produced which describes a language by means of ordered rules. Such rules are written in accordance with a framework of syntactic universals, which typological study has yielded (Lehmann 1974a:6).

We see then that Lehmann will set up a transformational grammar with specific ordering constraints (based on the universals of Greenberg) build into the phrase structure rules (see §1.6.2. below). For the most part, however, his endeavors will proceed along the typological avenue.

1.6.1. *Means of syntax*

In order to be explanatory a grammar must take into account the various processes or means of syntax given by Bloomfield:[24] modulation (intonation), modification, selection and order (arrangement).

> *Selection*, or determination of the entities to be used in any syntactic construction, is one of the basic syntactic processes. ... We refer to the proper relationships in syntactic sequences as *arrangement*. ... The syntactic process of changing items in accordance with their surrounding is known as *modification*. Finally, each of the ... sentences ... is accompanied by a basic pattern of *intonation* (Lehmann 1972d:111).[25]

Lehmann now points out that selection has been dealt with exhaustively in the past 100 years.[26] "Work on modification, or sandhi, has been almost entirely restricted to observation, when carried out at all. As we scarcely need to be reminded, Sanskrit is the only language in which observation has been systematically carried out" (Lehmann 1976c: 174).[27] "Our least adequated discription is in the field of intonation" (Lehmann 1974a:24). But the remaining process, i.e. order, is found to be the most important:

> The device known as *arrangement* or *order* is the most important process of language. ... Arrangement owes its significance to the linear structure of language. Its linearity requires that entities must be arranged in order (Lehmann 1978a:10).

Greenberg's universals and word order typology now provide a much needed framework for research into this process of syntax.

1.6.2. *Placement principle*

This section will deal with the syntactic means of order (arrangement) and its place in a transformational grammar. The framework for order, as we have seen, is provided by Greenberg (1966), specifically by his four parameters (see §1.4.1. [b]). The *subject*, however, which distinguishes type I (VSO) from type II (SVO) languages, is found not to be fundamental to typology:[28]

> ... subjects are by no means primary elements in sentences. Including them among the primary elements, as in the attempt to classify SVO and VSO languages as major types in the same way as VO and OV languages, has been a source of trouble for typologists as well as for linguistic theorists in general (Lehmann 1973c: 51).[29]

The *verb*, on the other hand, is found to be most important for typology:

> The verb is distinguished as a central element in language - the element fundamental in the ordering of the grammatical elements and markers. How these elements and markers are arranged with reference to the verb determines the typological structure of a language (Lehmann 1973c:65).[30]

These views are supported by recent findings of neurological research as well as other grammatical theories such as the dependency grammar of Tesnière and case grammar.[31] Consequently Greenberg's parameter I(VSO)/II(SVO)/III(SOV) can now be reduced to VO/VO/OV or simply VO/OV. This step is very practical in that all of the parameters used in the typology are now binary: NA/AN, NG/GN, Po/Pr and VO/OV. In addition to this, because of the importance of the *verb-object* order over all others, a hierarchy as well can be superimposed upon the four parameters. The results of these two modifications on Greenberg's parameters lead to a language typology (based on word order) which differentiates two language types: OV languages and VO languages.

Furthermore, since the relative order of the verb and object is the most fundamental aspect of this typology, all other orders (cf. Greenberg's universals) are dependent upon this order. In 1971 Lehmann proposed a *fundamental movement rule* to show this connection be-

tween the verb-object order and other orders:

> ... a fundamental movement rule. By this rule syntactic elements which are modifiers are placed on the converse side of the elements O and V. For example, in consistent VO languages, relative constructions, descriptive adjectives and possessives follow O; in OV languages they precede O (Lehmann 1971b:25).

Lehmann later renamed his principle - it became the *principle of placement for modifiers*[32] - and formulated it as the following phrase structure rule:

$$\#QV(N^{Obj})(N^{Mod})\#\rightarrow\left\{\begin{array}{l}\#QV(N^{Obj})(N^{Mod})\# \\ \#(N^{Mod})(N^{Obj})VQ\#\end{array}\right\}\begin{array}{l}\text{(for VO languages)}\\ \text{(for OV languages).}\end{array}$$

By this rule verbal modifiers - qualifiers (Q) - are placed before verbs in VO languages and after in OV languages. Likewise nominal modifiers (N^{Mod}) are placed after nouns (N^{Obj}) in VO languages and before in OV languages. This *placement principle* represents an important advance by linking many of Greenberg's random and independent universals to one parameter, i.e. OV/VO.

Whereas Lehmann simply states his *placement principle* derived from a generalization of Greenberg's universals, Vennemann offers an explanation of this principle[33] in his *principle of natural serialization*:

> The PRINCIPLE OF NATURAL SERIALIZATION had long been intuited by linguists. ... It can be made explicit only in a theory of grammar which represents semantics in an explicit way. It is itself based on another principle proposed by R. Bartsch: the PRINCIPLE OF NATURAL CONSTITUENT STRUCTURE. This principle says that elements belonging together in the hierarchy of semantic representation tend to be lexicalized and serialized in the surface representation in such a way that hierarchical dependencies are directly reflected in categorical operator-operand relationships and closeness of constituents to each other in the surface string. The natural serialization principle comprises the natural constituent structure principle but says that furthermore, the operator-operand relationship tends to be expressed by unidirectional serialization: {Operator {Operand}}tends to be serialized either as [Operator [Operand]]throughout, or as [[Operand] Operator] throughout (Vennemann 1973:40-41).

Specifically then, the *principle of natural serialization* can be formulated

as follows:

$$\{\text{Operator } \{\text{Operand}\}\} \Rightarrow \begin{cases} [\text{Operator } [\text{Operand}]] & \text{in OV lang.} \\ [[\text{Operand}] \text{ Operator}] & \text{in VO lang.} \end{cases}$$ [34]

In returning now to Lehmann's *placement principle* and keeping in mind that his new *explanatory syntax* is based not only on Greenberg's universals but also on generative grammar, this principle, which has been formulated as a rule for use in a generative grammar, is placed after six phrase structure rules and before the transformational rules.[35]

1.6.3. *Typological characteristics*

In table IV below, I will attempt to give a complete list of the specific typological characteristics governed by the *placement principle* and their relative orders for VO and OV languages.[36]

TABLE IV

	CHARACTERISTIC	TYPE	
	Syntax	VO	OV
a	Adpositions	Pr + N	N + Po
b	Comparisons	A + M/P + St	St + M/P + A
c	C(omparative) M(arkers)	CM + Adj	Adj + CM
d	Adv(erbials)	V + Adv	Adv + V
e	Gapping	Backward	Forward
f	Na(me), T(itle)	T + Na	Na + T
g	F(amily) Na, Gi(ven) Na	GiNa + FNa	FNa + GiNa
h	Teens: Nu(meral), TEN	Nu + TEN	TEN + Nu
i	Dir(ectional), Te(mporal) Adv	Dir + Te	Te + Dir
j	D(irect), Ind(irect) Obj	D + Ind	Ind + D
	Nominal Modifiers		
k	Rel(atives)	N + Rel	Rel + N
l	G(enitives)	N + G	G + N
m	Adj(ectives)	N + Adj	Adj + N
n	Det(erminers)	N + Det	Det + N
o	Nu(merals)	N + Nu	Nu + N
p	Num(ber) M(arker)	N + NumM	NumM + N

		VO	OV
q	Adv, Adj	Adj + Adv	Adv + Adj
	Verbal Modifiers		
r	Aux(iliaries),Main V(erb)	Aux + Main V	Main V + Aux
s	Mod(al verbs)	Mod + Main V	Main V + Mod
t	Int(entional verbs)	Int + Main V	Main V + Int
	Morphology		
u	Morphological Type	Inflectional	Affixational
v	Morphological Type	Isolating	Agglutinating
w	Inter(rogatives)	Inter + V	V + Inter
x	Neg(atives)	Neg + V	V + Neg
y	Inter, Neg	Inter + Neg + V	V + Neg + Inter
z	Pot(entialities)	Pot + V	V + Pot
aa	Caus(atives)	Caus + V	V + Caus
bb	Refl(exives)	Refl + V	V + Refl
cc	Decl(aratives)	Decl + V	V + Decl
dd	Tem(pus)	V + Tem	Tem + V
	Phonology		
ee	Syllable Type	Closed Syllable	Open Syllable
ff	Vowel Assimilation	Umlaut	Vowel Harmony
gg	Accent	Stress Accent	Pitch Accent
hh	Mora-Counting	----------	Mora- Counting
	Other Characteristics		
ii	Affixation	Prefixation	Suffixation
jj	Assimilation	Anticipatory	Progressive
kk	Complementary Clauses	Hypotaxis	Parataxis
ll	Passivization	Passives	---------
mm	Pron(ouns)	Rich in Pron	Poor in Pron
nn	Clefting	Clefting	---------
oo	Sentence Introducing Particles	Sent. Intr. Pcls.	---------
pp	Number of Vowels	----------	Small Set

		VO	OV
qq	Morphophonemic Modification	Initial	Final
rr	Part(icipial Modifiers)	----------	Part
ss	Q(uestions)	Q ... V	V + Q
tt	Relative Pronouns for marking relative constructions	Pronouns	----------
uu	Indicators of reflexive constructions	Reflexive Pron	Verb Markers
vv	Expression of verbal categories	----------	Suffixes
ww	Surface declarative markers	----------	Favored
xx	Congruence markers	Markers	Lack of Markers
yy	Postposed coordinating conj.	----------	Postp. conj.[37]

It is now reasonable to assume that some of these typological characteristics are more important for the determination of the typological patterning of specific languages than others.[38] Accordingly, Lehmann sets up a list of the five most important characteristic elements of syntactic systems:

> Other order relationships have been identified, but here I list only the selected set, for two basic types of language:
> VO 1. Prepositions; 2. Comparative adjective Pivot Standard (A P St); 3. Noun Relative construction (N Rel); 4. Noun Adjective (N A); 5. Noun Genitive (N G).
> OV 1. Postpositions; 2. Standard Pivot Adjective (St P A); 3. Relative construction Noun (Rel N); 4. Adjective Noun (A N); 5. Genitive Noun (G N).
> We may regard the five constructions selected here, as well as the VO/OV construction, as characteristic elements of syntactic systems. Languages must include them much as they must include phonological elements like vowels, consonants, resonants or obstruents (Lehmann 1972b:169-170).[39]

1.6.4. *Marked patterns*

In setting up the typological word order patterns of specific languages we are primarially interested in finding the neutral or unmarked orders:

> Greenberg's statements on universals in the 'order of meaningful elements' rightly put forward the notion of a 'dominant' order. We are reminded that the idea of dominance is not based on the more frequent occurrence of a given order: actually what is here

> introduced into the 'order typology' by the notion of dominance is a stylistic criterion. For example, of the six mathematically possible relative orders of nominal subject, verb, and nominal object -- SVO, SOV, VSO, VOS, OSV and OVS -- all six occur in Russian ... yet only the order SVO is stylistically neutral, while all the 'recessive alternatives' are experienced by native speakers and listeners as diverse emphatic shifts (Jakobson 1966: 268-269).

We notice now that languages very often reveal a number of competing patterns; two qualifications to the *placement principle* must therefore be made to maintain the theory. The first qualification is made for *marked patterns*. Lehmann points out that certain elements in a sentence can be emphasized or marked through a change in word order, through special intonation or through the use of particles:

> Elements in sentences can be emphasized, by marking; the chief device for such emphasis is intial position. Arrangement in this position is brought about by stylistic rules applied after structures have been generated by P rules and transformational rules (Lehmann 1974a:219).

> Marking too may be used for singling out various constituents, by change of order or by intonation, with or without accompanying particles.
> ... A serpent I'm not.
> ... I am not a *serpent* (Lehmann 1978b:173-174).[40]

Some patterns, however, are not readily susceptible to rearrangement for marking, such as comparatives, adpositions and the teen numerals; "For this reason we ascribe great importance to constructions like the comparative in determining the basic patterns of individual languages" (Lehmann 1974a:22).[41] Unfortunately, we learn little more than this regarding *marking*.

1.6.5. *Typological change*

The second qualification to the *placement principle* is made for languages undergoing typological change. In such languages one finds non-conforming features such as preposed adjectives in (SVO) English which has developed from SOV Proto-Germanic. In other words, "when languages show patterns other than those expected, we may assume that they are undergoing change"(Lehmann 1973c:55).[42] The cause of this

change may be due to external development (borrowing) or to internal modification.[43]

> During the time of transition, these languages were neither OV nor VO. I would like to lable languages at such stages ambivalent in type. Moreover, as a general principle, we may propose that ambivalent languages lack the syntactic framework for a standard order of embedded constructions (Lehmann 1972c:989).

There are, accordingly, certain constructions which are typical for such 'ambivalent' or inconsistent languages such as absolute constructions,[44] definite adjectives[45] and verbal nouns.[46]

It has further been proposed that in the typological change from OV to VO datives are among the first elements to change their order:

> Interrelationships between changes of patterns have also been hypothesized on the basis of very little data to the effect that datives may be among the first patterns to be shifted in OV languages, when postposed as a kind of afterthought. ... Such placement of the dative, leading toward disruption of the OV structure, signals a shift in basic word order; it would be followed in turn by a change in other government constructions as well as in nominal modifying constructions like relative clauses (Lehmann 1978a: 42).[47]

1.7. *Summary*

One of the earliest attempts at a language typology based on word order was made by Weil (1844). Using seven different languages as his sample, he was able to abstract five different parameters (i.e. AN/NA, MN/NM, CV/VC, Pr/Po, SC:MC/MC:SC). The results of his investigation led to a classification of languages into two types: the one type places the qualifying word after the word qualified and the other places the qualifying word before the word qualified.

P.W. Schmidt extended his sample of languages to include most of the known languages of the world. Likewise Schmidt set up five parameters, but in contrast to Weil, he realized the fundamental importance of the position of the genitive. This led him as well to a classification of languages into two types: the one placing genitives before the modified noun, the other after. Furthermore, he went one step further than Weil by correlating certain other word order patterns to the two types:

the order genitive + noun correlates with suffixes, postpositions, accusative + verb and adjective + noun; the order noun + genitive correlates with prefixes, prepositions, verb + accusative and noun + adjective.

To a certain extent Schmidt provides the basis for Greenberg's investigation of word order which leads to a classification of languages into 24 types according to four parameters: Pr/Po, VSO/SVO/SOV, AN/NA and GN/NG. Although his sample consists of only 30 languages, he does list the distribution of over 130 languages in an appendix. Furthermore, he postulates 45 (implicational) universals which hold between certain word order patterns/elements.

Lehmann's word order typology is based directly on Greenberg's universals. By reducing the one parameter concerning the order of subject, verb and object (VSO/SVO/SOV) to a binary parameter, i.e. either verb + object or object + verb, and setting up an hierarchy dependent upon this parameter, Lehmann reduces Greenberg's 24 language types to two types: VO and OV. He also takes many of Greenberg's 45 universals, which were not at all interrelated, and connects them directly to his typology based on the order of verb and object. And finally he accounts for exceptions to this typology through either typological change or the process of marking.

Endnotes

1. See Szemerényi (1977:339ff.), Altman and Lehfeldt (1973:13ff.), and Haarmann (1976:7ff.).
2. Cf. Greenberg (1957:66ff.), Robins (1973:*passim*, esp. 3), Ineichen (1979:90), and Mallinson and Blake (1981:3ff.).
3. Scaglione (1978:ix f.), cf. Scaglione (1972:74ff., 105ff.) and Robins (1973:14).
4. The text cited here is the English translation (by Super [1887]) of the third edition (1879) which has now become available as a reprint (1978).
5. Cf. also Weil (1978:21): 'I believe that with slight modifications the signs of our ideas are always presented in the order of our ideas, and that the differences which have been cited are for the most part only seeming differences.'

6. Cf. Weil (1978:29f.)'... it was necessary to lean on something present and known, in order to reach out to something less present, nearer, or unknown. ... Syntax relates to the exterior, to things; the succession of the words relates to the speaking subject, to the mind of man. There are in the proposition two different movements: an objective movement, which is expressed by syntactic relations; and a subjective movement, which is expressed by the order of the words.' This foreshadows the Prague school notion of *functional sentence perspective*, cf. §2.4.2.4. below.

7. Under certain conditions the order can either be reversed, i.e. the progression from goal to initial notion, or the initial can be omitted, see Weil (1978:43f.). Cf. here DeLancey's notion of *attention flow* and his remarks on mechanisms for managing attention flow (1981:632).

8. Weil (1978:56).

9. See Schmidt (1926:381-496).

10. There is, however, no mention of Weil in Schmidt's book.

11. Schmidt (1926:381).

12. Schmidt (1926:381-384), cf. (384): 'Darin offenbart sich die durchaus primäre Bedeutung der Genitivstellung und ihr unzertrennliches Eingewurzeltsein in das tiefste Sprachgefühl einer jeden Sprache.'

13. Schmidt (1926:384, 479ff.).

14. Schmidt thinks that originally the adjective was placed after the noun with the preposed genitive and only later tended to be placed before. This accounts for the many more exceptions found here than by the position of the accusative, cf. Schmidt (1926: 484ff.).

15. Cf. universal 42 (Greenberg [1966]:113): 'All languages have pronominal categories involving at least three persons and two numbers.'

16. For a discussion of these types of universals see Szemerényi (1977:351ff.).

17. Read: the order verb + subject + object implies prepositions.

18. Actually, from the table in question one can postulate either Pr → NG or NG → Pr.

19. Greenberg (1966:100), cf. Bechert (1976:53).

20. Greenberg (1966:97ff.); N.B. nothing is said about the dominance of GN.

21. Cf. Bean (1977:13); see however, Canale (1976:43).

22. A few years after Lehmann started investigating word order Vennemann directed his attention as well to this field, cf. Vennemann (1973, 1974a-d, 1975); see also Antinucci (1977).

23. Cf. Hirt (1934:vi).

24. Bloomfield (1933:184), Lehmann (1973c:63; 1974a:24; 1977a:519). N.B. Sapir recognizes six processes, see Sapir (1921:61), Szemerényi (1971:109) and §2.1.1. below.

25. Cf. Lehmann (1974a:25): 'For an understanding of PIE syntax, the role of each of these processes must be related. A sentence in PIE is generated by selection of word classes and inflected subsets of these arranged in various patterns, which are subject to sandhi changes and delimited by specific patterns of intonation.' See also Lehmann (1978a:9-12).

26. Cf. Lehmann (1974a:24).

27. See Tauli (1958:162-164).

28. Cf. the numerous papers on the notion *subject* in Li (1975). Notice too that subject properties in a sentence will be distributed among two noun phrases in Ergative languages, cf. Comrie (1981:104). Regarding the generalization of Greenberg's three word order types to two, cf. Comrie (1981:89ff.) and Thom (1973). Dezsö (1982:128ff.) offers a different approach here.

29. Cf. Lehmann (1976b:448): 'And unfortunately the SVO structure of the major languages of western civilization has led to an erroneous emphasis on the role of the subject in language.'

30. Cf. Lehmann (1972c:980): 'The view that verbs provide the central structure of sentences is supported by the well known subjectless sentences of the Indo-European languages, e.g. Latin *pluit* "it is raining" ...' See also Lehmann (1972f:267; 1975a:50).

31. Cf. Lehmann (1972f:273-274).

32. Lehmann (1973c:47ff.), see also Lehmann (1978a:19).

33. Cf. Vennemann (1974a:79): 'My discussion is based on the word order universals of Greenberg 1966, their application in Lehmann 1970 [1972e], 1972 [1971a], and their explanation in Vennemann 1972 [1973] and Bartsch and Vennemann 1972.' See also Antinucci (1977:14ff.).

34. Vennemann (1973:41; 1974a:81; 1974c:347) and Bartsch and Vennemann (1972:136).

35. Cf. Lehmann (1974a:11-13).

36. For a different list of characteristics see Heine (1975:27ff.).

37. The references for these characteristics are L = Lehmann, L&R = Lehmann and Ratanajoti and V = Vennemann:
    a L 1971a:20; 1972c:977,982; 1972f:267; 1973a:84, etc.

b L 1971:23; 1972c:977,982; 1972f:267; 1973a:84, etc.
c V 1974a:79; 1974b:9.
d V 1974a:79; 1974b:8; 1974c:345.
e L 1970b:298; 1973b:183; 1978b:194; L&R 1975:153.
f L 1978a:17; L&R 1975:148.
g L 1978a:17; L&R 1975:148.
h L 1975a:55; 1977b:26; 1978a:17,19; L&R 1975:148.
i V 1974a:79; 1974b:9.
j V 1974a:79; 1974b:9.
k L 1970a:288; 1971a:19; 1971b:25; 1972c:977; 1972f:267.
l L 1971a:19; 1971b:25; 1972c:977; 1972f:267; 1973c:48.
m L 1971a:19; 1971b:25; 1972c:976; 1972f:267; 1973c:48.
n L 1974a:82f.
o V 1974a:79; 1974b:8.
p V 1974a:79; 1974b:8.
q V 1974a:79; 1974b:8; 1974c:345.
r L 1973c:60.
s L 1971b:25.
t V 1974a:79; 1974b:8.
u L 1973c:47,64; 1977c:282.
v L 1971b:25; 1973c:47,64.
w L 1973c:passim; 1976b:447; 1978a:17; L&R 1975:149.
x L 1971b:25-6; 1973c:passim; 1976b:447; 1978a:18.
y L 1978a:46.
z L 1971b:25-6; 1973c:passim.
aa L 1973c:passim.
bb L 1973a:86; 1973c:passim; 1976b:447.
cc L 1973c:passim.
dd L 1973c:59-60.
ee L 1973c:61.
ff L 1973c:61-62.
gg L 1973c:62.
hh L 1973c:62.
ii L 1970b:300f.; 1971a:23; 1972c:983; 1972e:241; 1973a:84.
jj L 1978a:23; 1978b:217.
kk L 1978b:195.
ll L 1977a:522-3; 1978a:22.
mm L 1973c:64; 1978a:23.
nn L 1978a:22.
oo L 1976c:175; 1978c:417-8.
pp L 1978b:221.
qq L 1978a:11,23.
rr L 1972f:272.
ss L 1971b:26.
tt L 1973c:56.
uu L 1973a:passim; 1973c:58.
vv L 1973a:84,176.
xx L 1974a:199; 1975a:56.
yy L 1974a:20.

38. Cf. Auer and Kuhn (1977:12).

39. Cf. Lehmann (1976c:173):'For diachronic syntactic study then we identify a hierarchy of syntactic characteristics according to retention. Among the most conservative patterns are adpositions, numerals in the teens, and comparison. Archaic constructions are also found in pronominal patterns and in derivational formations.'

40. See Lehmann (1974a:180; 1977a:520; 1978b:198-9) and Lehmann and Ratanajoti (1975:150).

41. Cf. Lehmann (1972c:985; 1972e:243).

42. Cf. Lehmann (1973c:49).

43. Cf. Lehmann (1971a:20,23; 1972c:989; 1973b:201; 1973c:56; 1975b: 155).

44. Cf. Lehmann (1972c:989; 1974a:22).

45. Cf. Lehmann (1970a:passim).

46. Cf. Lehmann (1974a:22-3).

47. Cf. Lehmann and Ratanajoti (1975:158-9): 'We may suggest that in the change of an OV to a VO language the verbal modifiers and complements are first affected, as seems true in the Indo-European dialects.'

2.0. A CRITICAL ANALYSIS OF WORD ORDER TYPOLOGY

The purpose of this chapter is to analyze a few central aspects of the typological theory developed by Lehmann. My comments, however, will apply not only to Lehmann's theory but also to the majority of other typological theories based on word order. For the most part I will concentrate on my own thoughts rather than spending a lot of time merely summarizing the numerous works of others concerning these topics. Although I will strive after a constructive criticism of the theory and even propose a few ways of expanding upon the theory, e.g. with respect to marking/function of word order, there will be a number of components which will be shown to be in need of a reanalysis, perhaps even withdrawn from the theory.

2.1. *Word order as a typological criterion*

In §1.6.1. above we have seen that word order is regarded as the most important process of language by Lehmann. Consequently, in his book *Proto-Indo-European Syntax* (1974a) and elsewhere word order plays the central rôle - a position that has been recently criticized:

> Syntax is now viewed as coterminous with word order, and word order is reduced to the implicational consistency of the relative ordering of dyads (Watkins 1976:305).

Although I would not go so far as to say that word order is the most important process of language, I do think that Lehmann's emphasis on word order is warranted especially in light of the fact that it has not been extensively dealt with in the handbooks and recent theories have opened up new avenues of research. I think that it is only reasonable to emphasize any new and previously neglected aspect of grammar even

to the extent of overemphasis; we must therefore view Lehmann's position in the proper prespective: he is one of the very first Indo-europeanists to investigate word order and related patterns in the Indo-European languages and attempt to reconstruct these for Proto-Indo-European. He also repeatedly refers to the four processes of language recognized by Bloomfield, i.e. *order, selection, modulation* and *modification*, all of which are interrelated:

> A sentence in PIE is generated by selection of word classes and inflected subsets of these arranged in various patterns, which are subject to sandhi changes and delimited by specific patterns of intonation (Lehmann 1974a:25).

It is now clear that Lehmann recognizes processes of language other than word order, but he has chosen to concentrate on this one process.

2.1.1. *Word order as a process of language*

Let us now take a look at these processes of language. Sapir, in his discussion of typology,[1] mentions various kinds of difficulties with earlier typologies, the first of which is the point of view:

> When it comes to the actual task of classification, we find that we have no easy road to travel. Various classifications have been suggested, and they all contain elements of value. Yet none proves satisfactory. They do not so much enfold the known languages in their embrace as force them down into narrow, straight-backed seats. The difficulties have been of various kinds. First and foremost, it has been difficult to choose a point of view. On what basis shall we classify? A language shows us so many facets that we may well be puzzeled. And is one point of view sufficient? (Sapir 1921:122).

In this connection he adds:

> More justifiable would be a classification according to the formal processes most typically developed in the language (*loc.cit.*126).

These formal processes recognized by Sapir are (a) *word order*, (b) *composition*, (c) *affixation*, including the use of prefixes, suffixes and infixes, (d) *internal modification* and (f) *accentual differences*.[2] Although his proposed typology is not based on word order it would be

justifiable - according to him - to base a typology on word order.

A number of other scholars have also mentioned various processes of language, among them:

> (i) Paul Zum sprachlichen Ausdruck der Verbindung von Vorstellungen gibt es folgende Mittel: 1. die Nebeneinanderstellung der den Vorstellungen entsprechenden Wörter an sich; 2. die Reihenfolge dieser Wörter; 3. die Abstufung zwischen denselben in Bezug auf die Energie der Hervorbringung, die stärkere oder schwächere Betonung ...; 4. die Modulation der Tonhöhe ...; 5. das Tempo, welches mit der Energie und der Tonhöhe in engem Zusammenhange zu stehen pflegt; 6. Verbindungswörter wie Präpositionen, Konjunktionen, Hilfszeitwörter; 7. die flexivische Abwandlung der Wörter ... Aber auch 2-5 bestimmen sich nicht bloss unmittelbar sondern sind einer traditionellen Ausbildung fähig (Paul ^{5}1920:123-124).
>
> (ii) Bloomfield The meaningful arrangements of forms in a language constitute its *grammar*. In general, there seem to be four ways of arranging linguistic forms. (1) *Order* ... (2) *Modulation* ... (3) *Phonetic modification* ... [and] (4) *Selection* (Bloomfield 1933:163ff.).
>
> (iii) Jespersen Our task is ended. We have tried to give an idea of the grammatical structure of the English language as it is spoken and written in the beginning of the twentieth century, with occasional glimpses of earlier stages. But it will be well here to retrace our steps and to give a short synopsis of the various means used in English for grammatical purposes. < (i) unchanged word, (ii) stress and tone, (iii) modifications of words other than those caused by stress, (iv) endings, (v) separate roots, (vi) grammatical ('empty') words, (vii) word order > (Jespersen 1933:374ff.).
>
> (iv) Fillmore This section will deal with some of the ways in which deep structures of the type proposed in this essay are converted into surface representation of sentences. The various mechanisms involve selection of overt case forms (by suppletion, affixation, addition of prepositions or postpositions), 'registration' of particular elements in the verb, subjectivalization, objectivalization, sequential ordering, and nominalizations (Fillmore 1968:32).

We notice now that word order is generally accepted as a process of language, but by no one of these authors is there a hierarchy set up among the different processes. And I think that they would all agree that the different processes are all essential aspects of the grammar.

Turning now for a moment to the process of intonation, a recent study by Seiler (1962) has pointed out some interesting connections with word order.[3] In taking German sentences Seiler has changed the word order to produce acceptable sentences and investigated the intonational patterns of these sentences. His results were (a) a change in word order is always accompanied by a change in intonation, and (b) with the same word order a variation in the intonational pattern was also possible, but this resulted in a different construction. This shows then that intonation is just as important a process as word order, if not more important.

2.1.2. *The geographical patterning of word order phenomena*

In the preceding sections as well as in the literature on the whole, word order has been viewed as a parameter of structural typology: word order is used as a criterion of language classification according to the structural typological method and not according to the genetic nor the areal method - see §1.1. above. What I would now like to discuss is the possibility of using word order as a parameter of the areal method. Recalling what has been said in §1.1. above, we should keep in mind the fact that language classes determined by the structural typological method are geographically discontinuous, whereas the classes determined by the areal typological method are necessarily geographically continuous. In the recent studies by Bechert (1974),[4] Masica (1974, 1976) and Heine (1975) it has been pointed out that word order defines geographical boundaries: "It is surface order which patterns areally" (Masica 1974:155). Before I enter into this discussion, I would like to mention some criticism made by an anonymous reviewer of a previous draft of the present book:

> Weniger wichtig, aber störend, ist die wiederholt gestellte Frage, ob bestimmte Merkmale "rein typologische" seien. ... Es handelt sich dabei um solche Merkmale, deren Verwendbarkeit für Zwecke der arealen Sprachgruppierung sich aufdrängt. Nur: typologische und areale Sprachgruppierungen beruhen *beide* auf strukturellen Merkmalen (+ evt. lexikalischen). Das Vorkommen oder Fehlen der Kategorie "Artikel" kann für typologische ebenso wie für areale Zwecke von Bedeutung sein. Kurz: ein Scheingefecht.

Let us now turn to the facts. Bechert points out that if one transfers the data given in Greenberg's APPENDIX II (Greenberg (1966:108-109) onto a map of Europe and Northern Asia, one finds a relatively full representation of the languages in this area - i.e. the *europäische Sprachbund*. The two extreme geographical areas reveal Greenberg's types 1 (VSO/Pr/NG/NA) and 23 (SOV/Po/GN/AN), with intermediate areas revealing intermediate types:

1:	VSO/Pr/NG/NA	Celtic languages
9:	SVO/Pr/NG/NA	Romance languages, Albanian
10:	SVO/Pr/NG/AN	Icelandic, Dutch, German, Slavonic, Modern Greek[5]
11:	SVO/Pr/GN/AN	Norwegian, Swedish, Danish
15:	SVO/Po/GN/AN	Finnish, Estonian
23:	SOV/Po/GN/AN	Finno-Ugric except Finnish group, Altaic, Yukaghir, Paleo-Siberian, Korean, Ainu, Japanese.

The important consequence that Bechert draws from this is the fact that these languages (with the exception of a few "Verwerfungen") build a continuous chain from west to east in which the specific types differ from their neighboring types in only one parameter. The explanation for this geographical distribution of word order types is to be found in the history of "Sprachbünden".[6] Masica, in his two studies on South Asian languages, gives excellent maps[7] from which the different geographical boundaries defined by the various word order patterns can be seen. Heine as well gives data from the African languages supporting this view.

I now argue that *any one* word order parameter, i.e. pre- vs post-position, AN vs NA, etc., can be viewed as a *structural feature* of language. These and other structural features can be used to classify languages: genetic, areal as well as structural typological classifications are *all* based upon these structural features. We cannot, however, say *a priori* that a given feature can be used for only one method of classification and not another or even all three: *any one single* parameter can be used as a distinctive feature of a language class based upon any

of these methods. But I must now emphasize that this is not the point that I am trying to make here.

My view is that the language specific patterning of *all relevant* word order parameters determines geographical boundaries, and hence the groups of languages based upon these structural features are to be regarded as *areal classes*. Furthermore, this line of thought is not merely a "Scheingefecht", but on the contrary, this will have repercussions for our theory of word order: if, indeed, word order patterning is to be viewed as structural typological in nature, we would expect to find *a hierarchy* of word order features independent of any specific language. This has not been found,[8] and it is unlikely that *one universal hierarchy* will be found. If, on the other hand, we view word order patterning as an areal criterion, then an investigation of a hierarchy will be superfluous: actually we will not even need to "explain" why certain patterns should occur with others because they are arbitrarily based. When viewed in this manner, the specific word order patterns cease to be primary constituents of language, and can now be regarded as variables which are readily changeable or borrowed. This way of looking at word order patterns accounts for the facts in a much more rational way than the current theories; it also points out certain important generalizations which would otherwise be overlooked. This will, however, render much of the current investigations into the implicational universals based on word order as irrelevant - this topic will be followed up in the next section.

Let me close this section by pointing out an interesting passage in Mallinson and Blake (1981:444):

> With language it is common to find that languages grow to become similar to their neighbours. As a result it is difficult to arrive at a hierarchical typology with a neat set of implicational rules. By and large, patterns or arrangements can change over time or be borrowed independently of one another. However, if the patterns are independently borrowable, which implies they are arbitrarily based, they are good candidates for typological classification even if it is difficult to establish clearly defined types. Any instability in patterns makes them a poor indicator of genetic relationship and a sensitive indicator of the pressures exerted on language.

Although I agree with their premise, I do believe that they have drawn the wrong conclusion: the word order patterns are good candidates *not* for structural typological classification, but rather for areal classification. Perhaps the central point here lies in the fact that the patterns are *independently borrowable*.

2.1.3. *Explanation of the type and exceptions to the type*

My aim here is not to enter into a discussion of "explanation in linguistics" in general, but merely to point out some problems connected with the explanation of the *type* and the *exceptions* to the type; we recall the fact that Lehmann refers to his theory as an *explanatory syntax*. Starting with explaining the type, Mallinson and Blake (1981:393f.) note three different ways in which this is carried out. The first method establishes a general principle for the ordering of modifiers and modifieds; in this connection we immediately think of Lehmann's *principle of placement for modifiers* and Vennemann's *principle of natural serialization*. Mallinson and Blake regard this method as being descriptive, but not explanatory. In the same vein Givón (1979:14f.) refers to this method as "nomenclature as explanation":

> One prevalent practice popularized by ... [linguists] is that of "explaining" via nomenclature. It involves the pointing out that some phenomenon in language is "really XYZ" and therefore its behavior can be understood because "that's the way all XYZs behave." There are two separate facets to this practice. First, if "XYZ" is a *class* of phenomena, then indeed what is involved here is the process of *generalization*, which is quite a respectable methodological preliminary in any investigation ... But by virtue of pointing out that the phenomenon under study is really an *instance* of the larger class "XYZ" one has not explained the behavior of the phenomenon, but only *related* it to the behavior of other members of the class. Now, if this is followed by explanation of the behavior of the entire class "XYZ", then indeed a reasonable methodological progression has been followed. Quite often, however, ... [linguists] "explained" the behavior of "XYZ"--either the individual or the class--by positing an *abstract principle* which may be translated as "all XYZs behave in a certain way." The tautological nature of such a procedure is transparent.

We see then that the basic problem here lies in the fact that one person's explanation is merely a description for another.

The second method referred to by Mallinson and Blake establishes some recurrent diachronic development. The examples given by them show that the explanation of the existence of prepositions or postpositions in a given language is to be explained by the diachronic development of these elements. But again they remark that "the second is essentially descriptive and promises to explain the word order type as an accident of diachronic developments, themselves in need of explanation" (*loc. cit.* 393). The third method combines diachronic developments with difficulties in processing:

> Our own feeling is that the word order type is the reflection of recurrent diachronic developments and some pressures resulting from potential processing difficulties. The alternative is to see the modifier-modified principle as exerting a kind of analogical pressure. We are suspicious of this because the items that would play a part in the proposed analogy are not all alike in an obvious way. It is not obvious, for instance, that S is a modifier of V as A is a modifier of N. (*loc. cit.* 394).

To sum up, the "explanations" usually given for the *type* are for the most part merely descriptions of the generalized facts. This, I believe, is a fundamental problem with approaching word order phenomena by a purely structural typological means; the areal approach - as pointed out in the last section - would certainly not entail this problem.

The main objective in typological studies has been to set up generalizations which correspond to the data found in a number of different languages. In the case of word order typology, the majority of effort has been directed towards establishing certain *implicational universals*: although this had been started long before Greenberg - see e.g. §1.3. above -, it reached its culmination in his work. One of the important innovations made by Lehmann and others on Greenberg's original theory was to interrelate the majority of word order patterns and to impose a hierarchy upon them. From the very beginning exceptions were found - not only by Lehmann and Greenberg, but already as far back as Schmidt. The problem to be tackled now then is to "explain" these exceptions. There seem to be basically two different approaches to this problem, one proposed by Lehmann and another by Hawkins.

In order to account for the patterns attested in the various languages Lehmann recognizes two areas for exceptions: exceptions can occur (i) in marked patterns, and/or (ii) in languages undergoing typological change. Now for some scholars this argument may seem *circular*: a pattern is an exception because it is marked, and it is marked because it is an exception, etc. The theory developed is thus immune to exceptions and is therefore irrefutable. My personal view on this matter is that a valid theory should indeed be refutable in theory, for only in this case can we really determine whether it is correct or not; theories which are from their very inception irrefutable cannot be tested and therefore cannot be shown to be correct or not. In the remaining part of this book I will give Lehmann and the others the benefit of the doubt and assume that certain aspects can be refuted: specifically, if we can define *marking* and *language change* in such a way that we can refute at least these parts independently of the rest of the theory, we will improve upon the theory considerably without dispensing with it entirely. This means then that if we want to preserve the theory, we must specify in greater detail and in a non-circular manner what is meant by typological change and marking. An attempt at this is made further on below.

The second way of explaining the exceptions to the implicational universals proposed by Greenberg is to refine the original universals by developing new universals which do not have any exceptions. This is the course taken by Hawkins (1979, 1980, 1982). We note that Greenberg was well aware of the fact that the majority of his implicational universals were not exceptionless; this can be seen by his use of *with overwhelmingly greater than chance frequency.* Hawkins now tries to refine these universals in such a way that there are no longer exceptions. For example, of the SOV languages some exhibit AN while others show NA, just as the various languages with AN show either GN or NG. There are, however, no SOV languages with AN which show at the same time NG. This fact leads him to the following exceptionless implicational universal:

> (I) If a language has SOV word order, and if the adjective precedes the noun, then the genitive precedes the noun, i.e. SOV ⊃ (AN ⊃ GN) (Hawkins 1980:201).

As I see it, there is one problem with this last course. These refined universals do not "explain" the facts any more than Greenberg did, but merely describe the facts available at the present in a more complicated way. They will need readjusting as soon as further exceptions are found. It is important to note here that of the 8,000 or so living languages of the world and the countless languages of the past and future, only a mere handfull of languages (100 to 200) have actually been investigated. In chapter four below I will even point out some shortcomings with the investigation of these few languages. In short, we cannot regard these refined implicational universals with any certainty as beeing absolute; there is nothing more offered than a coherent description of the facts. I might add here that this process of generalization is quite a respectable methodological *preliminary* in our investigation (cf. Givón *loc. cit.*), but it should not be considered as the final resting-place: the *motivation* for these still needs to be found.

2.1.4. *The function of word order*

The majority of work done on word order typology is done with only one of the original two aims (see §1.1. above) in view, i.e. the classification of languages. Almost totally neglected, but I believe much more rewarding, is the investigation and determination of certain typical mechanisms of language. It is in this area where explanations will be found and not, as we saw in the last section, in the mere classification of languages with respect to word order phenomena. It has, for example, already been pointed out by Sapir (1921:62) that

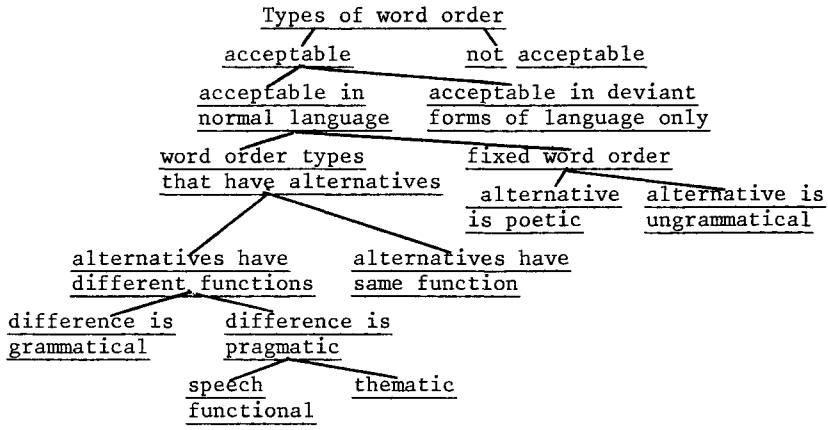
> it is important to bear in mind that a linguistic phenomena cannot be looked upon as illustrating a definite 'process' unless it has an inherent functional value.

Although I will reserve my own ideas on the function of word order until §2.4.ff. below, I would like to point out two very promissing avenues of approaching this.

The first approach is typical of the work done on language universals at the university of Cologne under the direction of Seiler. The following passage from Christian Lehmann (1973:28f.) sums this up in a very convincing way:

> Um zu Hypothesen über das Funktionieren menschlicher Sprachen zu gelangen, genügt es nicht, möglichst viele Sprachen durchzusehen in Bezug auf die Frage: gibt es dort das Phänomen P oder nicht? Entscheidend ist vielmehr die Frage: welche Rolle spielt P in einer Sprache, welche Stellung hat es in ihrem System? <Solche Fragen stellt Ultan typischerweise dann, wenn es gilt, Ausnahmen zu erklären ...; aber das setzt natürlich voraus, daß man die Regelmäßigkeiten bereits erklärt hat.> Nur wenn man solchen Problemen nachgeht, hat man Aussicht, die universalen Implikationen zu erklären. Wir müssen daher die genannten Phänomene unter folgenden Gesichtspunkten betrachten:
>
> Eine Wortstellung kann in einem gegebenen semantisch-syntaktischen Rahmen
> (14) das einzige zur Verfügung stehende Ausdrucksmittel sein oder neben anderen (segmentalen oder suprasegmentalen) zur Auswahl stehen,
> (15) selbständig sein oder in Konkomitanz mit anderen Mitteln vorkommen,
> (16) gewöhnlich (unmarkiert) oder ausgezeichnet (markiert) sein,
> (17) bedeutungsunterscheidend (distinktiv) oder bedeutungslos (redundant) sein,
> (18) optional oder obligatorisch sein.

Another very useful approach is outlined by Hakulinen (1976:70,142):[9]



2.1.5. *Conclusions*

To sum up the discussion so far, we can first point out the fact that word order has been regarded as one important process of language (along with others) as far back as Paul if not further. It has, however, only recently been investigated in great detail, much of which was carried out by Lehmann. Although word order is not the most important process of language, Lehmann's emphasis on this process is warranted and should, therefore, be viewed in the proper perspective. Furthermore, as Lehmann's theory now stands, it may entail a circularity in its argumentation. This, I have proposed, can be remedied by a comprehensive investigation and consequent noncircular definition of marking and typological change which can then be tested independently of the type. And finally, we find no conclusive explanation of the type; we might mention, however, that this was not Greenberg's original task to explain the correlations found,[10] but it was his task to state the generalizations that he drew from the data. This is quite a respectable methodological preliminary in the investigation of word order, but nonetheless it remains only the preliminary step. I do believe that it is now our task to attempt to find explanations for these correlations. My proposal here has been two-fold: first, many of the problems could be eliminated if we were to view the patterning of all relevant word order characteristics as an areal criterion; and secondly, true explanations of the individual word order characteristics are to be found in their function.

2.2. *Typological characteristics*

In §1.6.3. above I have attempted to give a list of all characteristics attributed to the two language types OV and VO. The purpose of this section is to show that through the examination of a few specific characteristics a reanalysis of all of these characteristics is now warranted. I do not, however, propose that all of these are to be rejected - most are surely able to withstand a reanalysis. But if one or more characteristics are found not to be directly connected with or derivable from the order of verb and object, then they should not be

used in subsequent studies as proof of one type or another or of the change from one to the other type of language. Before starting, let me emphasize one important aspect of my argumentation. Counterexamples cannot invalidate the theory; but my approach is not to simply give counterexamples. What I attempt to do here is to determine what the ultimate *motivation* is for these characteristics. If we find that the motivation for characteristic X is not directly dependent upon the order of verb and object, then this can indeed invalidate the theory, and it is not to be regarded as simply stating counterexamples.

2.2.1. *Negative and interrogative markers*

According to the theory the negative marker is placed before verbs in VO languages and after verbs in OV languages (see §1.6.3. (w) and (x) above). The evidence from the early Indo-European dialects, for example, suggests preverbal position for negative markers in PIE,[11] i.e. VO patterning. But PIE has been reconstructed as an OV language.[12] How is the placement of negative markers to be explained then? To answer this question we will have to take a closer look at negative markers in general. If we examine the specific markers for negation in different languages we find that some markers are *affixes* as in Japanese and Hebrew,[13] others are *auxiliaries* as in Finnish,[14] and still others are *adverbs* as in PIE.[15] In fact we even find negation expressed in a single language by means of a number of morpho-syntactic elements, e.g. in German we find (a) the prefix *un-* (*un-möglich* "im-possible"), (b) the adverb *nicht* ("no", "not"), (c) the adjective *keiner* ("no one", "none"), (d) the interjection *nein* ("no!"), etc. We see then that what has been done by the generalization resulting in this typological characteristic - and we may add a number of others - is the subsumation of a number of morpho-syntactic elements under one semantic category. Now in this particular case the generalization is not warranted. Although affixes, auxiliaries and some other elements, when used to express negation, do exhibit the order proposed by the 'placement principle', the adverb (and other elements) is not governed by this specific characteristic, but by an-

other, i.e. §1.6.3.(d) above, cf.:

> If in a language with dominant SOV order, there is no alternative basic order, or only OSV as the alternative, then all adverbial modifiers of the verb likewise precede the verb (Greenberg 1966: 80).[16]

According to this last principle, adverbs are placed preverbally in OV languages and postverbally in VO languages. This contradicts the patterning proposed by the *negation characteristic*.

I would now like to propose two different solutions to this problem. The first, in effect, modifies but still preserves the theory; it may suffice for the classification of languages along the current lines. Here the *negation characteristic* would be eliminated from the list of typological characteristics; the order of *negation* would merely follow from the other characteristics involving the specific morpho-syntactic element in question, i.e. adverb (cf. §1.6.3.(d)), affix (ii), auxiliary (r), adjective (m), etc. My ultimate proposal here is to replace some (if not all) typological characteristics involving a semantic category (e.g. negation, interrogative, reflexive, causative, etc.) by characteristics involving the corresponding morpho-syntactic means of expressing these semantic categories (e.g. adverb, auxiliary, pronoun, affix, etc.). If this is not done, we will have not only a number of competing characteristics for one and the same element, but also an arbitrary mixture of syntax and semantics.

My second proposal follows the approach of the Cologne Universals Project (see the passages from Christian Lehmann in §2.1.4. above and Seiler in §3.5. below). I would, accordingly, not ask whether negation is expressed in the language or not (if yes then Neg+Verb in VO and Verb+Neg in OV), but rather, what rôle does negation play in the language, and what position does it occupy in the system. This would then be followed up by erecting an Aristotelian bi-dimensional system in which the semantic category of *negation* would be placed on the 'categorical axis' and the various morpho-syntactic means of expressing this category on the 'categorematic axis'. On this last axis we will find a number of different elements, cf. e.g. Dezsö's remarks on

interrogative sentences in Hungarian:

> Interrogative sentences are characterized by peculiar accentuation rule, apportioning stress to a nominal element, or to an interrogative pronoun, but very often to the verb (Dezsö 1982:130).

We would then analyze the interrelationships and functions of these means. It is on this axis that word order will find its place along with a number of other processes.

2.2.2. *Tense markers*

The problems pointed out in the last section concerning negation are more evident when it comes to the semantic characteristic of *tense markers*. The placement of these markers have already caused trouble which has resulted in the postulation not of the expected order (i.e. verb + modifier/qualifier in OV languages and modifier/qualifier + verb in VO languages) but of the opposite order:

> Tense markers in VO languages are often suffixed to verbs, much as person, gender, and number markers are placed in part after verb roots in Hebrew. ... The post-verbal placement of tense markers is especially prominent in languages which place their subjects before verbs (SVO) rather than after verbs(VSO). E.g., when the IE languages were changing from OV to VO structure, tense came to be marked by suffixes (Lehmann 1973c:59-60).

Since, however, a large number of exceptions have been found, it has consequently been assumed that "expressions for tense follow idiosyncratic patterns" (Lehmann 1974a:17).[17]
Keeping in mind what has been said about negative markers in §2.2.1. above, let us now take a closer look at these markers. To express tense different formal means are employed in the various languages, three of which seem to be the most common:

(i) *Affixation* as in Turkish,[18] Japanese,[19] and PIE[20] - here we must also distinguish between prefixes (e.g. the Sanskrit augment *a-* and reduplication) and suffixes (e.g. the Sanskrit future suffix *-sya-*),

(ii) *Auxiliaries* as in English *will go* and other languages,[21] and

(iii) *Adverbs* as in Old Indic present tense with the adverb *purā́*

to express the past tense.[22]

Accordingly, when the semantic category tense is expressed through an auxiliary or through prefixes in VO languages and suffixes in OV languages, the formal means employed will appear preverbally in VO languages and postverbally in OV languages. If, on the other hand, adverbs are employed for this expression, or even prefixes in OV languages and suffixes in VO languages, then the resulting order will deviate from the order proposed. This means then that unless we can predict *a priori* that a certain formal means will be used to express the semantic category of tense - and I do not think that we can do this - the order of elements here will have to follow from a number of different elements, e.g. adverbs, prefix, suffix, auxiliary, etc. I am, therefore, inclined to subtract this characteristic from the list.

2.2.3. *Adpositions*

One of the most important typological characteristics is that of the existence of either pre- or postpositions; the term *adposition* is employed to cover both of these elements. In the first chapter we have already noticed that this specific characteristic was used by Weil and Schmidt for the classification of languages and by Greenberg as one of the three parameters for his basic order typology. In the generalizations made by Lehmann, Vennemann and others, prepositions correlate with VO (VX)patterning and postpositions with OV (XV) patterning. The motivation for these correlations has been given by Lehmann (1974a:15) as follows:

> For typological purposes ... prepositional/postpositional constructions are to be regarded as verbal. In ... these constructions a constituent governs another constituent in much the same way as a verb governs an object. Accordingly in their underlying pattern of arrangement the ... constructions *verb-object* ... and *preposition (postposition)-object* are identical.

In a recent article (Andersen 1979) I have shown that the existence of pre- or postpositions does not directly correlate with VO and OV patterning respectively. I would now like to reargue this position.

First of all, there are a number of preliminary problems that I

would like to point out before entering into the discussion of the motivation of adpositions. The first problem concerns not only adpositions but also a number of other categories as well: there are a number of cases where it is extremely difficult to determine what an adposition is and specifically to distinguish adpositions from case endings - see Kahr (1975:23ff.) for a relevant discussion. Secondly, there are some languages which do not possess this category:

> Most Australian languages have neither prepositions nor postpositions. Languages like Estonian and the Australian languages can thus be judged irrelevant, rather than counterexamples, to generalizations about prepositional versus postpositional languages (Comrie 1981:85).

Thirdly, there are not only languages with either prepositions or postpositions (or neither), but also languages with adpositions which can be manifested as pre- or postpositions (e.g. Finnish *kohti taivasta* and *taivasta kohti* 'towards the sky') as well as languages with pre- and postpositions used in the same construction (e.g. German *um Ulm herum* 'around Ulm', or *um Himmels willen* 'for heaven's sake'). This then means that *adposition* is not an exhaustive criterion for language classification along current lines, nor that we have here a binary criterion. What we do, in fact, have is a criterion with various possibilities: (a) +Po, (b) +Pr, (c) Po=Pr, (d) Pr+Po, (e) ∅. Some languages may even employ combinations of these possibilities.

Let us now take a closer look at the motivation of adpositions. It is a well known fact that adpositions derive historically from a number of other elements:[23]

(a) *adpositions from nouns* According to Tauli (1958:15f.):

> Most pre- and postpositions are former nouns with a concrete meaning. Postpositions are most often former nouns, to a smaller extent verbal nouns. ... The syntagm noun + postposition was formerly noun (determinant [attribute]) + noun (determinatum). E.g. Finnish *pojan kanssa* 'with the boy', according to P. Ravila, meant formerly '(als) der kamerad des knaben'.

This shows then that one possible origin of adpositions is a head noun in a construction composed of a modifier plus head noun:

poja-n *kansa-ssa*[24] develops into *poja-n* *kanssa*
boy-GEN company-IN boy-GEN with
'in the company of the boy' 'with the boy'.

The nominal origin of these adpositions in Finnish is clearly indicated by the fact that possessive suffixes - which are attached to nouns, e.g. *talo* 'house', *talo-ni* 'house-my' = 'my house' - are also attached to these adpositions: *minu-n kanssa-ni*
I-GEN with-my = 'with me'.

(b) *adpositions from verbs* Kahr (1975:33) points out two different possibilities here:

> There are two basic types of verb-derived adpositions, those which are derived from participles and those which develop directly from serial-verb constructions.

Examples of participles (and verbal adjectives in general) are very common, attested in examples such as the English prepositions *regarding, concerning, following,* etc. The development from verbs in serial-verb constructions can be demonstrated by the following hypothetical construction:

I give John receive book which gets reinterpreted as
I give John to book 'I give to John a book'.

To these two possibilities we can add at least a third: adpositions derived from *gerunds*. Examples of this development are found in Sanskrit:

NP(ACC) + *ādāya* 'having taken X' > 'with X',
NP(ACC) + *uddiśya* 'having shown X' > 'for X',
NP(ACC) + *ārabhya* 'having begun X' > 'since X'.

Notice that this development from verb to adposition represents the general direction, but there are some exceptions to this rule, cf. e.g. English *'to down a beer', 'to up and die',* etc.

(c) *adpositions from adverbs* The last common source of adpositions to be discussed here is an adverb. In Finnish there are a number of adpositions taking NPs in the partitive case which occur either as prepositions or postpositions:

kohti taivasta = taivasta kohti
towards sky(PART) sky towards = 'towards the sky',
päin kiveä = kiveä päin
towards stone(PART) stone towards - 'towards the stone'.

In these examples the adposition (*kohti/päin*) was originally an adverb and the partitive was governed by the verb as a 'partitivus respectus' (cf. Sadeniemi 1943:42; Hakulinen 1979:501,fn. 1056). This same development is taking place in English as can be seen from the following examples:

(i) *to kick the door down* and *to kick down the door,*
(ii) *three times over* and *over three times,*
(iii) *to see through a thing* and *to see a thing through,*
(iv) *His untimely death was a loss to music the world over.*

Now the essential point of my argument is not merely to show that adpositions develop from other elements (cf. Mallinson and Blake 1981: 385), but that the relationship between word order patterning and adpositions is not straightforward.

(d) *case I: modifier plus noun* Given a construction modifier plus noun (realized either as M+N in OV languages or N+M in VO languages) two different developments are possible and attested: (a) the head noun can develop into the adposition resulting in Po in OV languages and Pr in VO languages, or (b) the modifier can develop into the adposition resulting in Pr in OV languages and Po in VO languages. Notice that these are not merely counterexamples to the theory: the word order typology (we assume) correctly predicts the original order of modifier and noun, what it cannot predict is whether or which of the two elements will develop into the adposition.

For examples of this case let us first turn to Old Indic, a language revealing OV patterning. Here we should expect to find only postpositions in accordance to the typological theory; but already Delbrück (1878:47; 1888:470 f.) pointed out a number of 'unechte Praepositionen', i.e. adpositions that appear as prepositions and not, as we should expect, as postpositions. It was the attestation of these prepositions

(along with a few other patterns) which led Lehmann and Ratanajoti (1975) to their conclusion that the later Brāhmaṇic language was changing from OV patterning to VO patterning. In Andersen (1982a), however, it has been shown that there was no shift in the word order patterning in Old Indic. The explanation of these prepositions along with the OV patterning in Old Indic can be found in their origins:

> Die unechten Praepositionen gehen dem Casus vorher. Es kommt dies wohl daher, dass die meisten derselben die Bedeutung des Casus viel stärker und individueller modificieren, als die meisten echten Praepositionen (Delbrück 1888:21).

> In fact, a method had to be evolved for endowing the nouns in a sentence with a substitue for case and this was very soon done by grouping with them substantives which were themselves inflected. From the time of the Ṛgveda, beside *antáḥ* (Av. *antarə*, Lat. *inter*), we find *antarā́*, which is the instrumental of *ántara-* (Av. *antaro*) and has therefore originally the force of 'in the inner part'. But *antarā́* goes with the accusative like *antár* (which also admits the locative) and accordingly cannot be said to govern the substantive (Bloch 1965:158).[25]

We see then that Delbrück's 'unechte Praepositionen' have all generally developed from the pattern *modifier + noun* which follows from the theory for OV languages. It is, however, not the head noun that develops into the adposition, but on the contrary, it is the modifier which does so. As Bloch and Delbrück pointed out, these prepositions did not originally govern the noun, but were used to modify the noun (or case). Notice that these prepositions are employed in conjunction with NPs in the accusative, ablative, locative and instrumental case, *but not* with NPs in the genitive case. This clearly shows that these prepositions have developed from modifying elements in an OV language which, according to the theory, are preposed.

Another example of this development is found in Finnish which originally had OV patterning throughout, but recently borrowed the surface order SVO while still preserving the older OV patterning elsewhere. In addition to numerous postpositions taking NPs in the genitive case, cf.:

X(GEN) *lähellä* 'near X', from *lähi* 'neighboring',

X(GEN) *vieressä* 'beside X', from *vieri* 'side',

X(GEN) *kanssa* 'with X', from *kansa* 'people' (originally 'company'), and numerous other adpositions, which can be employed as either pre- or postpositions (see case II below), there are a few adpositions taking NPs in the partitive case which are employed as prepositions:

ilman X(PART) 'without X', from *ilma* 'air',[26]

kohden X(PART) 'in the direction of X', from *kohta* 'point',[27]

ennen X(PART) 'before X', from *ensi* 'first'.[28]

These prepositions originally merely modified the NP in the partitive case and hence are preposed in accordance with OV patterning. The underlying development can be seen in the following pairs of examples:

soda-n keske-llä = *keske-llä sota-a*
war-GEN middle-IN middle-IN war-PART
'in the middle of the war',

vuode-n alu-ssa = *alu-ssa vuot-ta*
year-GEN beginning-IN beginning-IN year-PART
"in/at the beginning of the year'.[29]

In both expressions we originally have the word order *modifier + modified*: in the first examples the modified noun has developed into a postposition (*keskellä/alussa*) taking a NP in the genitive (*sodan/vuoden*); in the second examples it is the modifying noun originally modifying a NP in the partitive case (*sotaa/vuotta*) which develops into a preposition. This shows then that in a consistent OV language which preposes nominal modifying elements, not only postpositions but also prepositions can develop. The starting point or motivation in each case is, however, the same: *modifying + modified.*

(e) *case II: pre- and postpositions from adverbs* As we have already seen in (c) above, adverbs are a common source for adpositions. We also have seen that adverbs are not governed by the same principle which governs the pre- or postposition of modifying nominal elements. They are very often free to be placed in various positions within the sentence (with consequent shifts in meaning or emphasis): according to the theory they can be placed anywhere before verbs in

OV languages and after verbs in VO languages. My claim now is that within a consistent OV or VO language which has this freedom in the placement of adverbs, both pre- and postpositions can develop. As a first example of this let us take a look at a number of adpositions in Old Indic which have derived from PIE adverbs or preverbs (P). These comprise the oldest layer of adpositions in Old Indic: *ánu, antár, abhí, úpa, pári,* etc. Let us now recall the fact that in PIE there was a tendency to place these adverbs or preverbs at the beginning of main clauses and the verb (V) at the end (*tmesis*):

(i) #P...V#,

whereas the proclitic variant tended to be used in subordinate clauses:

(ii) #...PV́#.[30]

I assume that the preverb was originally governed by the verb because its position in the sentence is dependent upon the verb: if the verb is accented (in subordinate clauses), then the preverb is proclitic, otherwise it is in initial position. Originally then, the preverb/adverb modified the verb in PIE, and when an object was used in conjunction with a verb together with its preverb it was governed by both:

(iii) O+(P+V): RV 3,39,5 - *gā́ anugmán* "They followed the cows"

Subsequently, the preverb/adverb - especially when separated from the verb - could have been felt to belong closer to the object (O) than to the verb:

> Was die Verbindung mit Casus angeht, so lässt sich aus dem Sanskrit besonders gut nachweisen, dass der Casus ursprünglich zu der mit der Praeposition innerlich verbundenen Verbalform trat, und dass erst allmählich sich ein engeres Verhältnis zwischen Casus und Praeposition entwickelte (Delbrück 1888:432).

Hence these adverbs/preverbs develop into adpositions:

(iv) (P+O)+V: RV 1,113,13 - *ánu dyū́n* "every day",

(v) (O+P)+V: RV 3,35,8 - *pathyā́ ánu* "along the roads".[31]

The construction in (iv) originated in #PO...V# and the one in (v) in #...OPV́#. Thus we find both prepositions and postpositions in the Rigveda - an OV language - not motivated directly by the "placement principle". Notice, however, that the later preferred order N+Po takes

time to establish.[32] The recent studies by Masica (1974, 1976) on the areal patterning of word order phenomena in South Asia suggest that the determining factor for the subsequent choice of postpositions over prepositions may very well be due to influence from neighboring languages which have postpositions, thus supporting my claim that the word order patterns should be regarded as areal criteria in language classification. This development of adverbs (preverbs) in the IE dialects is summarized by Szemerényi (1968:24) as follows:

> Thus the so-called *prepositions* were at first, and partly even in historical times, independent adverbs. The IE noun, with its clear morphology, was quite capable of expressing the various relations intended by the speaker. At the most, an adverb could be added to define the meaning of the case-form more specifically. The accusative, e.g., could originally be used to denote the goal, a use that in Latin survives with names of cities and small islands (*Romam*, *Cyprum*) and with a few nouns (*domum*, *rus*). But the meaning could be specified: *in urbem* 'in the city -- into (it)', *ad urbem* 'to the city -- towards (it)', etc. Sooner or later, however, the adverb became an integral part of the expression, the position of the adverb became fixed -- usually before the noun, hence the name preposition -- and the meaning of the case form became weakened: in the new synchronous state this meant that a preposition required a certain case-form of the noun, the preposition governed the case.

Further examples of this development can be found in Finnish. Here we find a number of adpositions occurring as either pre- or postpositions which have developed from adverbs, cf. not only the examples given in (c) above with *kohti* and *päin* but also:

yli tie-n = *tie-n yli*
over road-ACC road-ACC over 'over the road',
läpi piha-n = *piha-n läpi*
through yard-ACC yard-ACC through 'through the yard'
(cf. Hakulinen 1979:501, fn. 1056).

Again we find pre- and postpositions derived from adverbs which were free to be placed in various positions within the sentence - i.e. before or after nouns occurring preverbally in OV languages and postverbally in VO languages - in consistent languages.

Notice now that varying positions of adverbs quite often correlate

with different meanings or shifts in emphasis and hence the difference in meaning in the following pairs of examples:

English: *to see a thing through* - *to see through a thing.*

Old Indic: *ā samudrāt* 'bis zum Meer hin' - *samudrād ā* 'vom Meere her' (Delbrück 1888:452).

Old Indic: *váram ā* 'nach Belieben' - *ā váram* 'besser als' (Grassmann 1873:1217-1218).

To sum up, we can now draw the following conclusions. Concerning the typological characteristics, one should differentiate between *primary constituents* (such as nouns, adjectives, genitives, adverbs, etc.) and *secondary constituents* (such as adpositions) which develop diachronically and syntactically from the primary constituents. Now the theory may correctly predict the word order in primary constituents, but it cannot predict whether secondary constituents will develop nor the resulting word order if they do develop: the motivation for the word order in the secondary constituents is to be found in the order of primary constituents from which they originate. Therefore, since it has been shown that the "placement principle" itself is responsible for both pre- and postpositions in some consitent languages, I am inclinded to subtract *adpositions* from the list of characteristic elements of typological systems. Adpositions can then be used in support of one or another typological patterning only if the original construction from which they developed has been determined.

Before going onto our next characteristic I would like to point out one severe problem with the reconstruction of adpositions in PIE. Recently Friedrich (1976:469) has reconstructed prepositions for PIE with the following argument:

> This leaves us with a long-term drift from a *frequency* rule for postposing in Vedic, to a *higher* frequency in Classical Sanskrit (but not an obligatory rule at all), to the strong (albeit *not* rigid) postposing of the Modern Indic languages. The long-term diachrony points toward a greater degree of *preposing* as we go back toward PIE.

The fundamental flaw in Friedrich's argumentation should now be quite evident: if we go back in time we do not - as Friedrich believes -

reach a state where *only* prepositions are to be found - thus giving evidence of VO patterning -, but on the contrary, we will reach a state where an equilibrium between pre- and postpositions is to be found, or specifically a state where PIE adverbs are relatively free to be moved around within the sentence. It has been these PIE adverbs which developed into the oldest layer of adpositions in the older IE dialects.

2.2.4. *Assimilation*

It has been stated that if assimilation occurs in VO languages it will be anticipatory (or regressive) - i.e. AB assimilates to BB - and in OV languages it will be progressive - i.e. AB assimilates to AA. In Pāli, a Middle Indic language with OV patterning, we find both kinds of assimilation:

(a) *anticipatory assimilation*
  (i) *attha-* ("interest") from Old Indic *artha-*,
  (ii) *kakka-* ("a precious stone") from Old Indic *karka-*,
  (iii) *phassa-* ("touch") from Old Indic *sparśa-*,
  (iv) *ayya-* ("venerable") from Old Indic *ārya-*, etc.

(b) *progressive assimilation*
  (i) *takka-* ("whey") from Old Indic *takra-*,
  (ii) *missa-* ("mixed") from Old Indic *miśra-*,
  (iii) *assa-* ("horse") from Old Indic *aśva-*,
  (iv) *tassa* ("his") from Old Indic *tasya*, etc.

Since Pāli is an SOV language we should expect only progressive assimilation but not both progressive and anticipatory assimilation. The exceptions cannot be explained as due to a typological change - the Indic languages have been consistent SOV languages since the earliest Old Indic texts and continue to be up to the present.[33] And these exceptions cannot be readily explained as being marked. What is then the answer to this problem?

Recent studies in *Natural Phonology* have shown that the sounds of a language can be arranged hierarchically according to the degree of sonority. It has also been shown that assimilation of consonants

from different hierarchical levels progresses along the hierarchical axis. For Pāli the following hierarchy has been established:

stops > *s* > *nasals* > *l* > *v* > *y* > *r*.[34]

The consonant lower on the hierarchy (toward *r*) assimilates in all features to the consonant higher on the hierarchy (toward *stops*). Now if the consonants are of equal rank in the hierarchy, the assimilation is usually regressive (the first assimilates to the second). Generally it can be assumed that the sonority hierarchy is language specific, but in cases where the consonants are of equal rank the direction of assimilation is usually regressive regardless of the language type. This fact has already been noted by Kent (1936:258):

> An examination of many examples of assimilation and dissimilation of consonants shows that the natural direction of the influence is regressive; I have attributed this to the fact that the thought of the speaker is ahead of his utterance, which tries to overtake the thought, but only at the expense of confusion in the order or the nature of the sounds uttered.

There are, now, some factors which can influence assimilation processes, i.e. the position of stress and morpheme boundary. Notice, for example, that the final consonant of the Pāli verbal prefix *ud-* assimilates to the inital consonant of the verb root: *ud + kaṇṭhati* > *ukkaṇṭhati* "to long for" , *ud + tarati* > *uttarati* "to come out of (water)". The initial consonant of the suffix *-ta-* of the past participle, on the other hand, assimilates in some cases - e.g. *sudh + ta-* > *suddha-* "purified" - in other cases it is the final root consonant which assimilates to it, e.g. *ad + ta-* > *atta-* "assumed". Another problem which is not solved by the theory is reciprocal assimilation, e.g. (Pāli) *labh + ta-* > *laddha-* "attained", *nis + kamati* > *nikkhamati* "to go forth from", etc.

The conclusion to be drawn here is that the direction of assimilation is dependent upon factors other than the word order patterning of the particular language in question. In other words, the typological characteristic of assimilation should be subtracted from the list of typological characteristics.

2.2.5. *Gapping*

For some languages we have no difficulty in determining the word order patterns; for others, however, the mere determination of VO or OV for clauses has proved to be an evergreen problem. A case in point is German with VO in main clauses but OV[35] in subordinate clauses. Recently Ross (1970) proposed a theory which would enable one to determine the underlying word order of languages according to the direction of gapping. When sentences with the same verb (V) are conjoined, all but one of these verbs can be deleted leaving only subjects (S) and objects(O) which are not repetitious. If it is the first verb which is retained the process is termed *forward gapping* (FG), if it is the last verb it is termed *backward gapping* (BG):

SVO + SVO + ... + SVO ⇒ SVO + SO + ... + SO (FG).
SOV + SOV + ... + SOV ⇒ SOV + SO + ... + SO (FG).
SVO + SVO + ... + SVO ⇒ SO + SO + ... + SVO (BG).
SOV + SOV + ... + SOV ⇒ SO + SO + ... + SOV (BG).

EXAMPLES

English: *I ate fish, Bill ate rice, and Harry ate roast beef.*
⇒ *I ate fish, Bill rice, and Harry roast beef.*[36]

Japanese: *Watakusi wa sakana o tabe, Biru wa gohan o tabeta.*
I (Prt) fish (prt) eat, Bill(prt) rice (prt) ate
⇒ *Watakusi wa sakana o, Biru wa gohan o tabeta.*
I (prt) fish (prt),Bill(prt)rice (prt) ate
'I ate fish, and Bill rice' - literally: 'I fish, and Bill rice ate'.[37]

Ross then goes on to investigate the relationship between gapping and word order which led to the following principle to be added to the theory of grammar:

> If a language has SOV order in deep structure, it is a VERB-FINAL LANGUAGE: its grammar can contain no rule which moves verbs to the left, nor any rule of the form ...
> (...A...X
> 1 2 ⇒ 0 2+1) (Ross 1970:258).[38]

Taking a look at German he notes that main (VO) clauses gap forward,

subordinate (OV) clauses gap in both directions. Applying his principle, he concludes that German is an underlying (S)VO language.

In Lehmann's theory this principle of gapping has been generalized to mean that OV languages gap backwards as in the Japanese example above and VO languages forward as in the English example.[39] Subsequently, the language of the Śatapathabrāhmaṇa is shown to be no longer an SOV language like the Rigveda but is on its way to changing from SOV to SVO patterning because it exhibits only forward gapping:

áthaitád barhír anusám asyati parīdhinśca (ŚB 2.6.1.47)
then that straw thereon he-lays paridhis-and
'Then he lays the sacrificial straw thereon and also the paridhis' (Lehmann and Ratanajoti 1975:153).

A closer examination of this language, however, reveals examples of backward gapping:

katham nu tad avīraṃ katham ajanam syād
how now this void of heroes how destitute of men can-be
'How can this [place] be void of heroes, how can this be destitue of men?'(ŚB 11.5.1.4.).

Similar contradictory patterns have led others[40] to a reanalysis of the gapping principle and it was subsequently withdrawn by Ross (1973: 419,fn. 16) himself:

> See Ross (1970) for the argument, which had to do with the directionality of *Gapping*. Since I wrote this paper, a number of excelent studies of gapping have appeared, and several investigators have concluded independently that there are arguments showing that the identification of forward and backward *gapping*, assumed without proof in Ross (ibid.) and central to the conclusions reached there, could not, in fact, be maintained. And all facts derived from the original theory (which was that no OV language can ever become VO) could be accounted for equally plausibly on alternative hypotheses.

Even though the theory has been withdrawn by Ross, it is still used in proving and disproving statements on word order patterning, especially by Friedrich,[41] Lehmann[42] and Heine.[43] Gapping must therefore either be given up as a typological criterion, or studied in greater

detail[44] before it can be properly used in word order typology.

2.2.6. *The penthouse principle*

In the last section we saw that Ross attempted to determine the underlying word order[45] of various languages and especially German by means of the principle of gapping. He was, however, forced to withdraw this theory, but not without proposing a new theory, i.e. the *penthouse principle*:

(1) The Penthouse Principle

More goes on upstairs than downstairs.

When we tear ourselves away, however reluctantly, from this metaphor, and turn to Linguistics, defining upstairs as "within independent clauses", and downstairs as "within subordinate clauses", we can recast (1) slightly more prosaically as

(2) No syntactic process can apply only in subordinate clauses (Ross 1973:397).

The main points of this new theory which will be of importance to us are the following.

(38) Possible surface orderings of constituents

a. Some languages are strict OV [= Object(s) + Verb], or verb-final, languages-e.g., Japanese (almost), Hidatsa (almost). ...
b. Some languages are OV downstairs, but VO [Verb + Object(s)] upstairs-e.g., German.
c. Some languages are VO everywhere-e.g., English (almost).
d. No languages are OV upstairs and VO downstairs.

How can we explain the gap in (38) - the absence of type d languages, which we might term Upside-Down German (UDG)?

The precognitive will already be inkling that it has something to do with the Penthouse Principle. The connection is this: it would appear that VO order must be produced by some process which obeys (2). If this is true, then (39) follows.

(39) The underlying order in German is OV, with the main clause VO order being produced by an upstairs-only verb-fronting rule.

If the underlying order in German were VO, as I concluded the last time I looked at this evergreen question [Ross 1970], then it could easily be changed into the impossible UDG by an upstairs-only rule which made treetop clauses verb-final.

However, if all clauses in German were underlyingly OV, then the observed surface order could be produced by an upstairs-only rule that moved the verb in treetop clauses to second position.

(40) Conclusion: German is underlyingly OV.

If we stay with the problem of making UDG impossible via the Penthouse Principle, then we see that (40) is just a corollary of the more sweeping (41):

(41) Hypothesis: All languages are underlyingly OV (*loc.cit.* 407-408).

Now my aim here is not to disprove the penthouse principle, but rather to take a more critical look at the data used to solve the original problem, i.e. the generally acknowledged fact that German has SVO word order upstairs while SOV downstairs:

There are, however, examples of splits where no such ready solution is forthcoming. A classic example is from German, which has the word order SVO in main clauses but SOV in subordinate clauses:

Der Mann (NOMINATIVE) *sah den Jungen* (ACCUSATIVE)
'The man saw the boy.'

Ich weiß, daß der Mann den Jungen sah.
[I know that the man the boy saw]
'I know that the man saw the boy.' (Comrie 1981:83).

In this last example from Comrie we find the following word order in the subordinate clause:

Subordinate conjunction + SOV.

This is, however, not the end of the story but only the beginning. If a subordinate conjunction, for example, is not present, we will find the word order SVO in these subordinate clauses:

Er sagte, Hans liest das Buch (cf. Cole 1974:10).

'He said, Hans reads the book.'

Very often we will find the verb in the conjunctive in these cases:

Main clause: *Er trinkt Wein.* (SVO)

Sub. clause: *Er sagt, daß er Wein trinkt.* (Conj. + SOV)

Sub. clause: *Er sagt, er trinke Wein.* (SVO)

Furthermore, if the subordinate clause without a subordinate conjunction precedes the main clause, we find the word order VSO (cf. Cole

loc. cit.):

Sind mehrere Objekte in einem Satz vorhanden,
are several objects in a sentence present,
so können sie in verschiedener Reihenfolge stehen.
then can they in various orders stand
'If there are several objects present in a sentence, then they can stand in various orders.'

Trinkt Fritz Wein, so schläft er ein.
drinks Fritz wine, then sleeps he in
'If Fritz drinks wine, then he will fall asleep.'

We will even find VSO word order in contrary-to-fact subordinate clauses:

Er tat so, als hätte er von all dem nichts gewusst.
he did so as had he from all this nothing knew
'He did, as if he knew nothing of all this.'

It should now be clear that, contrary to the opinion of many typologists, German does indeed reveal a number of word order in subordinate clauses:

(i) Subordinate conjunction + SOV,
(ii) SVO, and
(iii) VSO.

In Ross' terminology we should therefore view German as being an *Upside-Down German* language.

Of course the ultimate problem that we are faced with here is whether word order belongs to the *deep structure* or to the *surface structure*. For those who have viewed word order as a deep structure phenomenon, there seem to be two main difficulties. First of all, Givón (1979:42) correctly points out that

> One of the consequences of this abstract approach to "deep universals" which do not manifest in actual attested utterances, has been a rash of papers on the typology of "underlying word-order." In such a vein, Bach (1970) could claim that Amharic--one of the most rigid SOV languages on record--was really, "underlyingly" a VSO language, among other things because of the historically frozen VSO order of the pronominal elements around the verb. Similarly, McCawley (1970) could claim that English--one of the very

> few relatively-rigid SVO languages on record--was really, "underlyingly," a VSO language. Similarly, German was at various times claimed to be "underlyingly" an SOV language, with the SVO--V-second syntax of the main clause transformationally derived, or alternatively a V-second-SVO language underlyingly, with the SOV, historically frozen order in subordinate clauses transformationally derived. In this fashion, syntactic typology, rather than being a matter of fact, became a matter of economy, simplicity, and various ingenious "proofs."

Secondly, if we follow the most current work in *Extended-Standard-Theory* (cf. Chomsky 1982) we find that the difference between "deep structure" and "surface structure" is getting smaller and smaller all the time. These new developments render much of the work on the deep structure word order of the 1970's obsolete. The alternative approach, and I might add the one that I adhere to, is that word order is a surface structure phenomenon.

2.2.7. *Conclusions*

The preceding sections have, I hope, shown that all of the typological characteristics need to be reanalyzed. These characteristics have been, no doubt, valuable for us, but they remain, as I pointed out in §2.1.5. above, only the preliminary step in our investigation. In our further investigation of these characteristics the following points should be kept in mind.

First of all, there should be a distinction made between different *semantic categories* such as negation, interrogation, reflexifization, reciprocity,[46] etc. and the specific *formal means* of expressing these categories such as adverbs, suffixes, auxiliaries, etc. In making this distinction we notice that the 'placement principle' is directly concerned with the formal means and not the semantic categories. Accordingly, the list of typological characteristics should be rewritten to include the formal means but not the semantic categories.

Secondly, a further distinction should be made between *primary* formal means such as genitives, adjectives, adverbs, etc. and *secondary* formal means such as adpositions which evolve from the primary means. Again the 'placement principle' is directly concerned with the primary formal means and only when the primary means from which the

secondary means have developed are known can these secondary means in specific cases be used for typological purposes. I might add, however, that even here we will still have numerous problems to solve regarding these primary formal means. These problems start with such basic terms as *subject*, cf. among others the various papers on this problem in Li (1976) and Mallinson and Blake (1981:121ff.) -- remember that Vennemann and Lehmann (in his earlier works) operate without a subject (cf. §1.6.2. above). Mallinson and Blake (1981:123ff.) have also pointed out some of the problems with the *object*. We even find that some languages, such as Hixkaryana, do not possess the grammatical category *adjective*, cf. §3.3.2. below for a further discussion of this category. Furthermore, should we really regard the following two constructions as representing one formal category, i.e. *genitive*: (a) *the dog's tail*, (b) *the tail of a dog*? Semantically they are comparable, but morpho-syntactically they represent two different construction types. These are just a few of the problems that will be encountered in our further typological research of the typological characteristics.

Thirdly, there are some primary formal means, such as adverbs, which are not governed by the 'placement principle' to the same extent as the other primary means. Specifically in the case of adverbs, they are placed before the verb in OV languages according to the theory, but their exact position in the sentence is not prescribed. In other words, they can occur sentence initially, preverbally or anywhere between. Perhaps we should make a distinction here between the *linear order* of constituents and the *placement* of elements.

Finally, a reanalysis of the characteristics with the addition of more data may show that the proposed order was prematurely arrived at. In such a way the characteristics may either need to be modified or eliminated. In this connection we have discussed *assimilation* and *gapping*. We can also refer to a number of other studies including, among others, Miller (1979) for *teens* (cf. §4.2.2. below), Bennett (1979) for Greenberg's universal 23 concerning *proper* and *common* nouns, Christian Lehmann (1973) for *interrogative sentences*, and

concerning *relative clauses* not only Comrie (1981:131ff.) who shows that there are indeed three basic types of relative constructions with respective orders, but also Christian Lehmann's (1979) outstanding contribution to our understanding of the relative clause. I would also like to mention Christian Lehmann's (1974) work on Greenberg's universal 14 concerning *conditional clauses* and his approach to such universals.

2.3. *Placement of modifiers*

It is generally assumed that there are only two different possibilities for the placement of modifying elements, i.e. either *modifying + modified* or *modified + modifying*. But as far back as the middle of the last century other possibilities have been recognized:

> Every time that several words concur to express an idea we can distinguish, by examining carefully the syntax, four or even five different ways in which words can be arranged (Weil 1978:70).

The first two ways spoken of here are the ascending construction[47] (i.e. *modifying + modified*) and the descending construction[48] (i.e. *modified + modifying*) -- see §1.2.2. above. The other ways distinguished by Weil will be the topic of the following paragraphs.

2.3.1. *Compound*

> We may add as a fifth form the cases where the words which are used to express an idea are joined into a single word. It is true that a compound is not properly speaking a fact of syntax; and yet it is not wholly foreign to our subject, because the same ideas which in one language are expressed by compound words are sometimes rendered in another by groups of words (*loc. cit.*:70).

His example for this type is the following:

> The poet-musician who instructed a Greek chorus for their imposing festivals was called χοροδιδάσκαλος. The idea is expressed in the most perfect unity by a compound and continuous word (*loc. cit.*:71).

For Weil there are basically two different types of compounds:

> one in which the determinative part precedes the part that is determined or limited, (ζωγράφος, *ignivomus*, beau-frère,

> Blumenkrone) and the other in which these relations are reversed (ῥίψασπις, crève-coeur, Taugenichts) (*loc. cit.*:72).

Today we would distinguish between more than just these two types of compounds.[49] But even here the connection of the various types of compounds and their relationship to word order typology has been discussed by Lehmann (1969; 1975b).

2.3.2. *Enclavement*

> When the complement is followed by the word qualified and preceded by a word which is indissolubly bound to it we shall call it the order of *enclavement* or inlocked construction (*loc. cit.*:70).

Weil gives the following example of this construction using the same elements as in his example for compound:

> If we wished to distinguish the two ideas which are fused in the compound word, preserving at the same time the unity of the conception, we should use the form of the enclave. 'It is not necessary that we should put in the same rank him who bears the expense of the representation and him who teaches the chorus.'
> In Greek we should express this about as follows:
> Τόν εἰς τὴν χορηγίαν δαπανῶντα οὐκ εἰς τὴν αὐτὴν τάξιν δεῖ τοῦ χοροῦ διδασκάλωι.
> The complement τοῦ χοροῦ is enclosed between the substantive διδασκάλωι and its article (*loc. cit.*:71).

In other words, in the construction

τῶι	τοῦ	χοροῦ	διδασκάλωι
the	of the	of chorus	teacher
art.	art.	noun	noun
DAT	GEN	GEN	DAT

the modifying element (τοῦ χοροῦ - of the chorus) is placed within the modified element (τῶι διδασκάλωι - to the teacher) which is composed of two members, i.e. the article (τῶι) and the noun (διδασκάλωι). Thus this construction differs from the ascending construction, which in this case is exemplified by the following example:

> 'We can predict the success of a chorus, if we know the musical talent of him who instructs it.'
> Προλέγοις ἄν πῶς ἀγωνιεῖται ὁ χορὸς, εἰ τοῦ χοροῦ τὸν διδάσκαλον γνοίης μουσικῆς ὅπως ἔχει (*loc. cit.*:71).

In this last example the genitive (τοῦ χοροῦ - of the chorus) precedes the noun in the accusative with its article (τὸν διδάσκαλον - the teacher). The enclavement construction also differs from the descending or analytical construction as exemplified by the following:

> ... to give an example of the descending or analytical construction, one might reply to the question: What is the chorodidascalus? by
> Ἀλλὰ φανερὸν ὅτι εἴη ἂν ὁ διδάσκαλος τοῦ χοροῦ, ὡς αὐτὸ τὸ ὄνομα δηλοῖ. (*loc. cit.*:71).

Here we find the opposite order, namely, noun with article followed by the modifying genitive with its article.

2.3.3. *Hyperbaton*

> When the complement is separated from the word next to which the rules of syntax require it to be placed, by another word or by several words which constitute part of another syntactic group, we have what we may call the dispersed construction: let us however retain for it the name which it has always borne, namely, *hyperbaton* (*loc. cit.*:70).[50]

Using the same noun and modifying genitive as in the examples for compound and enclavement above, Weil gives the following example of hyperbaton:

> If we wished to make very prominent one of two ideas and to pass lightly over the other we should only have to separate more the elements of the group by making use of the fifth construction, namely the hyperbaton:
> εἰ τὸν διδάσκαλον γνοίης τοῦ χοροῦ ὅπως ἔχει περὶ μουσικὴς [*sic!*] (*loc. cit.*:71).

Here the genitive is separated from the preceding noun by the intermediate verb γνοίης.

2.3.4. *Explanatory appositive*

> What distinguishes these five forms of expression from each other, I make haste to add, is not simply the more or less close connection between ideas placed in relation to each other; there are slight shades of another kind. ... But we have not yet exhausted all the constructions so remarkably varied which are at the disposal of the Greek language. The ingenious use which this language makes of the article gives it a sixth form, that of the explanatory appositive, which, considered in relation to the con-

> nection of ideas, can be placed between numbers two (i.e. ascending construction) and three (i.e. enclavement). In this form the article is repeated as ὁ διδάσκαλος ὁ τοῦ χοροῦ (*loc. cit.*:71-72).

In the last example the article of the noun is repeated after the noun and placed before the genitive with its article.

2.3.5. *Seiler 1960*

In the preceding paragraphs we have seen that a language like Classical Greek distinguishes six types of arrangement between a modifier and its modifying element and not just two as is generally assumed in current word order studies. But even within one arrangement pattern an intonational shift as well may change meaning or emphasis as is shown in Seiler (1960).

By setting up the same arrangement *böse Hunde* ('bad dogs') but varying the intonational patterns four types can be distinguished:

(a) *bȍse Húnde*
(b) *bŏse Húnde*
(c) *bȍse Hùnde*
(d) *bŏse Hùnde.*

The intonational pattern in (d) is used to signal that there are other members of the same set (i.e. *Hunde*) which are not *böse*. In other words, *böse Hùnde* stands in opposition to *nícht-bȍse Hùnde* such as *gúte Hùnde, tréue Hùnde, sánfte Hùnde,* etc.[51] The pattern found in type (a), on the other hand, is of a completely different nature. In this case the members of the set are all entities which are *böse* and characterized by those specific entities which are also *Hunde*. Here *bȍse Húnde* stands in opposition to *bȍse Nícht-Hunde,* such as *bȍse Kátzen, bȍse Tíere, bȍse Ménschen,* etc.[52] The other two patterns (b) and (c) are neutral with respect to the distinctions made by the previous two types.

This study shows that even in a seemingly simple construction consisting of a noun and a preposed adjective at least three distinct constructions can be differentiated through intonation. In other words, in some languages the word order alone may not be sufficient for the

correct analysis of certain constructions.

2.3.6. *Conclusions*

The preceding paragraphs indicate, on the one hand, that in some languages there are more possibilities for the arrangement of modified and modifying elements than merely modified + modifying or modifying + modified, and, on the other hand, with the one order adjective + noun different intonational patterns can lead to different constructions. This means then that it may be oversimplifying matters considerably to say that languages have either the order GN/AN, NG/NA or both. In some cases more possibilities are available, in other cases, the order of genitive (or adjective) and noun is not sufficient for the ultimate identification of the construction in question. In this context I would also like to mention that Comrie (1981:137ff.) differentiates three different types and respective orders for *relative clauses*: (a) the prenominal type in which the relative clause precedes its head, (b) the postnominal type in which the relative clause follows its head, and (c) the internal-head type in which the head actually occurs inside the relative clause. Comrie (*loc. cit.*:91) also points out another problem which belongs here, i.e., the failure to distinguish modifiers which are expressed as separate words from those which are expressed as affixes. As an example he mentions that in many OV languages *possessors* (i.e. separate words) precede their head nouns, whereas the *possessive affixes* are suffixed.

2.4. *Marking*

Let us now recall that Lehmann has made two qualifications to his 'placement principle', the first of which, i.e. marking, will be the topic of this section. In §1.6.4. above we have already pointed out the fact that Lehmann regards marking as being achieved through a change in word order, a special intonation or the use of particles. Prior to 1978[53] a change in word order for the purpose of marking was equated by Lehmann with initial position, an idea going back to Delbrück:

> Without discussing Delbrück's further treatment of marked order, we note that he in general identifies initial position as characteristic of marked elements in the clause (Lehmann and Ratanajoti 1975:152).[54]

Final position, however, has also been recognized as a marked position by other linguists:

> He (i.e. a speaker) will always tend to pronounce first what is most actual to him; and, on the other hand, he may sometimes on purpose - more or less consciously - hold back an idea so as to produce a greater effect if its appearance is prepared in the right way. There are thus two emphatic places, first and last (Jespersen 1933:99).[55]

In fact, Weil has even argued that a word can be emphasized (marked) by a change in word order within the clause:

> If it is necessary to strongly emphasize a word, place near it another on which the sense does not require you to put any emphasis. Thus the emphatic word, even when placed neither at the beginning nor at the end of the sentence, will have an advantageous position, for the emphasis is enhanced by the repose of emphasis that accompanies it (Weil 1978:101).

I would now like to enlarge upon this notion of marking and its relation to word order in the following section.

2.4.1. *Markedness*

The notion of markedness was used for the first time in Prague school phonology in the context of the problem of neutralization and the archiphoneme.[56] The following is an attempt by Jakobson at a general over-all definition of this notion:

> The general meaning of a marked category states the presence of a certain property A; the general meaning of the corresponding unmarked category states nothing about the presence of A and is used chiefly but not exclusively to indicate the absence of A (Jakobson 1957:5).[57]

Through subsequent research different characteristics of marked and unmarked features have been found to exist. So, for example, Greenberg (1966b:13-24) mentions the following characteristics of unmarked phonological features:

(a) the appearance in internally conditioned neutralization,
(b) higher frequency,
(c) simple as opposed to complex,[58]
(d) greater variety of subphonemic variation,
(e) its connection with the implied feature in universal implicational statements of phonology, and
(f) its connection with a concept of basicness.[59]

If we turn to morphology we can mention Zwicky (1978:130-137) who distinguishes the following seven senses of morphological markedness:

(a) material markedness,
(b) semantic markedness,
(c) implicational markedness with three subsequent predictions:
  (i) implicationally marked forms will tend to show fewer irregularities than implicationally unmarked forms,
  (ii) marked categories will tend to show more syncretism,
  (iii) marked categories will tend to show more defectivation, more gaps or missing forms, than unmarked categories,
(d) abstract syntactic markedness - expressed as:
  (i) inherent lexical marks,
  (ii) marks of obligatory morphosyntactic categories,
  (iii) marks established by agreement rules,
  (iv) marks established by government rules,
  (v) marks positioned by attachment rules,
(e) productive markedness,
(f) stylistic markedness, and
(g) statistical markedness.

For recent work on syntactic and pragmatic markedness we can mention Givón (1979:67ff.). The most useful approach to markedness for our purposes here, I believe, is offered by Enkvist (1977:9-11):

> To begin with, a general taxonomy of the different uses of the terms 'marked' and 'unmarked' member of an opposition might look like this, if arranged from the more formal to the more impressionistic types of definition:
> (i) Markedness as a concept correlated with the use of formal markers in a description of a language. The marked member of the opposition is the member which has a marking feature which is absent from the unmarked member. Such marking features may be
> (a) phonological ...
> (b) morphological ...
> (c) syntactical ...
> (d) lexical[60] ...
> (ii) Markedness as a concept correlated with a distribution pattern: a wide distribution suggests less marking, a restric-

ted distribution more marking ...
(iii) Markedness as a concept correlated with objective frequency counts: the least marked structure is that member of an opposition which occurs most frequently in a suitably selected corpus of text.
(iv) Markedness as an intuitive concept ...

The usefulness of this approach lies in the fact that it enables us to choose a formally marked entity over all other types of marking -- especially number (iii) -- see my comments in §4.5. below.

2.4.2. *Parameters affecting word order*

In another paper (1976a:9-11) Enkvist addresses himself to the relation between formal syntactic markers and word order:

> As a general principle it might be assumed that languages making more use of formal markings and congruence are freer to use word order for tasks other than the expression of basic syntactic functions such as the syntactic roles of constituents within the clause or sentence. But these 'other tasks' ought to be specified rather than loosely dismissed as instances of free variation, vague 'stylistic effects' or the like.[61] ...
> In the light of such considerations, word order appears to be affected by a number of different parameters:
> - expression of modalities (statement, question, etc.)
> - difference between clause types (main clause, subordinate clauses)
> - expression of basic syntactic functions such as subject, object etc., and of the scope of operators and modifiers
> - expression of thematic ordering (functional sentence perspective) determined by text strategy in terms of parameters such as given and new
> - expression of focus, motivated by propositional presuppositions; this is linked with emphasis and special structures such as cleft
> - weight of constituents (the principle of end-weight), and
> - expression of iconic cohesion.

An examination of the effect of these parameters on the word order in a specific language will, therefore, lead to the distinction between marked and unmarked order in the language in question. Such an investigation of word order will necessarily entail an analysis of word order not only in *isolation* but also in *context*. It is this specific area where many problems are to be found in current word order studies: although sentences in isolation may indeed give us the impression of

a totally free word order, when viewed in their respective contexts we find that the variations very often correlate to pragmatic functions.[62] In the following sections each of these parameters will in turn be investigated.

2.4.2.1. *Expression of modalities*

The expression of different modalities (statements, questions, imperatives, etc.) can affect word order or, alternatively, word order can *function* in distinguishing statements from questions etc. It should be noted that intonation as well may play a rôle in such distinctions whether alone or in combination with either a change in word order or the use of other syntactic elements. But for our purposes here the phonological aspect will be left out of consideration.

Two common means of distinguishing statements from questions are (a) word order inversion and (b) the use of special question particles.[63] In English, for example, inversion can be used, whereas in Finnish a question particle (*-ko/-kö*) can be used:[64]

(i) English: *We are going home.*
Finnish: *Menemme kotiin.*

(ii) English: *Are we going home?*
Finnish: *Menemmekö kotiin?*[65]

Consequently Finnish is able to use inversion (i.e. a change in word order) where English must use an additional morphological element, e.g. in differentiating definite from indefinite:

(iii) Finnish: *Auto on kadulla.*
English: *The car is in the street.*

(iv) Finnish: *Kadulla on auto.*
English: *There is a car in the street.*[66]

In this connection it would be interesting to find out all possible formal means used in making such distinctions and their connection to basic word order patterns or other typological features.[67]

Turning back to the question of the basic word order pattern, in accordance with Jakobson's definition we can now consider the word order used in expressing statements as basic/unmarked in comparison

to the order found in questions, if we consider this change in word order as an additional formal element parallel to the usage of particles in other languages.

2.4.2.2. *Difference between clause types*

The next parameter mentioned by Enkvist is the effect of clause types (i.e. main vs. subordinate clauses etc.) on the word order. What Enkvist had in mind[68] in proposing this parameter was the difference in the position of the negative adverb (*inte* 'not') in Swedish sentences such as:

(a) *Elvira reser inte till Mexiko.* (Main clause)
Elvira travels not to Mexico.

(b) *Jag vet, att Elvira inte reser till Mexiko.* (Subordinate)
I know that Elvira not travels to Mexico.[69]

In the first example, a main clause, *inte* is placed after the verb (*reser*), whereas in the second example, a subordinate clause, *inte* is placed before the verb.

This parameter is especially evident in German where main declarative clauses show the basic sentence pattern subject + verb + object (SVO), and subordinate clauses introduced by conjunctions very often show the order subject + object + verb (SOV), cf. §2.2.6. above:

(c) *Er trinkt Wein.* (SVO)
He drinks wine.

(d) *(Er sagte, daß) er Wein trinkt.* (SOV)
(He said, that) he wine drinks.

In English, on the other hand, this specific distinction in word order is not made in subordinate clauses.

Accordingly, one can consider the order found in main declarative clauses in German as basic/unmarked and the order in subordinate clauses -- when this differs from main clauses -- as marked through a formal syntactic element, i.e. word order (and perhaps a subordinate conjunction).

Let us now take a look at the following Finnish examples (cf. Karlsson 1976:73):

(e) *(Me) lähdemme Helsinkiin illalla.*
we go Helsinki-to tonight
'We will go to Helsinki tonight.'

(f) *Mekö lähdemme Helsinkiin illalla?*
'Are WE going to Helsinki tonight?'

(g) *Lähdemmekö (me) Helsinkiin illalla?*
'Are we going to Helsinki tonight?'

(h) *Helsinkiinkö (me) lähdemme illalla?*
'Is it Helsinki that we are going to tonight?'

(i) *Illallako (me) lähdemme Helsinkiin?*
'Is is tonight that we are going to Helsinki?'

These examples show that in main interrogative clauses it is possible to place any element at the beginning of the clause with the interrogative suffix (*-ko/-kö*). But notice that in indirect (subordinate) interrogative clauses this variation is no longer possible:

(j) *En tiedä, lähdemmekö Helsinkiin illalla.*
NEG-1Sg know ...
'I don't know if we will go to Helsinki tonight.'

(k) **En tiedä, Helsinkiinkö lähdemme illalla.*

(l) **En tiedä, illallako lähdemme Helsinkiin.*[70]

Finnish thus supports the 'penthouse principle' (§2.2.6. above); the basic/unmarked word order is, accordingly, to be found in the subordinate clause here. But the data given above allows us to go one step further: there are certain pragmatic features formally expressed by (a change in) word order in main clauses which are not available in subordinate clauses. It is this functional aspect of word order here that I believe deserves to be investigated in more detail.

2.4.2.3. *Expression of basic syntactic functions*

> Word order may distinguish between different functions of constituents within the clause and sentence; so that for instance in English, a noun phrase preceding a transitive verb is usually interpreted as a subject, a noun phrase following a transitive verb as an object (Enkvist 1976a:8).

This parameter will most likely play a more important rôle in those lan-

guages which do not make an overt morphological distinction between these constituents. So for example German, Latin, Sanskrit and other languages which differentiate between the nominative and accusative will not have to rely on this parameter:

(a) German: *Den Hund schlägt der Junge.*
the dog hits the boy
'It is the dog that the boy hits.'

But even in these languages one must fall back on word order for the interpretation of sentences where the distinction might not be made, e.g., in German where there is no distinction made for feminines and neuters in the nominative and accusative:

(b) German: *Die Tochter küßte die Mutter.*
the daughter kissed the mother
'The daughter kissed the mother.'

In this example there is no morphological distinction between the nominative and accusative, both *die Tochter* and *die Mutter* can be interpreted as either nominative or accusative. Here the word order distinguishes between the two functions.[71] We may, therefore, propose that the nominative and accusative are distinguished through formal morpho-syntactical elements, i.e. either case endings, particles, word order or other means. Consequently, the order in sentences where word order alone distinguishes between nominative and accusative is to be taken as basic/unmarked.

Furthermore, we can point to numerous examples where a certain word order is restricted to a specific grammatical category and hence may also function (either independently or together with other elements) in distinguishing such categories. Dezsö (1982:243) shows, for example, that aspect and word order are related in Hungarian:[72]

> For the transition from type SOV to type SVO, for example, the change in the nature of aspect in Finno-Ugric languages may have played an important role. In Hungarian, which is at a transitory stage of this change, the basic word order SOV cannot be used with perfective verbs, so word order SVO must be resorted to, since it is applicable both with perfective and imperfective verbs. The role of aspect can also be observed in other languages with two alternative types of word order, but it does not neces-

> sarily mean a relationship between a given aspect and a given word order (for instance, perfective aspect and SVO), but, rather, it means that until the aspect gets morphologically fixed, the word order also contributes to its expression.

2.4.2.4. *Expression of thematic ordering*

> As scholars of the Prague school and many others have emphasized, word order is also used to signal the arrangement of information within the clause or sentence ('functional sentence perspective', thematic order in terms of theme and rheme or topic and comment, and focus) (Enkvist 1976a:10).

Just as in the preceding sections we have noticed that either a formal element -- a word, particle, affix, etc. -- or word order (or both) were used for the expression of certain grammatical functions, so here too we may note that there are some languages which mark thematic elements through particles (i.e. separate words) and others which must rely on word order. A necessary prerequisite, however, for investigations of thematic ordering is a stringent definition of terms such as 'theme', 'rheme', 'topic', and 'comment'. The clearest and most useful definition of these terms is, I believe, given by Enkvist (1976b: 63-64):

> By topic I mean a constituent which (a) occurs at the very beginning of the clause, being preceded only by connectives and conjunctions; and which simultaneously (b) can be regarded as having been moved up front from some other, less marked, position, and (c) does not tolerate any other fronted constituent next to itself (i.e., a clause can have only one topic). A comment is, correspondingly, a clause-final constituent similarly moved into clause-final position. A theme, on the contrary, is (if we define it positionally) the first part of the clause up to, and sometimes including, the verb ... The theme may consist of a number of subthemes: thematic adverbials (or adverbial themes), noun phrases, etc.; if there is a topic (that is, if the frontmost constituent is the result of topicalization, meaning the kind of fronting movement specified above), the topic is part of the theme. Topicalizations and commentizations merely move constituents about, without changing syntactic relations. Thematizations and rhematizations (that is, the operations leading to choice of theme and rheme, respectively) may on the constrary change syntactic relations: they include choice of subject (including passivization), subject and object raising, extraposition, tough movement, and other comparable operations. ... As to functions: the theme-rheme and topic-comment systems adjust thematic

> perspectives, help to connect the sentence with its textual and situational environment, and serve text strategy. The theme is usually 'what the sentence is about' and often contains old ('contextually bound') information. The rheme often contains new information, with the most important new element in final or comment position.

Topics and comments are, accordingly, to be regarded as elements which have been moved from 'less marked' positions within the clause into initial (for topics) or final (for comments) position. Where there has been such a change in word order the resulting word order is to be viewed as exhibiting a marked pattern.

Let us now recall the passage (Weil 1978:29-30) cited in §1.2.1. above. The neutral unmarked Latin word order used to express 'Romulus founded Rome' would be

(a) *Romulus Romam condidit.*

Romulus would then be the *theme* and *Romam condidit* the *rheme*. Since this is an unmarked word order, we will not find a topic nor a comment in this specific sentence. From the work by Li and Thompson (1976) on 'subject prominent' and 'topic prominent' languages, we know that some languages are primarily governed by syntactic considerations, e.g. Latin -- we don't need topics in every Latin sentence --, other languages, e.g. Chinese, are primarily governed by pragmatic considerations; hence in such languages most sentences (if not every) must have a topic. Turning back to 'subject prominent' Latin, we see that in Weil's first sentence

(b) *Idem Romulus Romam condidit.*

Romulus is topicalized, but since it is already in initial position it must be additionally marked here by the deictic pronoun *idem*. *Romam condidit* remains the rheme. Weil's second example

(c) *Hanc urbem condidit Romulus.*

has *urbem* (= *Romam*) as the topic marked by *hanc*, and *Romulus* as comment in final, postverbal position. Similarly, in the third example

(d) *Condidit Romam Romulus.*

condidit has been topicalized (without additional marking) and *Romulus* is commentized.

Let me exemplify these thematic terms on German sentences. Our first example will be a neutral active sentence:

(e) *Der Junge sieht den Hund.* (SVO)
The boy sees the dog.

Here we see that *der Junge* was chosen as theme (=subject) of the sentence and *den Hund* as rheme. If we would choose 'the dog' as the theme, this would result in the choice of a passive construction:[73]

(f) *Der Hund wird von dem Jungen gesehen.* (SVO)
The dog IS by the boy seen
'The dog is seen by the boy.'

Topicalization and commentization can now be applied to both of these examples:

(g) *Den Hund sieht der Junge.* (OVS - topicalization)

(h) *Von dem Jungen wird der Hund gesehen.* (OVS - topic)

These examples show that theme and rheme result in various constructions, whereas topicalization and commentization do not change constructions but merely move elements to the front or the back of the sentence.

In the following example from Old Indic prose, we find a topic (*manave*), which has been moved up front together with a topic marker (*ha vai*):

(i) ŚB 1,8,1,1: *manave ha vai prātaḥ ... udakam*
Manu-to TOPIC in the morning water
ā jahrur.
they brought
'In the morning they brought Manu water.'

The unmarked order would be:

(i') *prātaḥ manave udakam ā jahrur.*

In this sentence, which is the very beginning of an important myth concerning Manu, Manu is topicalized, thus indicating that, although he is not the theme of this specific sentence, he is the topic of the entire passage.

For examples of commentization let us take a look at the early Middle Indic inscriptions of Aśoka. In Andersen (1980a) I have shown

that the unmarked/basic word order in these inscriptions is SOV. We find, however, numerous passages in which there are elements following the verb, i.e. amplified sentences; these are all due to the process of commentization, see Andersen (1982c) for details.

(j) RE VIII A: ... *lājāne vihārayātāṃ* ... *nikhamisu*. (SOV)
Kings pleasure-tours they used to set out
'The Kings used to set out on pleasure tours.'

(k) RE VIII C: *se devānaṃpiye piyadasi lājā* ... *nikhamitha*
and King Aśoka he set out
saṃbodhi. (SVO)
'And King Aśoka set out on a Saṃbodhi (tour).'

Example (j) exhibits the unmarked order SOV, whereas (k) shows the marked SVO order, with a commentized object: *saṃbodhi* occurs for the very first time in the text at this passage, and therefore it is commentized in accordance with Enkvist's definition ' ... with the most important new element in final or comment position' (Enkvist 1976b:64).

To sum up, we see that our task in investigations of word order can be stated as follows:

> The normal pattern must be identified, and thereupon the patterns used for marking and other special processes, such as topicalization (Lehmann 1978a:36).

This will, accordingly, lead to a distinction between marked and unmarked patterns and, at the same time, involve a functional analysis of word order.

2.4.2.5. *Expression of focus*

> Focus is marked by special prominence through stress, intonation and paralinguistic devices; by clefts; or by both clefts and special prominence ... Focus mechanisms also mark new information, or correct information that has been wrongly received (focussed form-words such as articles or prepositions usually indicate corrections, a focussed verb or focus-carrier *do* indicates assertiveness or insistence). Such markings are indicated particularly when there is new information in a part of the sentence (the theme or front part of the rheme) which is usually reserved for old information. That kind of emotive emphasis which gives special prominence to individual constituents or sentence elements also comes under focus (Enkvist 1976b:64).

The following examples show how focus can be expressed in English:

(a) *phonologically* (through stress and intonation)
CHARLIE gave Jane the apple.
Charlie GAVE Jane the apple.
Charlie gave JANE the apple.[74]

(b) *syntactically* (through cleft sentences)
It was Charlie who gave Jane the apple.
It was Jane who was given the apple by Charlie.
It was the apple that was given to Jane by Charlie.[75]

(c) *both*
IT WAS Charlie who gave Jane the apple.[76]

Consequently, when a change in word order (alone or with other devices) is used to express focus, this order is to be regarded as a marked order. When we turn our attention to older languages where we have no spoken records, we find, on the one hand, that it is difficult (if not impossible) to determine the stress and intonation patterns, on the other hand, we could expect to find focus expressed syntactically or through particles:

> It is difficult to make any positive statements about emphasis in a dead language; there are however certain indications from which we may safely draw conclusions (Weil 1978:88).

In the following passage from Old Indic prose we find two different means employed to express focus:

(d) ŚB 6,1,2,11: *se ūrdhvebhya eva prāṇebhyo devān*
he upper-from pcl. vital airs-from gods
asṛjata. ye <a>vāñcāḥ prāṇās
he created which lower vital airs
tebhyo martyāḥ prajñā.
these-from mortal creatures
'From the upper vital airs he created the gods, and it was the lower vital airs, from which (he created) the mortal creatures.'[77]

The first sentence uses the focusing particle *eva*, the second, on the other hand, uses a cleft sentence. The particle *eva* is, by the way,

not restricted to any specific position within the sentence as can be seen in the following examples:

(e) ŚB 1,6,3,10: *tasmād u ha- enam indra eva jaghāna.*
therefore and him Indra FOCUS he slew
'And therefore it was Indra who slew him.'

(f) ŚB 6,2,1,3: *tam u vai prajāpatir anv- eva- ecchat.*
him and TOPIC Prajāpati after FOCUS he searched
'And him Prajāpati still searched after.'

In this last example *eva* even separates a preverb from the main verb.

The following example from Aśoka shows one of the important functions of focus:

(g) RE IV D-E: *esa aṃne ca bahuvidhe dhaṃmacalane*
this other and manifold practice of morality
vaḍhite. vaḍhiyisati ca- eva
promoted he will promote and FOCUS
devānaṃpiye piyadaso lāja dhaṃmacalanaṃ
King Aśoka practice of morality
imaṃ.
here
'This and manifold other practices of morality are promoted. And King Aśoka will ever (continue to) promote the practice of morality here.'

In IV E the focussed verb *vaḍhayisati* indicates assertiveness, as Enkvist pointed out. Notice that in these examples from Indic, a fronted element can be the result of either topicalization or focus; in each case, however, there will be a different pragmatic function.

2.4.2.6. *Weight of constituents*

The 'principle of end-weight' suggests that shorter elements precede longer, weightier elements. Various linguists have proposed different terms for this principle such as Beauzée 'the law of the growing members', Behaghel 'Gesetz der wachsenden Glieder', Jespersen 'the principle of relative weight', and Ross 'heavy noun phrase shift.'[78]

Beauzée (1767:II,65), for example, formulated his principle in the following way:

> De plusieurs Compléments qui tombent sur le même mot, il faut mettre le plus court le premier après le mot completé, puis le plus court de ceux qui restent, & ainsi de suite jusqu'au plus long de tous, qui doit être le dernier. 'Par ce moyen, dit M. de Gamaches (Dissert. sur les agrém. du langage Part. I. Edit. de 1718), ceux qu'on met aux dernières places ne se trouvent éloignés du terme modifié que le moins qu'il est possible.'[79]

The best known formulation of this principle is, however, Behaghel's 'Gesetz der wachsenden Glieder' (Behaghel 1909:139):

> So bildet sich unbewußt in den Sprachen ein eigenartiges rhythmisches Gefühl, die Neigung, vom kürzeren zum längeren Glied überzugehen; so entwickelt sich das, was ich, um einen ganz knappen Ausdruck zu gewinnen, als das Gesetz der wachsenden Glieder bezeichnen möchte.[80]

Numerous examples of this principle can be found in languages around the world, but let me start with a remark by Comrie (1981:84) concerning the order of adjectives in English:

> Although adjectives and relative clauses are similar conceptually, and indeed hard to separate from one another in some languages (e.g. Malay), in many languages they differ in word order: English is AN but NRel, for instance. In English, moreover, many heavy adjectival phrases have the same order as relative clauses, as in *people fluent in three languages*. This suggests that in characterizing languages as AN or NA, preference should be given to the order of simple adjectives than to that of more complex adjectival phrases.

We also know that in French an adjective may be placed before or after its noun; just one of the principles governing this placement is word order: monosyllabic adjectives precede polysyllabic nouns, whereas polysyllabic adjectives follow monosyllabic nouns.[81] Even in Pāṇini's grammar of the Sanskrit language (ca. 500 B.C.), it is stated (II,2, 34) that in *dvandva* compounds the member which has fewer vowels is placed first; so for example *grīṣma-vasantau* 'summer and spring', *kanyā-kumārau* 'daughter and son', etc. For an example of the 'principle of endweight' in Old Indic prose see §4.4.2.1. (c) below.

The 'principle of end-weight' may, when employed, be responsible for producing an otherwise non-conforming typological pattern which in turn will be regarded as marked.

2.4.2.7. *Expression of iconic cohesion*

> A further principle affecting word order is 'iconic cohesion', that is, the repetition of patterns which leads to isomorphism between different constituents of a clause or sentence, or between different units of a text (clauses, sentences, paragraphs, etc.; in poetry, lines, stanzas etc.). As a stylistic device, iconic cohesion is particularly common in artistic (for instance 'balanced') prose and in poetry. In metrically regular poetry for instance, the needs of phonological iconicism (metre, alliteration, rhyme, cadence) often interact with word order and lead to the use of 'poetic' word order patterns not commonly used in other kinds of communication (Enkvist 1976a:11).[82]

An example of this parameter is noted by Watkins (1976:307):

> Word order may serve a purely iconic function, as in the following Umbrian example:
>
> (1) *Clauerniur dirsas herti Fratrus Atiersir ...*
> *Clauerni dirsans herti Frater Atiersiur ...*
> 'The Clavernii are required to give to the Atiedian brothers ...
> The Atiedian brothers are required to give to the Clavernii ...'
>
> Maintaining the relative order of the Clavernii and the Atiedian brothers, but switching the case marking of subject and indirect object tells us just what the relative position of the two groups was in the social hierarchy.

The following example of 'iconic cohesion' comes from Old Indic prose:

(a) ŚB 6,1,2,26: ... *tena eṣo <a>gneḥ pitā ...*
thereby he Agni's father
... *tena etasya- agniḥ pitā ...*
thereby his Agni father
'... thereby he is Agni's father ...
.... thereby Agni is his father ...'

There is now another principle that should not be separated from 'iconic cohesion', i.e. 'chiasmus'. Here we find a cross arrangement of symmetrical parts of discourse:[83]

(b) English: *A superman in physique,*
But in intellect a fool.

(c) Finnish: *pienemmät hevosen päätä*
smaller horse's than head
päätä ihmisen isommat (Kalevala XIV:319-320).
than head man's larger
'Smaller than a horse's head,
than the head of a man larger'

(d) Homeric Greek A 7: Ἀτρεΐδης τε ἄναξ ἀνδρῶν
son of Atreus and lord of men
καὶ δῖος Ἀχιλλεύς
and heavenly Achilles
'the son of Atreus, the lord of men,
and the heavenly Achilles.'

In (d) we find the order noun + attribute followed by attribute + noun.

(e) Old Indic: RV X,135,5d *anudéyī yáthābhavat*
RV X,135,6a *yáthābhavat anudéyī*

In those cases of 'iconic cohesion' and 'chiasmus' where one word order is changed to conform to another order, the resulting order will be regarded as being marked.

2.4.2.8. *Pronominalization*

To this list of parameters given by Enkvist I would like to add one more, which may overlap with other parameters (e.g. end-weight, expression of thematic ordering), but since it does play such an important rôle in some languages it deserves to be emphasized here and listed as a separate parameter. This is the process of *pronominalization*. A change in word order due to pronominalization is particularly evident in English *WH- movement* and in French:

> In many languages, the order of pronouns is different from that of other noun phrases, so that in French, for instance, clitic object pronouns precede the verb, whereas other objects follow:
>
> *Le garçon a vu la jeune fille.*
> 'The boy has seen the girl.'
>
> *Le garçon l'a vue.*
> 'The boy has seen her.'
>
> However, it is known that unstressed constituents, such as clitic pronouns, are often, cross-linguistically, subject to special

> positioning rules only loosely, if at all, relating to their grammatical relation, so sentences with pronouns can be discounted in favour of those with full noun phrases (Comrie 1981:83).

Notice also that in German the order of direct and indirect object is governed by this principle:

(a) *Er gibt dem Johann das Buch.* (SVO_dO_a)
'He gives John the book.'

(b) *Er gibt es dem Johann.* (SVo_aO_d)
'He gives it to John.'

(c) *Er gibt ihm das Buch.* (SVo_dO_a)
'He gives him the book.'

(d) *Er gibt es ihm.* (SVo_ao_d)
'He gives it to him.'

It is now a well known fact that there are various types of pronouns: demonstrative, possessive, personal, interrogative, etc. In some languages the choice of pronoun has morphological repercussions, e.g. in Hungarian (Dezsö 1982:181):

> Hungarian applies the objective conjugation when the object is expressed by a demonstrative, a possessive or a personal pronoun, except where 1st and 2nd person pronouns are involved, for instance: *A fiú lát engem.*, and *A fiú lát téged.* 'The boy sees me., The boy sees you.' Objective conjugation, however, is used in Hungarian in connection with certain kinds of interrogative, indefinite, negative and general pronouns (such as pronouns with *-ik* particle: *melyik*, *valamelyik*, *semelyik* etc.), which are generally regarded as "indefinite" pronouns, and which are expressive of a specific identification.

The point that should be emphasized here is that the order of pronouns may differ from that of full nouns. This fact seems to be overlooked by those who reconstruct VS patterning for languages in which the verbal endings derive from earlier pronouns:

> E.g., the fact that Proto-Indo-European, which is reconstructed as an SXV language, has subject-verb agreement inflection for person and number after the verb shows that at an earlier stage of development that language was a VSX language, because only in a basic VS arrangement can subject pronouns find their regular position immediately after the verb so that they may first become enclitics and then degenerate to suffixes in that position.

> As an inflection on the verb, these elements were carried on even after the language had developed new subject pronouns and changed word order (Vennemann 1974d:223-4).[84]

By overlooking such facts, it is no wonder that Miller (1975) reconstructs VSO, SVO and even SOV patterning for Proto-Indo-European.

2.4.3. *Conclusion*

Starting with a discussion of a number of parameters proposed by Enkvist, which can affect word order, I have shown that, in effect, word order can *function* in making these distinctions. This is surely neither an exhaustive account of the function of word order in these terms, nor is this the only approach possible for the study of the function of word order. But still, if this approach would be followed, enlarged and improved upon, it would provide concrete means of distinguishing marked from unmarked patterns. In this way, part of the circularity of Lehmann's theory can be remedied.

These preceding paragraphs have in addition shown that word order can function not only on the syntactic level but also on the level of discourse. We know that many languages have been termed 'free word order languages',[85] but in the majority of cases this refers only to its function on the syntactic level of grammar. Sanskrit, for example, with its rich inflectional system must not rely on word order for the expression of syntactic constituents to the same extent as in English or Chinese.[86] If we take a number of isolated sentences from Sanskrit we do indeed find a great variation in the word order. A closer examination of these sentences *in their respective contexts*, however, does show us that the variant patterns have pragmatic functions; this I have shown in Andersen (1980c). This restriction of investigating word order only to isolated sentences without any reference to context is, I believe, the biggest problems most studies of word order are faced with.

Finally, I would like to mention one more aspect of the function of word order: the form and function of word order may differ in the various forms of language. Holman (1976), for example, has shown

that this is true in written language as opposed to spoken language. In chapters four and five below we will see that the word order of comparative constructions differs in prose texts from that of metrical, poetic texts. Other distinctions can be drawn in standard language vs. dialects, formal speech vs. casual speech, lento vs. allegro speech etc. Accordingly, the function of word order must be investigated in reference to these distinctions.

2.5. *Word order change*

The second qualification for Lehmann's 'placement principle' is made for languages undergoing typological change in the course of their historical development: i.e., inconsistent typological patterns may be the result of typological change, manifested either as innovations or as relics. Recently this assumption has been criticized by a number of scholars, e.g. Lightfoot (1979:156):[87]

> Thus a distinction is drawn between 'consistent' and 'transitional' languages, as if all languages are not in transition from one stage to another.

I would, however, defend Lehmann's stand here. It is obvious to almost everyone, including Lehmann,[88] that languages are constantly changing. But it is not at all obvious that all languages are constantly in a state of drastic typological change. Lithuanian and Russian, for example, although having undergone numerous changes in the course of their respective developments, have preserved the rich case system of PIE.- i.e. a typological aspect of grammar. English, on the other hand, has in the course of its development virtually given up this typological characteristic. Or, if we compare the historical development of Indic and Italic languages, we see that in Indic, on the one hand, the SOV pattern has been preserved from Vedic down to Hindi, whereas the SOV pattern of Latin is no longer preserved in SVO French. Here we see then that eventhough languages are changing, typological aspects need not be the focal point of all change. Where the change does affect this part of the grammar - i.e. word order, case system, etc. - we can indeed expect to find either in-

novations or relics here, which will subsequently be inconsistent with other typological patterns. Notice too that this explanation for inconsistencies has been proposed by Schmidt (1926:382-3), cf. §1.3. above. This, I believe, is what Lehmann refers to. The problem that we now face is how to tell whether a specific typological inconsistency is due to typological change or to some other cause (marking). This problem must be solved in order to remedy the circularity in Lehmann's argumentation: a pattern is inconsistent (= relic/innovation) because the language is in a state of typological change, and the language is in a state of typological change because it reveals typological inconsistencies.

In the past, two different aspects of word order change have been discussed. The first concerns *how* languages change their word order patterns; this is termed the *transition* aspect. At present two different proposals have been made here: *sudden catastrophe* and *chronic infection*, cf. Aitchison (1979:45-6):

> A catastrophe view assumes that there is a gradual build-up of pressure within the language system, followed by a major upheaval which results in a new word order. In a chronic infection, on the other hand, one relatively insignificant change follows another with no definable crisis point.

Support for sudden catastrophe can be found in Thom (1973), in Lightfoot's work on English modals (1974, 1979) and it is implied in Vennemann's account of the shift from OV to VO in Indo-European dialects. Chronic infection, on the other hand, is presupposed by Hyman (1975) in his account of the shift from OV to VO in certain Niger-Congo languages and it is envisaged not only in Ross (1973) but also in Koch (1974).

The second aspect of word order change, and the one that has attracted the most attention, concerns *why* languages change their word order patterns; this is termed the *causation* aspect. Two areas of sources for word order change have been pointed out by Lehmann (cf. §1.6.5. above): (a) external development or borrowing and (b) internal modification.[89] Internal modification has subsequently been divided into the following three subtypes: disambiguation, grammati-

calization and afterthought.[90] Let us now take a closer look at these sources for word order change.

2.5.1. *Contact*

Lehmann (1973b:201f.) points out that languages may change their word order patterning under the influence of other languages, the influence being exerted by multilingual speakers.[91] This is the most popular traditional explanation for word order change, being supported by numerous examples, for the majority of which there is no better explanation, cf. Sasse (1977:85):

> Eine der beliebtesten traditionellen Erklärungen für Wortsetllungsveränderung stützt sich auf die Beobachtung, daß die Folge der Konstituenten ein verhältnismäßig leicht interferierbares syntaktisches Phänomen ist, und führt demnach Wortstellungsveränderung grundsätzlich oder weitgehend auf Substrateinwirkung und andere Formen von Sprachkontakt zurück. Diese Auffassung wurde jüngst von Lehmann in verschiedenen Publikationen neu vertreten, und wie rezente Arbeiten über Wortstellungssprachbünde zeigen ... gibt es für viele Einzelfälle kaum eine bessere Erklärung.

The following are just a few examples of word order change due to contact -- see Mallinson and Blake (1981:399). OV Akkadian, according to Lehmann (1973b:201), deviates from other VO Semitic languages because of contact with OV Sumerian. Similarly OV Amharic, another Semitic language, had prolonged contact with OV Cushitic, see Hyman (1975:115). And Sri Lankan Creole Portuguese has all of the OV typological characteristics, the source of which is OV Tamil and OV Sinhala.

It is now interesting to note the following remark made by Hyman (1975:121):

> As mentioned ... contact as a cause of syntactic change has recieved considerable attention in the works of Lehmann. In all of the other cited studies of word order change (Vennemann, Li and Thompson, Givón), it is either not mentioned, or is underestimated.

We must add, however, that Givón (1979:276, fn.9) does (now) recognize this cause:

> So far, most of the strongest demonstrable instances of change *toward* SOV (Ethiopian-Semitic, Akkadian, New-Guinea Austronesian) seem to have been motivated by massive substratum contact.

Mallinson and Blake (1981:399) also point out another aspect to keep in mind here:

> Of course positing internal reasons for change does not mean precluding contact as a partial explanation for some instances of change.

The fact that word order patterns can be easily influenced by contact with other languages now poses two questions. First, as was already pointed out in §2.1.2., there seems to be no clear-cut distinction between word order as a typological criterion and word order as an areal criterion of language classification. And second, as Sapir (1921:144) has pointed out:

> Languages are in constant process of change, but it is only reasonable to suppose that they tend to preserve longest what is most fundamental in their structure.

The fact that word order patterns are not necessarily preserved longest questions the assumption that it is the most fundamental process of language, see §1.6.1. above.

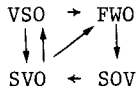
2.5.2. *Disambiguation*

This explanation of word order change is proposed by Vennemann who sees a cyclic development in language development:

> Languages develop cyclically from 'morphology with few grammatically functional word order rules' to 'word order with few morphological rules' and back again, with sound change being the causal factor throughout: first sound change grinds off the morphology and thus forces the grammar to respond by substituting word order rules in order to counter the threat of ambiguity. Next sound change degrades the positionally fixed independent function words of the language into a new morphology, which makes the word order rules redundant and leads to their loss. And so on indefinitely (Vennemann 1973:25).

Vennemann summarizes his discussion of type changes by giving the

following schema (*loc. cit.*: 40):



> This schema is based on the idealization that a language develops freely, without pressure from another language of different type. An SOV language can only change to SVO, but not into a VSO language nor into a free word order (FWO) language. It does so when its case system weakens due to phonological change. An SVO language may either develop a new case system, whereupon it may change into an FWO language; or it may change into a VSO. A VSO language may develop a case system and become an FWO language, or it may change back into an SVO language by making a stylistic nominal subject topicalization rule an obligatory S position rule. An FWO language may only develop into an SOV language.

Disambiguation, then, is brought into Vennemann's theory to account for the development from SOV to SVO patterning (1975:293):

> As a substantive S-O marking system is eroded by phonological change, word order syntax must react to compensate for the ambiguities and perceptual complexities arising in a consistent verb-final language.

In addition, Vennemann postulates an intermediate stage -- TVX (topic-verb-X) -- in this development: SXV →TVX → SVX (or in Lehmann's terminology: SOV → TVO → SVO). This stage is characterized by a verb-shift to follow the topic, usually the subject. The subsequent type - SVO - develops from TVO by a limitation of the topic to subject.[92]

Although there is a correlation between SOV basic word order and case marking -- cf. Greenberg's universal 41 (1966:96):

> U 41: If in a language the verb follows both the nominal subject and nominal object as the dominant order, the language almost always has a case system. --

there are a number of problems with Vennemann's theory of disambiguation.[93] First, not only are there examples of languages which tolerate exactly those ambiguous structures that were taken as the cause for the development from SOV to SVO,[94] but also ambiguity itself is tolerated in a large number of sentences in all languages as Li

and Thompson (1974:212) have pointed out:

> It is a matter of fact, well known to the students of syntax and semantics, that structural homonymity and hence, syntactic ambiguity, is found in a large number, if not a vast majority of sentences in any language. The reason is an obvious one: although ambiguity in itself may hinder communication, it is compensated for in actual performance by the redundancy of language as an information carrier and other preceptual cues in the environment. Furthermore, syntactic and semantic ambiguity serves an essential function in literature, as well as humor and other artistic uses of language.

Second, if a SOV language cannot distinguish subject and object cases, moving the verb to post-topic position will not remedy the situation.[95] Third, in many cases in the development from SOV to SVO patterning the case morphology was weakened *after* the shift in the basic order (from SOV to SVO).[96] And finally, there are cases in which languages have shifted from SOV to SVO and at the same time *increased* their case morphology, e.g. Finnish.[97]

2.5.3. *Grammaticalization*

This explanation of word order change has been proposed by Li and Thompson (1974) who show that word order change can be the result of the grammaticalization of a lexical item. In their case -- the change in Chinese from SVO patterning to SOV -- it is the verb in complex sentences (serial verb constructions) which becomes grammaticalized (*loc. cit.*: 209-210):

> A more significant and direct factor explaining the SVO → SOV change is that the verb in an SVO language can develop into a case marker thus collapsing SVO complex sentences into simple SOV sentences. ... Hence, an important result obtained through our study of Chinese word order change is that a change of word order need not begin within the set of simple sentences. ... In other words, one does not expect speakers of a language to move the verb of a simple sentence from one position to another as a process of historical word order change regardless of what has happened to the morphology of the language. It is much more reasonable to imagine, as the facts in Chinese bear out, that simple sentences of a new word order arise from complex sentences as a result of morphological change or lexical change. Such sentences of the new word order co-exist with sentences of the old word order and eventually replace the latter. Thus, in the

> case of Ancient Chinese, the simple sentences of SVO order remained as SVO, while certain complex sentences became simple sentences with SOV order:
>
> SVOV → S case marking particle O V.

Whereas Li and Thompson's theory is used to explain the change from SVO patterning to SOV in Chinese, Hyman (1975) has proposed grammaticalization as providing the impetus for a change from SOV to SVO in Niger-Congo. In both cases it is interesting to note that it is a serial verb which becomes grammaticalized.[98] This grammaticalization is, however, not sufficient in and of itself to cause a shift from SVO to SOV order as has been pointed out by Lord (1973).[99]

2.5.4. *Afterthought*

The notion of afterthought as the impetus for word order change was proposed first by McKnight (1893:217):[100]

> To the apparently finished sentence are added a number of explanatory details, afterthoughts, or some element, by reason of close connection with the following clause, may be put after the verb. To motives like these the analytic order probably owes it origin.

Afterthought was taken up again by Hyman (1974:121) for the explanation of the word order shift from SOV to SVO:

> [... afterthought] predicts that there will be intermediate stages between SOV and SVO, i.e., the verb does not zap into second position in one step, as it were. Rather, the grammatical elements between S and the V move out in accordance with the likelihood of their serving as afterthoughts.

In his discussion of afterthought, Kohonen (1978:130) points out:

> These considerations predict that there should be a scale of mobility of sentence elements, which is connected with their closeness to the verb. What is involved here is again the notion of valency adverbials and essential/peripheral constituents. Thus locatives, datives, benefactives and instrumentals are likely to move out before the object, with pronoun objects retaining the XV order longest.

Closely related to afterthought is Hetzron's (1975:376) proposed *presentative movement*:

> We may thus state that there exists a tendency in languages to put into final position elements that the speaker wants to keep available for further reference.

Afterthought thus pertains to the change in word order from SOV patterning to SVO not merely by the postponement of the object in one step and thus producing the required SVO pattern, but rather the step-by-step removal of all intermediate constituents between S and V and their subsequent grammaticalization in the postverbal position. Evidence for this has been given for English by Kohonen (1978) and Stockwell (1977) and for Niger-Congo by Hyman (1974).

I would now like to turn our attention to the Indic languages. In Old Indic the basic word order pattern SOV has been recognized as far back as Delbrück (1878). Since then there has been an evergreen problem to be explained: in many sentences there are elements which follow the verb. Delbrück (1878:51-56) called these elements *Schleppe* and Lehmann and Ratanajoti (1975:152ff.) recently called them *codas;* Gonda (1959:7ff.) has referred to such sentences as *amplified sentences*. Although Lehmann and Ratanajoti (1975) do propose an explanation for a change in word order from SOV to SVO in Old Indic similar to afterthought in which datives are the first to be moved into final position, the SVO pattern has not been grammaticalized. In Andersen (1982c) I have examined early Middle Indic (Aśokan inscriptions) which shows numerous examples of postverbal (commentized) elements, but still a dominant SOV patterning. In any such amplified sentence in these inscriptions we find only *one* postverbal constituent. There is however virtually no restriction to the specific constituent that can be commentized: subjects, direct and indirect objects, instrumentals, locatives and other elements are found in the postverbal position. This clearly shows that the postverbal placement of these constituents is due to the process of commentization and that the basic pattern is SOV. Thus there has not been a shift in order from SOV to SVO in Indic, see §4.2.2. below and Andersen (1982a) for further details.

In my opinion, afterthought is in the majority of cases just a spe-

cific instance of commentization. But if we recall Enkvist's definition of commentization given in §2.4.2.4. above, we see that commentization can move *only one* sentence internal constituent into final position. For afterthought to work, it seems to me that one major constituent (e.g. locative, dative, instrument, etc.) must first be moved into final position via commentization and then grammaticalized in this position (i.e. SOV + constituent$_1$ = basic order) before the next constituent can subsequently be commentized and grammaticalized in this final position (i.e. SOV + constituent$_1$ + constituent$_2$ = basic order), etc. This presupposes a specific sequence in the commentization of these constituents, and if I am not mistaken, objects must be the very first constituents to be moved, otherwise it would not be possible to come up with the order SV + Object + locative + etc.

2.5.5. *Conclusion*

I disagree with Bean (1976:46) when she writes:

> Lehmann had no theory of word order change in the sense that Li and Thompson' reanalysis, Hyman's afterthought, and Vennemann's principle of ambiguity avoidance ... constitute theories of change which are applicable generally to language change situations. He concentrates instead on the changes which have taken place in Proto-Indo-European and the Indo-European dialects.

On the contrary, I think that Lehmann does have a general theory of word order change which is superior to the other three theories mentioned by Bean (and above) by taking into account external[101] as well as internal causes and by not only committing himself to only one specific internal cause but also leaving open the possibility of a number of different internal causes. He does, for example, suggest that the principle of afterthought was the determining factor in the change of SOV to SVO in Old Indic.[102]

Leaving aside borrowing, all three other proposed explanations[103] for word order change have been shown to be neither necessary nor sufficient. But just as in phonology there is no one specific condition/explanation for all sound changes, so in word order studies one should not assume that there is only one specific condition/explanation for

word order change. All three theories discussed above may very well explain word order changes for specific cases, but none can explain the changes in all cases.[104] It must, however, be noted that all three theories do rely on the supposition that the surface verb-object order serves as the focal point from which all other word order patterns are derived.[105] It does seem likely though, that word order change can be due to internal sources other than the ones proposed here. In this context I agree with Givón (1978:83) when he views word order change in some cases as due to the reevaluation of more-marked pragmatic variants in such a way that they are re-interpreted as the neutral pattern:

> There is a wealth of evidence suggesting that the major mechanism for word-order change involves the "downward" *reevaluation* of more marked pragmatic word orders involved in various topic-focus operations, so that eventually they are re-interpreted as the neutral pattern. The more-marked pragmatic variants turn out to be overwhelmingly what Emonds ... calls root transformations, which are limited primarily to main clauses, or to more assertional clauses ... Therefore, since the mechanisms primarily responsible for word-order innovation are in operation mostly in main-assertional clauses, obviously the syntax of these clauses is going to reflect the more innovative word-order, while the word-order of subordinate clauses is going to be more conservative.

I would like to conclude this section on word order change with a quote from Weil (1978:69):

> It appears then that the perfection of a language consists not in following invariably an exclusive system of construction, or in adhering with immutable logic to the ultimate consequences of an adopted principle; but, on the contrary, it consists in a judicious improvement upon a too prominent and uniform characteristic, by the admission of an opposite system and by balancing the shortcomings of one method over against the excellences of another.

2.6. *Summary*

In this chapter the major aspects of Lehmann's theory have been discussed in detail. Although Lehmann's theory was taken as the point of departure, my remarks are directed towards all current typological theories based on word order. In my opinion, since word order

patterns cluster around geographically defined areas and are readily influenced by the patterns found in neighboring languages, the patterning of all relevant word order characteristics should be used as a means of classifying languages according to the areal method. It has also been shown that many of the word order patterns find their motivation not in the order of verb and object but in other areas; thus all characteristics should now be reanalyzed. Furthermore, the statement that languages have either modifying + modified or modified + modifying order represents an unwarranted oversimplification in many cases. And finally, as the theories now stand, they entail a certain degree of circularity especially in regards to the two qualifications made to explain exceptions, i.e., marking and word order change. If we define these two aspects non-circularly in such a way that they will be able to be falsified in theory and develop concrete means for the determination of markedness and typological change, then this circularity might be remedied.

In the remaining chapters other aspects of word order typology and specifically the more practically orientated ones will be discussed; the order of constituents within the comparative construction will serve as the point of departure.

Endnotes

1. See Sapir (1921: chapter VI).
2. Sapir (1921:61-62), cf. Szemerényi (1971:109).
3. Seiler (1962), see also Seiler (1960:5-50, esp. 19ff.), and §2.3.5. below.
4. See Sasse (1977:83, 121) and Ineichen (1979:90ff.).
5. Cf. Bechert (1976:55). See Bechert (1976:63-64) for a list of corrections to Greenberg (1966).
6. Bechert (1976:57), see Szemerényi (1971:79f.).
7. Masica (1974:181-182; 1976:29).
8. See Canale (1976) for work on hierarchies of word order relationships.
9. Cf. Kohonen (1978:40ff.); see also Thompson (1978) for work along these lines.

10. Cf. Comrie (1981:86ff.).

11. Cf. Jeffers (1976:986).

12. See Lehmann (1974a:passim).

13. Cf. Lehmann (1973c:50).

14. In Finnish negation is expressed by the auxiliary verb *en*, *et*, *ei*, etc.

15. E.g. Old Indic *ná* and its cognates.

16. See Vennemann (1974a:79; 1974b:8; 1974c:345).

17. See Lehmann (1974a:95): "deictic categories like tense differ from other modalities ..."

18. Cf. Lehmann (1974a:17).

19. Cf. Lehmann (1973c:52).

20. Cf. Szemerényi (1970:212ff.).

21. See Masica (1974:162) for other examples.

22. Cf. Lehmann (1974a:139) and Delbrück (1888:502f.).

23. Cf., e.g., Vennemann (1973:31f.), Givón (1971:399-401), Mallinson and Blake (1981:385 ff.) and Li and Thompson (1974).

24. See Toivonen (1978:157); another explanation is given by Tauli (1958:16).

25. Cf. Delbrück (1888:432): "Der Ausdruck, dass die Praeposition den Casus regiere, ist für die Periode der Sprache, die uns hier beschäftigt, höchstens bei *ā* bis and *purā (purás)* vor in ihrer Verbindung mit dem Abl. angebracht." See also Speijer (1886:114, fn.1): "It is wrong to say that the noun-case, attending on the prepo., is *governed* by it, for it is not the preposition, that causes the case, but it is the general bearing of the case, which is qualified and limited by the preposition."

26. According to Toivonen (1978:105) *ilman* represents an original instructive or genitive of *ilma*.

27. Cf. Hakulinen (1979:230) and Toivonen (1978:39).

28. Cf. Hakulinen (1979:110) and Toivonen (1979:205).

29. See Sadeniemi (1943:42; passim), Denison (1957:93-102) and Hakulinen (1979:499f.).

30. Cf. Delbrück (1888:44f.), Watkins (1963:35; 1964:1037) and Baldi (1979).

31. Cf. Bloch (1965:157) and Delbrück (1888:452). I have noted the following additional examples with *purás* "before": *puró no* (RV 7,1,3) and *ṇas purâḥ* (RV 1,42,1); *puró adhvaré* (RV 6,15,7) and *sṛ́jaye puró* (RV 4,15,4); *puró áśvān* (RV 3,53,23) and *ŕíśataḥ puró* (RV 4,7,9).

32. See Bloch (1965:157).

33. See Andersen (1979; 1982a) and §4.2.2. below.

34. See Hankamer and Aissen (1974:132); Rudes (1977:4) gives a table of strength hierarchy for different consonants in English. For assimilation in Pāli see Junghare (1979:12; 126ff.).

35. Cf. §2.2.6. below for more on German word order.

36. See Ross (1970:250).

37. See Ross (1970:251).

38. See Tai (1973:668), cf. however Bach (1971:156) and Masica (1974: 158).

39. See Lehmann (1973b:56; 1974a:33).

40. E.g. Maling (1972), Pak (1973) and Subbarao (1972).

41. See Friedrich (1975:22; 1976:213f.).

42. See Lehmann (1978b:194) and Lehmann and Ratanajoti (1975:153); cf. Lehmann (1978a:20; 1978c:412).

43. Heine (1976:12-13;17).

44. More recent work on gapping can be found in Pulte (1971), Walter (1976), Neijt (1979) and Mallinson and Blake (1981:Chapter four).

45. Underlying in the sense of deep structure word order and not basic word order.

46. Cf. Watkins (1976:309): "The middle voice is a semantic category; reflexivization, passivization etc. are syntactic categories which could be expressed formally by the middle voice."

47. See Weil (1978:62): "It is evident from these facts that the ascending construction binds more closely the ideas that have been put into relation with one another and that the descending construction tends more to detach them from one another."

48. See Weil (1978:67): "Briefly expressed, the chief characteristic of the ascending construction is to make prominent the unity of the thought, that of the descending construction is to show clearly all its parts."

49. For a very useful survey see Salus (1965).

50. Cf. Weil (1978:15): "In fact the technical term *hyperbaton* is inveriably used by Plato in the same sense which has attached to it ever since."

51. See Seiler (1960:19).

52. Seiler (1960:21).

53. The first mention of a position other than initial for marking is found at Lehmann (1978a:22; 1978b:174-175), cf. Crews (1977: 140).

54. See also Delbrück (1878:13): "Diese traditionelle Wortstellung wird durchkreuzt von der occasionellen Wortstellung, welche in der bewegteren Erzählung und der begrifflichen Erörterung häufig ist. Das Grundgesetz desselben ist: Jeder Satztheil, der dem Sinne nach stärker betont sein soll, rückt nach vorn."

55. See Delbrück (1888:25): "Namentlich möchte ich nicht entscheiden, ob vielleicht ein Wort auch dadurch ausgezeichnet werden kann, dass es an die letzte Stelle des Satzes tritt.", and Behaghel (1909:138): "Man wird also gerne das ans Ende rücken, was man wegen seiner Wichtigkeit dem Gedächtnis des Hörers besonders einprägen mochte, oder das jenige, was wegen seines größeren Umfang an sich nicht so leicht vom Gedächtnis aufgenomen wird."

56. See Szemerényi (1973:64): "The terms marked and unmarked, coined, it would appear, by Trubetzkoy in 1930 [See Trubetzkoy's letter of 31.7.1930 quoted by JAKOBSON 1971:734f., and cp. Jakobson's use of the terms ibid. 125f., etc. ...] were meant to characterize the two members of a privative opposition as possessing or not possessing a mark, a phonological feature that was the only one to distinguish them"; see also Greenberg (1966b:13).

57. Cf. Greenberg (1966b:25).

58. Cf. Hockett (1955:166-167).

59. See Szemerényi (1973:67-68).

60. Enkvist also uses the term "textual fit" to refer to the degree of adaption that integrates a sentence into its context, i.e., as a textual marking feature; see also Masica (1974:157f.).

61. For ideas along similar lines, cf. Weil (1978:53).

62. See Andersen (1980a; 1980c; 1982c) for a discussion of pragmatic/discourse functions of word order in Indic.

63. See Greenberg's universals 9-12 (1966:80-83).

64. In Finnish inversion can also be used along with the particle, cf. the following endnote.

65. The order *kotiinkö menemme* 'Is it home that we are going?' is also grammatical, but entails the focusing of *kotiin*.

66. The constructions expressed in these last examples are the locative and existential respectively, cf. Andersen (1982c:18f.).

67. See Weil (1978:59), Baker (1970), Bach (1971) and Tai (1973:664).

68. Personal communication.

69. Cf. Hyltenstam (1976:86). For English see Green (1976).

70. Finnish subordinate clauses must have either verb-initial word order followed by the enclitic interrogative particle, or *WH-* words initially; there is, however, still a variation in word order possible in the remaining part of the clause for the expression of

definiteness and indefiniteness: *voitko sanoa onko auto kadulla?* 'Can you tell (me), if the car is in the street?', *voitko sanoa onko kadulla auto?* 'Can you tell (me), if there is a car in the street?', *voitko sanoa missä linjaauto on?* 'Can you tell (me), where the bus is?', *voitko sanoa missä on linjaauto?* 'Can you tell (me), where there is a bus?'

71. It should be added here that the intonation pattern may as well be of assistance for the correct interpretation.

72. Hopper and Thompson (1980) show that aspect, definiteness of object and a number of other grammatical categories are closely related. I might add that word order can play an important role in distinguishing these categories. See Mallinson and Blake (1981:161).

73. For more recent work on passives, see Andersen (1983; Forthcoming a; b).

74. See Enkvist (1975:74).

75. See Enkvist (1975:75); cf. Givón (1979:78) for an example from Sherpa.

76. See Enkvist (1975:76; 1976a:10).

77. Cf. Oertel (1926:29ff.).

78. Cf. Scaglione (1978:ix); see also Enkvist (1976a:11) and Delbrück (1878:37-38).

79. Cf. Weil (1978:89). Weil (1978:92-93) thought that this principle should be reversed and reformulated as: "Of several complements relating to the same word give the most concise form to that which immediately follows the modified word, and, as you go on, give to the modifying terms a fuller and more extended form."

80. Cf. also Behaghel (1909:138): "Man wird also gerne das ans Ende rücken, was man wegen seiner Wichtigkeit dem Gedächtnis des Hörers besonders einprägen möchte, oder dasjenige, was wegen seines größeren Umfangs an sich nicht so leicht vom Gedächtnis aufgenommen wird."

81. Cf. Haarmann (1976:143).

82. See also Weil (1978:42).

83. Cf. Weil (1978:43).

84. See also Miller (1975:33).

85. For some examples of the use of 'free word order' see Comrie (1981: 32, Mallinson and Blake (1981:181) and Steel (1978:605), but see Mallinson and Blake's (1981:170) remarks on Steel's definition.

86. See Staal (1967) for an in-depth investigation of free word order in Sanskrit. The following passage sums up his approach in a nutshell: "On closer inspection the gap between Indian and Western approaches appears to be narrow. This is not to say that the

divergence is merely a matter of language and presentation. The two approaches, although to some extent complementary, are basically different. They agree however in that, on the whole, word order has *no grammatical significance*" (60). On page 28, Staal cites a passage from Patañjali, in which Staal interprets him as stating that word order is free (*yatheṣṭam*). *yatheṣṭam* means, however, 'according to wish' and not 'free'; depending upon what the speaker has in mind, a different order can be used. Accordingly, I would translate the examples given in this passage on page 28 as: *āhara pātram* 'fetch a bowl' and *pātram āhara* 'fetch the bowl.' In addition, I would say that if Staal's theory of grammar cannot explain the variation in Sanskrit sentences, a possible alternative reason for this could be that the grammar itself is not capable of doing this, rather than the categorical conclusion of free word order.

87. See also Watkins (1976:306).

88. Lehmann's (1973b:1) very first sentence in his book on historical linguistics starts with "Languages change constantly,..."

89. See Sasse (1977:123ff.).

90. See Hyman (1975:115ff.), Aitchison (1979:45) and Mallinson and Blake (1981:398ff.).

91. See Lehmann (1973c:57), Hyman (1975), Bach (1970), Hetzron (1975: 377), Givón (1971:§2.2.), Sasse (1977:121ff.), Mallinson and Blake (1981:398f.); see also §2.1.1. above. Cf. Lehmann (1978c:401).

92. See Vennemann (1974c:361) and Kohonen (1978:28-29).

93. See Mallinson and Blake (1981:399ff.).

94. Cf. Leinonen (1977:49), Sasse (1977:94ff.) and Hyman (1975:117).

95. Cf. Klein (1975:54) and Bean (1977:51).

96. Cf. Hyman (1975:117), Leinonen (1977:49) and Sasse (1977:126).

97. Cf. Hyman (1975:117) and Itkonen (1978:56).

98. See also Givón (1975) and other works mentioned there especially for African languages; see also Sasse (1977:104ff.).

99. Cf. Lord (1973), Bean (1977:39) and Sasse (1977:117).

100. See also Bean (1977:28f.), Leinonen (1977:49) and Hyman (1975: 119ff.). McKnight views this type of word order change as being due primarily to increasing communicative needs. But as Koch (1974) points out perceptual ease is not the governing factor in language change, cf. Bean (1977:36).

101. Vennemann also takes external and internal causes into account, see Vennemann (1974c:351-352), but see Itkonen (1978:56).

102. I am, however, of a different opinion with respect to the change in Indic, see §4.2.2. below and Andersen (1979a; 1980a; 1982a).

103. See however Mallinson and Blake (1981:398): "It is not accurate to say that contact, grammaticalization and afterthought or expressivity shifts are *explanations* for word order change. For instance, contact with another language may result in the borrowing of a pattern, but we are still left with the question of why one particular pattern was borrowed rather than another, why the borrowing took place at one time rather than another, why one language was a donor rather than a recipient and so on. We prefer to speak of ways in which basic word order changes. Disambiguation is intended as an explanatory principle but it does not seem to be a sufficient one, as we shall see."

104. Cf. Sasse (1977:93): "Wenn SOV nicht die universell beliebteste Wortstellung ist, dann gibt es keinen Grund mehr, nach einem universellen Faktor zu suchen, der ihre Erhaltung verbietet; SOV-Sprachen können vielmehr aus beliebigen Motiven ihren Wortstellungstyp wechseln, und man wird sich in jedem Einzelfall von neuem darum bemühen müssen, diese Motive ausfindig zu machen."

105. Cf. Lehmann (1972f:271-272): "... we would expect a change in the order of verbs to affect the other constructions."

3.0. WORD ORDER WITHIN COMPARATIVE CONSTRUCTIONS

This chapter represents an investigation into one of the most important typological characteristics, namely, the word order within the comparative construction. As Puhvel (1973:145) points out:

> 'Comparison' in the general sense, even if we specify 'grammatical comparison', is a vast topic involving both syntax and morphology (leaving alone semantics and symbolic logic) and encompassing expressions and constructions for sameness and identity, extremeness and superlativity, in addition to measured relativity.

Since comparison is such a vast topic it will be of utmost importance to clearly define comparison as it will be used here.

Comparison can involve a number of parameters, the two most important being the number of entities compared and the number of qualities or properties used. Although it is possible to use one entitiy and two (or more) qualities - cf. *The table is longer than (it is) wide.* - or more than two entities and one quality - cf. *John is the tallest boy in the class.* -, in this investigation we will concentrate on comparisons involving only two entities and one quality or property: *John is taller than Mary.* In this connection it is relevant to note the following fact: our comparative construction does not express the actual process of comparison, but rather the *result* of such a comparison.[1] Consequently, there are only two basic results which can be expressed, i.e., (a) identity or similarity and (b) difference. If the result shows that the two entities in question do not differ with respect to the quality or property, we are dealing with a *comparison of equality: John is as tall as Mary.* If, on the other hand, the two entities do indeed differ, then the result will be termed a *comparison of inequality: John is taller than Mary.* Furthermore, the result of comparison can be ex-

pressed *implicitly* as in *John is (just) as tall / John is taller* or *explicitly* as in *John is as tall as Mary / John is taller than Mary*. In the following investigation the terms *comparison* and *comparative construction* will be employed to denote an *explicit comparison of inequality: X is larger than Y*.

It is also of interest to point out that by considering (i) the number of entities, (ii) the number of qualities, (iii) the result as being equality or inequality and (iv) the mode of expression, i.e. implicit or explicit, as the primary parameters of comparative constructions we can dispense with the traditional *degrees of comparison*, cf. Ultan (1972: 120):

(1) Positive: *John is tall.*

(2) Equative: *John is as tall as George.*

(3) Comparative: *John is taller than George.*

(4) Superlative: *John is the tallest of the boys.*

The difference between the positive and the equative lies in the mode of expression: the positive - if we choose to interpret it as a comparative form - is an implicit comparison, whereas the equative is an explicit comparison. Furthermore, the comparative involves only two entities, the superlative more than two.[2]

3.1. *Current views*

Before entering into our investigation let us first recall some current views on word order within comparative constructions. The starting point will be the discussion of comparison by Greenberg and his *Universal 22*:

> One other topic concerning the adjective to be considered is that of comparisons, specifically that of superiority as expressed, for example in English, by sentences of the type 'X is larger than Y.' A minority of the world's languages have, like English, an inflected comparative form of the adjective. More frequently a separate word modifies the adjective, as in English, 'X is more beautiful than Y', but in many languages this is optional or does not exist at all. On the other hand, there is always some element which expresses the comparison as such, whether word or affix, corresponding to English 'than', and obviously both the adjective and the item with which comparison is made must be considered, as in Eng-

lish *larg(er) than Y*. These will be called adjective, marker of comparison, and standard of comparison. The two common orders are: adjective, marker, standard (as in English); or the opposite order: standard, marker, adjective. These two alternatives are related to the basic order typology, as shown by table 8. A number of languages are not entered in this table because they utilize a verb with general meaning 'to surpass'. This is particularly common in Africa (e.g., Yoruba): 'X is large, surpasses Y'. Loritja, an Australian language which has 'X is large, Y is small', is likewise not entered.

Table 8

	I	II	III
Adjective - Marker - Standard	5	9	0
Standard - Marker - Adjective	0	1	9
Both	0	1	0
		Pr	Po
Adjective - Marker - Standard		13	1
Standard - Marker - Adjective		0	10
Both		0	1

Universal 22. If in comparisons of superiority the only order, or one of the alternative orders, is standard-marker-adjective, then the language is postpositional. With overwhelmingly more than chance frequency if the only order is adjective-marker-standard, the language is prepositional (Greenberg 1966:88-89).

In Lehmann's VO/OV typological theory this universal is generalized to: VO languages exhibit the word order *adjective-marker-standard*, i.e. A-M-St or just AS, while OV languages show the order *standard-marker-adjective*, i.e. St-M-A or just SA. To illustrate this Lehmann (1972c:977) gives the following examples from OV Hindi and VO Spanish:

Hindi: *Kuttaa billii see baRaa hai.*
dog cat from large is
Subject Standard Marker Adjective Verb
"The dog is larger than the cat."

Spanish: *El perro es mas grande que el gato.*
The dog is more large than the cat
Subject Verb Adjective Marker Standard
"The dog is larger tha the cat."[3]

The first example from Hindi shows the basic sentence pattern (S)OV with the order Standard (*billii*) before Adjective (*baRaa*), i.e., SA,

while the opposite order AS (*mas grande ... el gato*) is found in the (S)VŌ Spanish example.

3.1.1. *Importance of the comparative construction*

As we have already seen in the last chapter two qualifications to the 'placement principle' have been made: exceptions can be the result of (a) marked patterns, or (b) typological change. The importance of the order of elements within the comparative construction for the typological theory of Lehmann can now be deduced from the following passages:

> The most secure of these [constructions] is the comparative; it is never changed for poetic effect ... (Lehmann 1973b:56).

> Others [i.e., typological patterns] are rearranged with difficulty, such as comparatives; it is unlikely that an English poet would produce an OV comparative construction such as *the oaks house from high* to express *the oaks are higher than the house*. Still other characteristic patterns can be rearranged relatively readily, such as the shift of a postposition to preposition order, as was common in Classical Sanskrit and Greek. For this reason we ascribe great importance to constructions like the comparative in determining the basic patterns of individual languages (Lehmann 1974a:22).

> One of the patterns most resistant to change is that for comparison of inequality (Lehmann 1976c:172).[4]

In fact, the comparative construction has been regarded as being so central to word order typology that the typological patterning of an individual language can be determined alone by the order of elements within this construction:

> ... the typological approach permits predictions for these patterns. If for example a certain type of comparative construction is found in a language, the prediction can be made that the language is OV or VO; one needs little more, for example, than evidence of the pattern in the Japanese sentence ... ⟨sentence with a comparative construction⟩ ... to conclude that it is an OV language (Lehmann 1978c:429-430).

Using this principle that the word order within the comparative construction reveals the word order patterning of an individual language and extending this to the reconstruction of earlier linguistic states,

it has also been shown that PIE was an OV language:

> Though ... it has long been believed that in IE the object preceded the verb, the fluid word order of Latin, Greek and Sanskrit caused a lingering doubt. Lehmann has reargued the case on the basis of the order of comparative constructions in the earlier Vedic Sanskrit and Hittite ... (Adams 1976:71).

If, however, two different patterns for the comparative construction are indeed found in a single language, it is said to be an indication that the language is in the process of shifting from one language type to another:

> In such languages [i.e. languages undergoing typological change] two contrasting patterns of characteristic constructions may be attested, as in Latin with VO comparatives like *major quam tu* and OV comparatives like *tē major* 'bigger than you' (Lehmann and Ratanajoti 1975:150-151).[5]

3.1.2. *Motivation for the word order within comparative constructions*

The 'placement principle' states that in OV languages adjectives are placed before their nouns (AN: modifier + modified), while in VO languages the opposite order holds true, i.e. NA. In the comparative construction, which is also composed of a noun (standard) and an adjective, the opposite order is found:

OV - AN, GN, Po, SA,

VO - NA, NG, Pr, AS.

The motivation for this order (SA/AS), then, cannot be the same as the motivation for noun and adjective (AN/NA). It is generally assumed that the comparative construction and the verb-object order are similarly motivated:

> In a comparison, any 'topic' is measured against a 'standard' and the measurement is frequently expressed as a state. In many languages expressions indicating states are made with adjective-like elements having verbal characteristics. ... It is accordingly reasonable to expect that the order of comparative constructions should parallel that of verb:object constructions in any given language, as we indeed find (Lehmann 1972c:983).

> Since the standard is, semantically, a specifier of the transitive adjective, and since, syntactically, the result of the connection between the comparative transitive adjective and the standard noun phrase is an adjective rather than a noun phrase, we have to consider the standard as the operator and the comparative as the operand. The situation is analogous to that between object noun phrases and transitive verbs (Bartsch and Vennemann 1972:138, fn. 46).[6]

This motivation is extended to encompass the prepositional construction as well:

> For typological purposes the comparative construction and prepositional/postpositional constructions are to be regarded as verbal. In each of these constructions a constituent governs another constituent in much the same way as a verb governs an object. Accordingly in their underlying pattern of arrangement the three constructions *verb-object*, *adjective-pivot-standard* and *preposition (postposition)-object* are identical (Lehmann 1974a:15).[7]

3.1.3. *Marker and pivot*

Above we have noted that Greenberg recognized three elements within the comparative construction: (a) adjective, (b) standard and (c) marker. Instead of the term *marker*, Lehmann uses the term *pivot* which can be expressed by either a case ending, or a separate particle:

> In Old Nors *sólo fegra* 'sun (than) fairer' the noun ending *-o* functions as pivot. ... In other languages the nominal ending may be an ablative, such as Turkish *-den* or the appropriate endings in Sanskrit and Latin. The pivot may also be a separate particle, as in Japanese *yori* 'from' (Lehmann 1972b:170).

The term *marker* is still retained by Lehmann to refer to comparative suffixes added to the adjective, e.g. *-er* in *larger*:[8]

> ... and the adjective is marked with a 'comparative suffix' (Lehmann 1972b:170).

> ... the standard ... in the ablative ... before the adjective with the comparative suffix (Lehmann 1972c:985).[9]

In the reconstruction of the comparative construction, the most important aspect is the order of elements and not the etymology of the specific elements used:

> For in syntactic constructions the primary interest should be directed at the syntactic constituents rather than the etymology of the lexical material used to indicate them (Lehmann 1972a:327).

> ... for reconstructions of the Proto-Germanic comparative construction it is not essential to determine whether the pivot was the etymon of Gothic *þana*, OHG *dana*, or another particle, or a particular morphological ending, such as that of the dative. Rather, we must determine whether both patterns were found in the language (Lehmann 1972b:171).

Friedrich, on the other hand, uses the two terms *marker* and *pivot* in a completely different way:

> To begin with, Lehmann and his followers, unlike Greenberg, usually ignore the marker (e.g., English 'than') as a variable, and sometimes overvalue the pivot with the consequence that everything comes to hinge on the relative order of the Standard and Adjective (Friedrich 1975:27).

Although Friedrich is right in pointing out the overemphasis of order in Lehmann's reconstruction (and subsequent neglect of the etymologies of the specific elements used),[10] it is not clear how Friedrich's *pivot* is related to the comparative construction. He has, by the way, overlooked the exact usage of *marker* by Greenberg:

> Greenberg's marker, incidentally, refers only to a 'separate word' such as English 'than', and does not include case endings even where, as in Greek, they function as markers (Friedrich 1975:17).

Greenberg (1966:88) states explicitly that the marker can be expressed by either a word or an affix:

> On the other hand, there is always some element which expresses the comparison as such, whether word or affix, corresponding to English 'than'.

The use of pivot (P) by Friedrich can be seen from the following passage:

> A typical example of a three place PSA comparison is (Y 334): ὅς ... σεῦ ... φίλτερος, 'who is dearer than you'. The patterns for Homeric Greek three place constructions can be summarized as follows:

(I) PSA 29 (II) PSA 5 (III) ASP 3
PAS 26 PAS 6 APS 3 ...
The patterns just stated above are difficult to relate to some of the other patterns, in terms of current theory. One of Greenberg's universals (#22), for example, calls for SPA or APS as either the *only order* or the *main order*, but neither of these conditions holds for Homeric Greek (Friedrich 1975:16-17).

Additional examples for pivots in Homer are given by Friedrich (*loc. cit. fn.8*):

(i) SPA: πατρός ὅδε ἀμείνων
"He (is) better than his father."

(ii) ASP: θάσσονας ... ἰρήκων ... ἵππους
"horses faster than hawks".

(iii) PA: το ... λωΐτερον καὶ ἀμείνων (sic!)
"that is better and better".

(iv) AP: ἀρείων ... ἐγώ
"better than I".

It seems to me that Friedrich uses the term pivot in the sense of the A-member of a construction of the form *A is larger than B*, i.e., pivot refers to the first entity, while the standard refers to the second.

To sum up, Greenberg originally recognized three different elements for the investigation of the word order within comparative constructions: (a) an adjective, (b) a standard and (c) a marker. Lehmann, although introducing an additional element pivot, concentrated on the order of the adjective and standard in his theory. To complicate matters, Friedrich lays emphasis on his pivot, which seems to correlate to the first entity (A) in comparisons of the form *A is bigger than B*. This last viewpoint will be discussed in the next section.

3.1.4. *The comparative construction as a constituent*

Let us now take a look at the following examples:

(a) *John is a good boy.*

(b) *John is in town.*

(c) *John is Fred's son.*

(d) *John is tall.*

(e) *John is taller than Harry.*

Through substitution and other tests[11] we can show that the underlined portions of the above examples are constituents: a predicate noun phrase (NP) in (a), a prepositional phrase (PP) in (b), a NP composed of a genitive and a noun in (c), a predicate adjective in (d) and an adjective phrase (AP) in (e). Now, in discussing the word order within these constituents we can say that (a) reveals the order adjective + noun, (b) exhibits a preposition and not a postposition, (c) the order genitive + noun, etc. Notice now that the subject *John* has absolutly nothing to do with the word order of these first three predicate constituents. Turning to (e) we see that the order of elements within the AP is adjective + *than* + standard. Bringing the subject *John* into consideration here as the pivot in the way Friedrich does is just as absurd as it would be to consider the subject along with the other elements in the other examples above: (a) would then show the order pivot ... + adjective + noun, etc. In other words, we should be interested in the order of elements within a constituent - in this case an AP - and the subject certainly does not belong to this constituent.

It therefore seems to me that Friedrich has brought into the argument an element which, strictly speaking, does not belong there. Subsequently he neglects a very important element of the comparative construction, i.e., the *marker*.[12] In this way he has distorted the true picture of the comparative construction and suggested that our research should be directed in another direction which, if followed, would lead us astray:

> A basic source of confusion has been the focus on the two variables of adjective and standard. ... If we include the variables of Pivot and Marker, as would Greenberg ... What we obviously need is a fullscale comparative study of comparison in all the stocks, taking Pivot and Marker fully into account and relating the results to what is known typologically and in terms of the logic of comparison (Friedrich 1977:467).

To sum up then, the pivot - as proposed by Friedrich - does not belong to the comparative construction and hence renders his examples from Homer as irrelevant for our discussion.

3.2. *Jensen 1934*

The previous paragraphs have shown that Greenberg's *marker* can be expressed through a variety of different means: in Latin *te maior* the marker is the ablative case ending whereas in *maior quam tu* it is the particle *quam*. These two expressions do not, however, completely exhaust the possible means of expressing a comparison of inequality in the languages of the world. In Greek, for example, a comparison can be expressed through the verb περίειμι "to be better than, superior to another, surpass":

... σέ ... περὶ θρένας ἔμμεναι ἄλλων (Homer N 631)
you sur- in reason -pass others

"... you surpass the others through (your) understanding."

The question which naturally arrises now is what are the different means used in the languages of the world to express a comparison of inequality? Jensen addressed himself to this question in his article "Der steigernde Vergleich und sein sprachlicher Ausdruck" (Jensen 1934).[13] After initial remarks about comparison in general, Jensen proceeds to give a *psychologically motivated sequence*[14] of the different means found in the languages of the world. This sequence will be the topic of the next sections. I might add here that the only other in-depth study of comparative constructions across languages that I am aware of - i.e. Ultan (1972) - has not been used for the following reasons. While Ultan's main interest was directed towards semantic features, we will be primarily interested in morpho-syntactic features of comparative constructions. Furthermore, Ultan differentiates between standard and degree markers; this I cannot agree with for reasons which will become evident later on.[15]

3.2.1. *A is big, B is small*

This construction type is effected by mere antithetic juxtaposition of two antonymical qualities: big - small.

Dakota: *de šiča, he wašte.*
this bad that good = "This is worse than that."[16]

3.2.2. *A is big, B is not (big)*

This type is basically the same as the previous type, the difference being that the antonymical quality (*small*) is subsumed under a negative form, i.e., *not (big)*.

Mosquito: *Jan almuk, Sammuel almuk apia.*
John old Sammuel old not
"John is older than Sammuel."[17]

3.2.3. *A and B, A is big*

In this construction type two entities are first given, and then one is singled out to be equated with the quality. In a way it is related to the previous type, the difference being that the negative form is not given but is to be understood.

Nyandya: *madzi ni cakudia komo cakudia.*
water and food good food
"Food is better than water."[18]

3.2.4. *A is big compared with B*

Whereas in the previous three types the comparative construction has been expressed through the juxtaposition of two clauses, this type incorporates both clauses into one in which the comparison is explicitly expressed through an element with various meanings: "by, beside, with reference to, compared with, etc."

Nuba: *Osmān Alí-n dógor irjēnun*
Osmān Ali-by is rich
"Osmān is richer than Ali."[19]

3.2.5. *A is big from B*

The next step in the psychological development of comparative constructions - according to Jensen - is the usage of either prepositions (/postpositions) or a case marker with the meaning "from". This type is perhaps the most widely used construction found.

Hindi: *yih ghar us ghar se barā hai.*
this house that house from big is

"This house is bigger than that house."[20]

3.2.6. *A surpasses B in size*

This is the first type which uses an element explicitly containing the idea of being more, surpassing through either a preposition (/post-position) meaning "above" or a verb meaning "to surpass".

Preposition - Latin: *super omnes beatus.*
above all happy.
"happier than all (others)."[21]

Verb - Greek: ἐγὼ περί ... εἰμι θεῶν (Homer Θ 27)
I above am gods
"I surpass the gods."[22]

3.2.7. *A is more big with respect to B*

The next stage in the development is effected by the addition of an adverb meaning "more".

Italian: *più grande di me.*
French: *il est plus grand que son frère.* [23]

3.2.8. *A is bigger than B*

The last stage in the development of the comparative construction is effected by the use of a special comparative form of the adjective. Although this phenomenon is widely used in most Indo-European languages, outside Indo-European it is rather uncommon, being found only in parts of Finno-Ugric, certain Caucasian languages and a few others.[24] Jensen differentiates three construction types which have a comparative adjective at their disposal.

3.2.8.1. *Prepositional (/postpositional) construction*

In this construction the B-member is connected to the adjective (*bigger*) by means of preposition (or postposition).

Modern Greek: Γιώργης είναι μεγαλύτερος από το Γιάννη
George is bigger from John
"George is bigger than John."[25]

3.2.8.2. *Case construction*

The connection between the B-member and the adjective in this type is expressed through the case ending.

Latin: *tē* *maior*
you-from bigger = "bigger than you".

3.2.8.3. *Particle construction*

In this type a separate lexeme is used to connect the standard to the adjective.

Latin: *maior quam tu*
"bigger than you".

3.2.9. *The various types of comparative constructions*

To sum up, Jensen has distinguished the following psychologically motivated sequence of comparative constructions:

(i)	A is big, B is small	[+J, +Ant]
(ii)	A is big, B is not (big)	[+J, +Neg]
(iii)	A and B, A is big	[+J, -Neg, -Ant]
(iv)	A is big compared with B	[-J, +Ad]
(v)	A is big from B	[-J, +"FROM"]
(vi)	A surpasses B in size	[-J, +Verb]
(vii)	A is more big with respect to B	[-J, +Adv]
(viii)	A is bigger than B	[-J, +Comp]

(J - juxtaposition, Ant - antonymical quality, Neg - negative, Ad - adposition, Comp - comparative adjective).

3.3. *A reanalysis*

In the following sections Jensen's sequence will be reanalyzed with special emphasis devoted to the morpho-syntactic characteristics. Let us first restate the various construction types noted above with respect to the prominent morpho-syntactic features:

(i-iii)	A is big, B is small/not (big)	[+J, -Comp]
(iv)	A is big by/with/from B	[-J, +Ad, -Comp]
(v)	A is big B-from	[-J, +Case, -Comp]

(vi)	A surpasses B in size	[-J, +Verb, -Comp]
(vii)	A is more big from B	[-J, +Adv, -Comp]
(viii-1)	A is bigger from B	[-J, +Ad, +Comp]
(viii-2)	A is bigger B-from	[-J, +Case, +Comp]
(viii-3)	A is bigger than B	[-J, +Pcl, +Comp]

Here we see that the distinctive feature of (i) to (iii) is the juxtaposition [+J] of two distinct clauses; in the remaining construction types the entire construction is incorporated into one clause [-J]. Since comparative forms of adjectives are not found throughout the world, the construction types (i) to (vii) can be characterized by the lack of such comparative forms [-Comp]; consequently, types (viii-1) to (viii-3) will be characterized by the employment of comparative forms [+Comp]. Furthermore, the standard is connected to the adjective by means of either an adposition [+Ad] (i.e. preposition or postposition) as in types (iv) and (viii-1), a case ending [+Case] as in types (v) and (viii-2), an adverb [+Adv] as in type (vii), or a particle [+Pcl] as in type (viii-3). We also find the employment of a verb [+Verb] in type (vi). Let us now take a closer look at these features.

3.3.1. *The comparative adjective*

As we have already noticed above only a very few languages have special comparative forms for adjectives at their disposal. The difference, however, between constructions with comparative adjectives and those employing positive adjectives is morphological and not syntactical. We notice then at one that the following pairs of types differ with respect to a morphological element (i.e. the comparative suffix) but not syntactically:

(a) Juxtaposition

(i) Without a comparative adjective - Hittite

nu-wa-za zi-ig LUGAL.GAL.
am-mu-ug-ma-wa-za LUGAL.GAL.TUR.^{RU} (KBo VI29II1)
"And you (are) a great king,
I (am) but a small king." [26]
"You are a greater king than I am."

(ii) With a comparative adjective - Classical Sanskrit
śreyān mṛtyur na nirjayaḥ
"Better (is) death, not defeat."[27]

(b) Adposition

(i) Without a comparative adjective - Hindi
mohan se baṛā
Mohan from big = "bigger than Mohan".

(ii) With a comparative adjective - Modern Greek
μεγαλύτερος ἀπὸ τὸ Γιάννη
bigger from John = "bigger than John".

(c) Case

(i) Without a comparative adjective - Hittite
anzēl TI-*anni UL SA BELU.NI* TI-*tar nakki.*
our life-DAT not GEN lord-our life important
"The life of our lord is not more important than our life" (KUB XXXI 42 II 18f.).[28]

(ii) With a comparative adjective - Latin
melius morte (Plautus: Rud. 675)
better death-from = "better than death".

Notice also that comparative forms of adjectives can be expressed synthetically as in *bigger, larger,* etc., or analytically as in *more beautiful, più grande, plus grand,* etc. This means then that the feature [+Adv] is, in fact, an allomorph of the feature [+Comp]. Keeping these facts in mind, we can now state more generally the various construction types as follows:

(a) Juxtaposition: A is big(ger), B is small / not (big),
(b) Adpositional: A is big(ger) FROM B,
(c) Case: A is big(ger) B-FROM,
(d) Particle: A is bigger THAN B, and
(e) Verbal: A SURPASSES B (in size).

3.3.2. *The adjective*

The adjective is that element within the construction which expresses the quality or property used in comparison. This seems sim-

ple enough, but, in fact, things are much more complicated than this. Take for example the following examples of comparative constructions from Hixkaryana given by Derbyshire (1979:67):

kawohra naha Waraka. kaw naha Kaywerye.
tall-neg. he-is Waraka. tall he-is Kaywerye.
'Waraka is not as tall as Kaywerye' or 'Kaywerye is taller than Waraka' ...

ohxe naha meku. ohxe nyhe naha yayhɨ. ...
good he-is monkey. good more he-is tapir. ...
'Monkey is good, tapir is better, ...' ...

kratxatxa yoho naha tukusu.
grasshopper bigger-than it-is hummingbird
'The hummingbird is bigger than the grasshopper'.

At first sight there does not seem to be anything wrong with these examples. Notice, however, the fact that this language does not possess the grammatical category *adjective*:

> Adjectives and adjective phrases do not occur. Adjective-like words are treated as adverbs (loc. cit.:42)[29]

If the language does not have adjectives, does this mean that it cannot express a comparison of inequality? Certainly not. What this does mean is that the language will use other grammatical categories for the expression of the quality or property involved in comparison. I would, therefore, rather gloss the examples above in the following way:

(i) Tallness-NEG he-is Waraka. Tallness he-is Kaywerye.

(ii) Goodness it-is monkey. Goodness more it-is tapir.

(iii) Grasshopper over[30] it-is hummingbird.

In this connection let us recall what Givón has to say about the category adjective:

> To summarize briefly, a universal phenomenon seems to exist whereby the lexical categories VERB, ADJECTIVE, and NOUN occupy different areas of a *continuum*, and the scalar property of that continuum seems to be *time-stability*. ... Given the facts summarized above, it is, of course, no accident that the lexical class ADJECTIVE has remained problematic, exhibiting even within the same language some 'more noun-like' properties and some 'more verb-like'ones (Givón 1979:14).

We see then that comparative constructions may employ a number of different grammatical categories for the expression of the quality or property. In the first two examples from Hixkaryana above nouns are used - cf. *John is more of a man than George* (Ultan 1972:120). The third example shows the use of an adverb with the meaning "over". Furthermore, it is no surprise to find expressions of comparison employing verbs with the general meaning "to surpass", as Greenberg has already noted (1966:88). For this reason I would strongly object to the elimination of such verbal constructions in a general typological discussion of comparative constructions; the same also applies to the juxtapositional or paratactical construction.

It therefore seems more useful to recognize at least two different construction types for the expression of comparison depending upon the grammatical category used to express the quality or property: (a) a *nominal construction* employing either a noun or, more commonly, an adjective for the quality or property and (b) a *verbal construction* which uses a verb for this expression.

3.3.3. *Link*

In the literature mention has been made quite often of the following two constructions in Latin:

(a) *maior quam tu*, and

(b) *te maior*.

The only difference usually attributed to these examples is a variation in word order: in (a) we find the adjective before the standard and in (b) the standard before the adjective. This situation is attested in a number of other languages, cf. the next two examples from Finnish:

(c) *pitempi kuin sinä.*
"taller than you".

(d) *sinu-a pitempi.*
you-from taller = "taller than you".

Unfortunately, there are a number of problems with this usual explanation. First of all, in both Latin and Finnish we also find the opposite order for the second examples (b) and (d) attested in the literature:

(b') *melius mort-e* (Plautus: Rud. 675)
better death-from = "better than death".

(d') *pienemmät hevosen pää-tä* (Kalevala 14,319)
smaller horse's head-from = "smaller than a horse's head".

This means then that word order is not a distinguishing feature for these constructions.

I would now like to introduce the term *link* as the morpho-syntactic means of connecting the standard to the adjective. This, I believe, is the basic distinguishing feature of the two construction types mentioned above. Specifically, in the constructions (a) to (e) given at the end of §3.3.1. above the link will be:

(i) juxtaposition in construction (a),
(ii) the adposition in construction (b),
(iii) the case ending in construction (c), and
(iv) the particle in construction (d).

For a discussion of the link in the verbal construction (e) see §3.4.4. below.

3.3.4. *Marker*

Let us now turn to the marker. I will now define the marker as that specific element which distinguishes a comparison of inequality from a comparison of equality. It is, therefore, that element which expresses the specific result of inequality as opposed to the only other result possible, namely, that of equality. In the juxtapositonal construction the marker is either the negative element *NOT* or the antonymical quality *SMALL*. For the next two constructions the marker will be identical to the links already mentioned, i.e. the adposition and the case ending respectively. Notice, now, that in a construction like the following from Hindi the postposition *se* "from" is the sole marker and at the same time the link.

Hindi: *Mohan se barā*
Mohan from big = "bigger than Mohan".

In those languages which have comparative forms of adjectives at their disposal, the comparative morpheme will represent an *additional marker*

in these constructions. In other words, the Latin construction *te maior* (or *maior te*) contains the following elements:

(a) the adjective *mag-*(nus) for the expression of the quality or property,

(b) the standard *tu*,

(c) the ablative case ending *-e* as the link, thus characterizing this construction as a case construction, and

(d) the two markers: (i) the ablative case ending and (ii) the comparative suffix *-ior*; these two elements thus distinguish this construction from a comparison of equality.

What is now the marker in the particle construction? We know already that the particle is the link, but is it also that element which distinguishes this construction from a comparison of equality? Let us take a look at a few examples:

Latin: *tam magnus quam tu.*
as big as you
maior quam tu.
bigger as you = "bigger than you".

German: *so groß wie Johann.*
as big as John
größer wie Johann.
bigger as John = "bigger than John".[31]

Finnish: *yhtä pitkä kuin sinä.*
as big as you
pitempi kuin sinä.
bigger as you = "bigger than you".

Old Indic: *samānam āgnimārutaṃ bhavati yac ca-agniṣṭome.*
same Agnimaruta becomes as Agnistoma-in
"The Agnimaruta becomes the same as in the Agnistoma" (AB 4,30,15).
tasmād ūrdbhāḥ puruṣasya bhūyāṃsaḥ prāṇā
therefore upper man's more-numerous Prāṇas
yac ca-avāñcaḥ
as lower

"Therefore, the upper Prāṇas of a man are more numerous than the lower" (AB 3,29,6).

French: *aussi bon que ...*
as good as ...
meilleur que ...
better as ... = "better than ...".

These examples show that the particle does not distinguish comparisons of inequality (in the second examples) from comparisons of equality (in the first examples); hence the particle, although being the link, is not a marker. Generalizing from examples found in a number of languages, I would now say that the sole marker in the particle construction is the comparative morpheme of the adjective: I have found only examples with such comparative adjectives. For an historical account of this fact in the Indo-European languages see Andersen (1980b).

3.3.5. *Types of comparative constructions*

It is now obvious that there are a number of different morpho-syntactic means of expressing an explicit comparison of inequality employed in the languages of the world. These construction types can be classified according to the link used to connect the standard to the expression of the quality or property:

(a) Juxtaposition: A is big, B is small / not (big).
(b) Adpositional: A is big(ger) FROM B.
(c) Case: A is big(ger) B-FROM.
(d) Particle: A is bigger THAN B.

In addition to these nominal construction types in which the quality is expressed by a noun or adjective, many languages employ a verb for this expression:

(e) Verbal: A SURPASSES B.

We now see that in a language like Latin with the constructions *maior quam tu* and *te maior* (or *maior te*) there is not simply two different orders represented but actually two different construction types, i.e., particle and case respectively. Taking a look at other languages we find that many languages employ various constructions for the expression of comparison and hence the word order of *the*

comparative construction is strictly not applicable, since there are a variety of constructions employed and not just one construction. Once a language uses diverse constructions the way is open for a semantic differentiation to go hand-in-hand with the morpho-syntactic variation. An example for this is found in Latin where there is not only a difference between the two constructions *maior quam tu* and *te maior* in the morpho-syntax, but also, according to Panagl (1973:373), in the semantics: the case construction exhibits presupposition, the particle construction, on the other hand, does not. I.e., *quis me est fortunatior?* (case construction) presupposes *fortunatus sum*, while *pater est maior quam filius* (particle construction) does not presuppose *filius magnus est*. Accordingly, it might prove advantageous for the semantic investigation of comparison to first (or at least additionally) distinguish between the various morpho-syntactic means of expressing these constructions.

3.3.6. *Secondary construction types*

So far we have discussed a number of construction types used for the expression of comparison; these I will term primary construction types. Moreover, we find in some languages secondary constructions, i.e., constructions which have developed from primary constructions, but which no longer preserve the primary morpho-syntactic features. For an example of such a secondary construction let us turn to Old Indic. One very common means of expressing comparison is the ablative case construction:

(a) *mánaso jávīyān* (RV I,118,1)
thought-ABL swifter = "swifter than thought".

In such case constructions we find the following features: an adjective, a standard, the ablative case[32] as the link as well as both the link and the comparative morpheme as the two markers. Keeping this construction in mind let us now take a look at another common means of expressing comparison, i.e., the verbal construction:

(b) *abhí yó víśvā bhúvanā babhūva* (RV IV,16,5)
above who all(AccPl) beings(AccPl) he became

"who surpassed all beings".

Here we find the quality expressed by the verb *bhū-* "to become", the marker is the preverb *abhí* "above", and together they build the complex verb *abhíbhū-* "to surpass" - the preverb is not required to stand next to the verb in this stage of the language. The standard in this construction is placed in the accusative case; for more details on the verbal construction see §3.4.4. below. Both constructions (a) and (b) are productive in Old Indic as primary constructions.

This language also has the possibility of deriving an adjective from a verb (with or without its preverb). Accordingly, from *abhí + bhū-* "to surpass", one can derive quite easily the deverbal adjective *abhibhū́-* "surpassing, superior":

(c) *tvám indra-abhibhū́r asi víśvā jātány*
you Indra superior you are all(AccPl) living beings(AccPl)
ójasā (RV X,153,5).
strength-with
"You, O Indra, are superior to all living beings in strength".

In this example we find a construction in which the quality is expressed by means of an adjective, the marker, however, is the preverb of the original verbal construction, and the standard is placed in the accusative case in accordance with the verbal construction from which this construction is derived. The real problem arises when we further derive a comparative form from the adjective *abhibhū́-*, i.e., *abhibhū́-tara-* "(more) superior":

(d) *víśvāḥ pṛ́tanā abhibhū́taraṃ náraṃ*
all(AccPl) hostile army(AccPl) superior-COMP(AccSg)man (AccSg)
"the man who is superior to all hostile armies"
(RV VIII,97,10).

In this last example we have a comparative adjective with a standard placed in the accusative case. This construction cannot be considered as a primary construction because - recalling what we said at the beginning of this section - the standard appears in the ablative case along with comparative adjectives in the case construction. What we in fact have here is a nominal construction - by virtue of the compar-

ative adjective - with a verbal construction link, i.e., the accusative case for the standard. Such secondary constructions cannot be readily explained nor investigated as instances of primary construction types given in the previous sections. For further examples of other secondary constructions in Old Indic see Andersen (1981).

We will, therefore, need to distinguish primary and secondary constructions in our investigation of comparison. For our purpose here, i.e. word order within comparative constructions, we will concentrate on the primary constructions.

3.4. *Motivation for the word order in comparative constructions*

Up until now we have seen that there is not just one comparative construction within which the order of elements can be investigated, but, on the contrary, there are numerous construction types available to the languages of the world. My contention now is that these construction types must be independently investigated for word order, i. e., the motivation for the order of elements differs from construction type to construction type. Let us now take a closer look at these construction types; the juxtapositional construction will not be discussed primarily because Greenberg does not include it in his investigation. The verbal construction, although being excluded as well by Greenberg, will be discussed in some detail in §3.4.4. below.

3.4.1. *Case construction*

The first nominal construction to be investigated is the case construction of the form *A is big(ger) B-FROM*. Such a construction is composed of the following elements: a standard, an adjective, a link and one or more markers. We will start by taking into account the standard, the adjective and the case ending - the link and one of the two possible markers - which will, theoretically, reveal the two possible orders:

(a) *adjective + standard + case ending (= maior te)*

(b) *standard + case ending + adjective (= te maior).*

In Latin, Finnish, Old Indic and numerous other languages both of

these orders are attested. This in itself falsifies the original assumption made by Greenberg that only two orders are possible, i.e., *adjective + marker + standard* and *standard + marker + adjective*, since these languages attest the order *adjective + standard + marker*. If we would take the comparative morpheme of the adjective - where employed - into consideration as well, we would end up with even more word order possibilities not accounted for by the original assumption, e.g., *standard + marker*$_1$ *+ adjective + marker*$_2$.

Our case construction can now be analyzed as an adjective phrase (AP) composed of an adjective and a complement noun phrase (NP). These APs can be further qualified or quantified, e.g. *John is two inches taller than Fred.*, etc. Notice that there are constraints on the employment of APs in some languages. In Finnish, for example, such comparative APs can be employed not only predicatively as in (i) but also attributively as in (ii):

(i) *Hän on Matti-a pitempi.*
he is Matti-PARTITIVE taller = "He is taller than Matti."

(ii) *Matti-a pidemmät miehet eivät pääse*
Matti-PARTITIVE taller(NomPl) man(NomPl) NEG-3Pl get
ilmovoimi-in
Air Force-ILLATIVE
"Men, who are taller than Matti, are not allowed into the Air Force" (cf. Hakulinen and Karlsson 1979:141).

The corresponding APs in other languages, on the other hand, can only be used predicatively, as can been seen from the English translation.

In this connection there is an important fact that should be realized: this underlying morpho-syntactic means of expressing the comparative construction , i.e. an AP involving an adjective and a complement NP, is not used exclusively for the expression of a comparison of inequality, but it is also used for a number of other expressions. If we turn to Finnish, for example, we find not only the comparative construction

(a) *pitempi sinu-a*
bigger you-PARTITIVE = "bigger than you",

but also a number of other constructions involving an adjective and its complement, cf. Tarvainen (1977: 76-77):

(b) *tietoinen asia-sta*
aware thing-ELATIVE = "aware of a thing"

(c) *perehtynyt asia-an*
acquainted thing-ILLATIVE = "acquainted with a thing"

(d) *kokenut työ-ssä*
experienced work-INESSIVE = "experienced in work"

(e) *uskollinen ystävä-lleen*
faithful friend-ALLATIVE = "faithful to a friend".

In German this type of construction is likewise quite productive:

(f) *der Ruhe bedürftig*
the rest (GENITIVE) needy = "in need of rest"

(g) *einem Mann treu*
one man (DATIVE) faithful = "faithful to one man"

(h) *mir zehn Mark schuldig*
me (DATIVE) ten mark (ACCUSATIVE) owing
"owing me ten marks".

This construction is, however, no longer used for expressing comparison which may have looked like

(i) **mir größer*
me (DATIVE) bigger = "bigger than I",

which corresponds to the English construction

(j) *superior to me*,

where *to me* represents the dative case. Earlier stages of German did use this type of construction for comparison (see Lehmann 1972c) and remnants are still found, for example, in Goethe:

(k) *Jedem Gift, das ich erprobet, schlimmer ist dein eignes noch*
(cf. Ziemer 1884:75,260; Jensen 1934:123).
"Every poison (DATIVE), that I tasted, worse is your own still", i.e.: "Your own poison is still worse than that one, that I tasted."

Here the standard (*Jedem Gift* "every poison") is placed in the dative case and represents the construction proposed in (i) above. In even earlier stages of the language this type of comparative construction was more productive (Hiemskringla 608,1):

(l) *"Hon var hverri konu friðari.*
she was than any other woman more beautiful" (Lehmann 1972a:323).

In this example the standard in the dative case (*konu*) precedes the adjective *(friðari)*. Notice also that the basic sentence pattern is SVO.

Let us now take a look at Homeric Greek where we find the following examples:

(m) Σ 285 ἐμοὶ θίλα
to me dear = "dear to me"

(n) Υ 334 σεῦ θίλτερος
you-GEN dearer = "dearer than you"

(o) Τ 250 θεῶι ἐναλίγκιος
to god resembling = "resembling a god".

In these examples we find the same order of elements as in the Germanic examples above: standard/complement NP before adjective. If we now turn to an OV language, e.g. Old Indic, we find the opposite order:

(p) RV V,51,4c *priyá índrāya*
dear Indra-DATIVE = "dear to Indra"

(q) ŚB X,6,1,6 *bahúḥ prajáyā paśúbhir*
abounding descendants-INSTR cattle-INSTR
"abounding in descendants (and) cattle".

As will be shown in chapter four, the underlying word order in the case construction in the Rigveda (and Old Indic in general) is *adjective + standard*. The same order is found in adjective phrases composed of adjectives and complement NPs.

Note, now, that in constructions where a positive adjective is used and not a comparative adjective (e.g. Hittite, Tocharian, etc.) the two constructions - adjective plus standard and adjective plus complement NP - will be identical in all respects.

To sum up, for the purpose of word order we must investigate all of the morpho-syntactic constructions in the particular language of the same underlying type and set up different (implicational) word order universals accordingly. In other words, we should replace Greenberg's one universal (#22) and all subsequent implicational universals concerning comparative constructions by a number of other universals, one of which would encompass adjectives and their complements as well as their respective word orders. In addition to this the motivation for the word order within the case construction is completely different from that of the other constructions - as will be shown in the next sections - and hence warrants a reanalysis of comparative constructions in all languages which must differentiate construction types. This preliminary investigation has, by the way, turned up some evidence for the following correlations:

VO languages (e.g. Germanic) show the order *complement NP + adjective*, and

OV languages (e.g. Old Indic) show the order *adjective + compliment NP*.

3.4.2. *Adpositional construction*

The next construction type to be discussed is the adpositional construction of the type found in the following examples:

(a) Modern Greek μεγαλύτερος ἀπο Γιάννη
bigger from George
"bigger than George".

(b) Hindi *mohan se baṛā*
Mohan from big = "bigger than Mohan".

(c) Japanese *akiko yori ōkii*
Akiko from big = "bigger than Akiko".

Although we may want to consider the adpositional construction as a variant of the case construction, there are a number of reasons for treating these constructions separately in this investigation of the word order. The most important reason is the fact that the motivation for the word order of standard and adjective with a case ending used

as the link, on the one hand, and the variant type with an adposition used as the link, on the other hand, are different. While the word order of the case construction may be dependent upon the order of verb and object, in Andersen (1979a) it has been shown that the existence and subsequent usage of prepositions or postpositions is not dependent upon the order of verb and object, cf. Baldi (1980) and §2.2.3. above.

In the examples of the adpositional construction given above we find the standard linked to the adjective by means of an adposition in which a total of four different orders are possible:

(1) preposition + standard + adjective,
(2) standard + postposition + adjective,
(3) adjective + preposition + standard, and
(4) adjective + standard + postposition.

The order (3) is found in example (a) above, the order (2) in examples (b) and (c) above and the order (1) in the following example from Modern Persian:

(d) Persian *an pesar az in doxtar bozorgtar ast.*
that boy from this girl bigger is
"That boy is bigger than this girl" (cf. Lambton 1967:21).

I have not found any examples with the order (4) above. Notice that this last example from the Persian has the basic word order SOV along with a preposition (*az* "from"). Here it should be noted that the severe problems faced with the existence of either prepositions or postpositions motivated by the word order typology have already been pointed out. It should also be added that this type of construction is used for a number of different constructions and not exclusively for comparison, just as we have seen in our discussion of the case construction above. In German, for example, we find, in addition to the type of construction found in the examples of the case construction and adjective phrases quoted in the last section, adjective phrases in which the complement is a prepositional phrase (PP):

(e) *zu dieser Aufgabe fähig*

to this task capable = "capable of this task".

English also exhibits this type of construction not only for the expression of comparison, e.g. *inferior to John / superior to him*, but also for non-comparative constructions: *dear to me*, etc.

The important aspects of the adpositional construction that we should, therefore, keep in mind are (a) this construction type is not exclusively used for the expression of comparison of inequality, and (b) the motivation for the existence of either a preposition or a postposition in such constructions is not dependent upon the word order typology as we pointed out above.

3.4.3. *Particle construction*

The last nominal construction type to be considered is the particle construction. Let us first take a look at the particle. In the Indo-European languages a variety of particles are employed in this construction, the classification of which has provoked some interest. Ziemer (1884:145ff.) divided the Indo-European particles into the following three groups:

(a) Separative particles: Skt. *na*, Gr. ἤ, Goth. *þau*, etc.,

(b) Comparative particles: Gr. ὡς, Lat. *quam*, Eng. *than*, Germ. *als*, etc., and

(c) Separative-comparative particles: Mod.Gr. παρ'ὅτι, Lat. *prae quam*, etc.

Forty years later Small (1924:36) set up only two groups:

(a) Separative/Adversative particles, and

(b) Syntactic particles,

which is essentially the same classification given by Gallis (1947:23). Recently Puhvel (1973:151) has proposed the following classification:

(a) Negative particles: "*NOT*" as in Indic and Slavic,

(b) Disjunctive particles: "*OR*" in Greek and Slavic, and

(c) Assimilatory and Associative particles: particles which have both meanings "*AS*" and "*THAN*" as in Western Indo-European.

If we shift our attention now from the semantics of these particles to the historical development and the syntactical function, we find as the common denominator for these particles a *conjunction* used to connect two clauses:

> All the IE languages have ... another ... means of expressing comparison with the help of adverbs and conjunctions. These particles did not in themselves originally contain the idea of comparison, which later became definitely associated with them. At first they probably connected two separate statements, ... (Small 1924:30).

> The first method [of comparison, i.e. particle construction] makes use of conjunctive particles to connect the first clause, containing the first object being compared and the comparative form of an adjective or adverb, with a second clause, containing the object or condition with which comparison is made (Small 1929:14).

Strictly speaking, the so called *negative particles* like the Classical Sanskrit *na* and Slavic *neže* are not conjunctions, and therefore, represent paratactical constructions of the type: *A is big, B is not (big).* Outside Indo-European languages we also find that the true particles used in the comparative construction are likewise original conjunctions, e.g. Finnish *kuin* "as, than" (cf. Hakulinen 1979:74).

On the basis of data collected from a number of different languages I have deduced the following generalizations: the particle construction is found only in those languages which use a comparative form of the adjective; the particle itself represents an original conjunction whose function it was to connect two clauses, one containing the comparative form of the adjective and the next clause containing the standard along with the positive form of the adjective. If we now assume that the particle in the particle construction was a conjunction which had the function of connecting two clauses, the starting point for our investigation of the word order of this construction will be the following construction in which the first object is the adjective and the second subject (or object) is the standard:

S_1,V_1,O_1 (= adjective) + conjunction + S_2 (= standard), V_2,O_2.

This pattern is found in sentences of the type *The table is longer*

than the rug is wide. Notice that the two qualities being measured in this example (i.e. *long* and *wide*) are different in both clauses; this is true only in a small number of cases. Generally, the qualities are the same and subsequently one, i.e. the unmarked positive, is liable to deletion:[33] *I am bigger than you are (big).* The deletion process can also affect the verb if it is the same (with respect to tense but not necessarily with respect to person and number) in both clauses: *I am bigger than you (are).*, but *I am bigger than you were (at my age).* This is the stage of development taken as typical for this construction by Greenberg, Vennemann, Lehmann and others in their discussions of word order. In this pattern one finds the entire first clause, followed by the conjunction and in turn by the subject (or object) of the second clause:

S_1,V_1,O_1 (adjective) + conjunction (particle) + S_2 (standard).

Now, if the language in question reveals VSO patterning, the order of elements in the particle construction will be:

V_1 + S_1 + O_1 (adjective) + conjunction (particle) + S_2 (standard).

In other words, our syntagma will be composed of the elements in the following order:

adjective (O_1) + particle (conjunction) + standard (S_2/O_2).

Likewise SVO and SOV languages will show the following orders:

SVO - (S_1+V_1) + O_1 (adjective) + conjunction + S_2 (standard).

SOV - (S_1) + O_1 (adjective) + (V_1) + conjunction + S_2 (standard).

We see then that the order of elements within the particle construction is - regardless of the specific word order patterning - always:

adjective + particle + standard.

This order is found among others in the following languages:

(1) SVO English - *bigger than you.*

(2) SVO German - *größer als du* (there is still some discussion as to the word order patterning of German, some believe it to be SVO, others SOV).

(3) SOV Latin - *maior quam tu* (this construction is found in the

oldest Latin texts which were still SOV).

(4) SOV Finnish - *pitempi kuin sinä* (although Finnish has borrowed the surface order SVO, the placement of modifiers and other typological characteristics still reflect the historically older SOV patterning).

(5) SOV Pāli - *seyyo yañce jīvitam* (in Andersen (1980a) it has been shown that the word order patterning of Middle Indic was SOV).

Before concluding our discussion of the particle construction let us add a few remarks on the construction in English. Our starting point will be a construction containing two clauses joined by a conjunction, e.g. *You are taller, then I am tall* (*than* is, historically speaking, a variant of the conjunction *then*). As we have seen above, portions of the second clause are liable to deletion. Once this deletion has taken place we end up with the first clause plus the original conjunction followed by a NP. Constructions like *bigger than me* then indicate that the particle (originally a conjunction) followed by a NP has been reinterpreted as a *preposition* followed by a NP. Once this stage has been reached the original conjunction/particle becomes one of a number of prepositions in the language, and hence the vacillation in English: *different from/to/than ...*, etc. In this way an original particle construction (which is still in use in English) has developed into a prepositional construction, whereby the particle - in a particle construction it was only a link but not a marker - becomes a second marker.

To sum up our discussion of the particle construction we can say that this type of comparative construction is realized in those languages which have such a construction at their disposal with the word order *adjective + particle + standard* regardless of the particular word order patterning of the language in question. A closer investigation also shows the fact that the syntactic construction underlying this type of comparative construction is also not exclusively limited to the expression of comparisons of inequality: *John went to the store, then home., The light turned orange, then red,.* etc.

3.4.4. *Verbal constructions*

Jensen makes the remark that the verbal construction is widely used in languages of the *Naturvölker*: "Die zweite Art [i.e. verbal construction] ist besonders in der Sprachen der Naturvölker sehr verbreitet" (Jensen 1934:120). Subsequently, he gives only examples from these languages. This construction is, however, by no means restricted to these languages, nor unknown to the Indo-European languages as the following examples show.

(1) English - *He surpassed all his contemporaries in skill.*

(2) German - *Er übertrifft ihn an Körperkraft.*

(3) Homeric Greek - ἐγὼ περίειμι θεῶν (cf. Θ 27)
"I surpass gods".

(4) Old Indic - *sá- ít agnír agnī́mr áti- astu anyā́n.*
this only Agni the Agnis above should-be others
"Only this Agni should surpass the other Agnis".
(RV VII,1,14c).

The distinguishing feature of the verbal construction is the employment of a verb for the quality or property. The standard appears as the object of the verb, thus leaving us with the investigation of the marker.

Recalling what we have said above in §3.3.2. concerning the NOUN-ADJECTIVE-VERB continuum, it should come as no surprise to find in some languages verbal comparative constructions which structurally parallel nominal constructions with the only difference being the expression of the quality: in nominal constructions a noun or adjective is used, in verbal constructions a verb. For example, parallel to a (nominal) adpositional construction of the form *A is large(r) FROM B* we find expressions in some languages of the form *A to-be-large FROM B* with the verb *to-be-large* expressing the quality:

(5) Susu - *Afriki fura fotetaa be*
Africa to-be-hot Europe from
"Africa is hotter than Europe" (cf. Friedländer 1974: 62).

Or, as another example, parallel to a case construction of the form *A is big(ger) B-FROM* we find a verbal construction *A to-be-big B-FROM*:

(6) Eskimo - *nano tugtu-mit angivoq.*
bear reindeer-FROM is-large
"The bear is bigger than the reindeer" (cf. Mey 1976:163).

In these two examples the quality is expressed by the verbs *fura* "to-be-hot" and *angivoq* "to-be-large", the standard is the object of the verb appearing either with an adposition (*be* "from") or case ending (*-mit* ABLATIVE "from") as the sole marker of comparison. Although I have not collected any examples, it is theoretically possible that we could find a verbal construction parallel to the juxtaposition construction, i.e. something like *A to-be-large, B to-be-small.* It should be pointed out in passing that in a verbal construction the only difference between a *comparative construction* and a *superlative construction* is the *numerus* of the standard: comparative - *John to-be-large boy-FROM*, superlative - *John to-be-large boys-FROM.*

Another type of verbal construction is found in constructions of the German type *Er übertrifft ihn* (lit.: he over-hits him, i.e. "He surpasses him"). In such constructions we find a preverb plus verb instead of a verb plus either adposition or oblique case ending as in (5) and (6) above respectively. Let us now turn to a language where this type of construction is quite productive, namely, Old Indic. In this language the verb *as-* "to be" can be used without a preverb as a possible means of expressing a comparison of equality. We notice, however, that when used with a preverb, e.g. *ati* "over", the resulting complex verb *ati + as-* "to surpass" becomes a comparative verb in a comparison of inequality, cf. (4) above where *astu* is the 3rd-singular-present-imperative-active of *as-*. This shows, then, that the preverb not only increases the valence of the verb - *as-* is an intransitive verb meaning "to be, to exist", *ati + as-* is a transitive verb meaning "to surpass" (lit.: "to be over") - but it is also that specific element which distinguishes a verbal comparison of inequality from a comparison of equality, and hence it is the *marker* in this comparative

construction.

Such verbal constructions can now be further qualified by an instrumental NP:

(7) *víśvāni sánty abhy ástu mahn-á*
all(AccPl) present(AccPl) he shall surpass greatness-INSTR
"He shall surpass all present in greatness" (RV II,28,1).

We might want to consider the type of construction exemplified by (4) above with *ati + as-* (and *adhi + bhū-, abhi + bhū-*, etc.) as an implicit comparison - implicit because the specific quality in question is not expressed and not because the standard is not expressed. We find, however, that such implicit constructions can be turned into explicit constructions by the addition of instrumental NPs as in (7). The majority of verbal comparative constructions in Old Indic employ verbs other than *as-* "to be" and *bhū-* "to become" together with the preverbs *ati* "over", *adhi* "above", *abhi* "over", etc. and therefore are explicit comparative constructions, cf. *ati + jīv-* "to over-live", i.e. "to outlive":

(8) *ná há saṃvatsaráṃ yájamano <á>tijīved*
not indeed year(AccSg) sacrificer he may outlive
"(For if he were to pour it out during the chanting) the sacrificer would not outlive the year" (ŚB 4,2,4,6).

This type of construction is very productive not only in Old Indic but also in other Indo-European languages including English, cf. the numerous comparative verbs with the preverb *out-*: *to outdo, to outdraw, to outfight, to outgrow, to outrun,* etc.

Constructions with verbs of the type *to surpass*, however, differ from those of the type *to outdo* in an important aspect: we cannot analyze such verbs as being composed of a preverb plus a verb. What we, in fact, have here is a verb which has been derived from an adverb, i.e. Latin *superō* "to surpass" is derived from the adverb *super* "above", likewise the Finnish verb *ylittää* "to surpass" is derived from the adverb *yli* "above, over". These constructions may also be considered as implicit comparisons because an explicit quality or property is not expressed.

Three different types of verbal comparative constructions have now been discussed, i.e. (a) constructions with nominal markers - adpositions, case endings, etc. - and a verb instead of an adjective or noun, (b) constructions with a preverb as marker along with a verb as the expression of the quality and the standard as object, and (c) constructions in which the verb is derived from an adverb along with the standard as object. Let us now turn to the word order in these constructions.

In all verbal constructions the order of the standard and the expression of the quality or property is identical to the order of verb and object, the only exception being constructions like (7) above where the quality is expressed by an additional instrumental NP. If we bring the marker into consideration we will end up with patterns which are not accounted for by any typological theory, i.e., in the German *Er übertrifft ihn* we find the order marker + quality + standard. And again we see that the underlying construction employed here is not restricted to the expression of comparison.

To sum up, the motivation for the word order here is not the same as that for the nominal constructions. Therefore, we see again the necessity for separate investigations of the word order within the specific construction types used in expressing comparison. And finally, verbal constructions should not be eliminated from general investigations into comparative constructions as Greenberg and others have done.

3.5. *Conclusions*

It is now clear that Greenberg's *universal 22* and all subsequent typological theories regarding the order of elements within comparative constructions are not valid for a number of reasons. First, comparison was so vaguely defined that several diverse construction types have been subsumed under the one heading. These construction types must be separately investigated because the motivation for their respective word orders is different. In the case of the particle construction the word order *adjective + particle + standard* seems to be universal re-

gardless of the specific word order patterning. Furthermore, since the existence of prepositions or postpositions is not dependent upon the word order patterning, we cannot postulate a universal of word order for this construction type. In addition to this we have also seen that the syntactic structures used to express the comparison of inequality are not restricted to this specific expression but are generally used in the languages for a number of other expressions. Therefore, any universal concerning comparison of inequality must be taken as part of a more general universal regarding a number of different syntactic structures, e.g., adjective plus complement constructions, etc. Finally, there is no justifiable reason for excluding the verbal and juxtapositional constructions from a general discussion of comparison.

If we were to change our priorities in such a way that word order would be subordinate to comparison of inequality, there is at least one way in which a typology of comparative constructions could be persued in a much more rewarding fashion: I am thinking here about the recent theory of universals propagated by Seiler (1973;1978) and his Universals Project.

> Since we know that there are many kinds of variations, of squishes, of implicational relationships, and of hierarchies, we need first an ordering principle in order to interpret them adequately. The best I could think of is the Aristotelian bi-dimensional system of categories vs. categorems ... On the categorial dimension or axis we are concerned with the 'What?': What is contained and expressed in a language - categories, relations, meanings, systematicity, etc. On the categorematic axis we are concerned with the 'How?': How do properties cluster in a given language or in a group of languages - as representations of categories, implicational relationships, incompatibilities, etc. (Seiler 1978:15).

If we choose to follow this line of thought, we would propose to place *comparison of inequality* on the 'categorical axis' and then list the various underlying constructions available across languages to express this grammatical category, e.g., juxtaposition of two clauses, adjective phrase, compound verb constructions, etc. Since all these underlying constructions are used for the expression of other categories, they represent an inventory of the possible syntactic structures to choose from.

Some of these, then, may be specified in more detail, e.g., APs could be divided into those structures with a PP or a NP as complement. At this stage in our differentiation *word order* can be taken into consideration: NP + Adjective, Adjective + NP, etc. For an attempt at such an alternative universal of comparative constructions see Andersen (1982d).

Furthermore, we have analyzed the comparative construction with the following results. Semantically, our construction is composed of (a) the quality or property used in the actual process of comparison, (b) the standard of comparison and (c) the result of the comparison - in this case it is inequality; this we have termed the marker which is that specific element which differentiates a comparison of inequality from a comparison of equality. On the morpho-syntactic level of grammar we will find respective expressions for these semantic categories: (a') an element along the NOUN-ADJECTIVE-VERB continuum for the expression of the quality or property, (b') a NP for the standard and (c') one, or possibly two markers. In addition to these elements we will find a morpho-syntactical means of connecting the standard to the expression of the quality or property: this we have termed the link.

Now since there has not been any distinction made between the different types of comparative constructions in previous discussions on word order, most of the results already obtained are extremely difficult to evaluate. What is now needed, then, is a reanalysis of the word order of comparative constructions in as many different languages as possible taking into account the fact that the various construction types have different *motivations* for their respective word orders. Let me illustrate this need for a reanalysis on one example. It is generally assumed that in Latin one word order - *maior quam tu* - has replaced another word order - *te maior* - in the development of this language, thus indicating a typological shift from an (S)OV language to an (S)VO language. As I have already shown, the word order for the particle construction is *adjective + particle + standard* regardless of the word order patterning. Thus the particle construction can give us no information regarding the word order patterning in Latin at any stage -

notice that the particle construction is attested in the earliest Latin texts. Furthermore, in the older stages of Latin one finds not only the word order *te maior* but also *maior te* for the case construction. These orders are of primary importance for the typological theory and the shift from SOV to SVO. What has not been done as yet is to determine which of these two orders has been replaced by the other. For a further discussion of Latin see chapter five below. We might add here the fact that a differentiation of morpho-syntactic construction types may very well have semantic repercussions: it has been shown, for example, that in Latin the case construction exhibits presupposition while the particle construction does not.

Finally, this investigation has led to additional conclusions concerning the current views on word order within comparative constructions: (a) The word order of the comparative construction is indeed liable to *marking* and is thus no longer to be regarded as one of the most important typological characteristics (see §3.1.1. above). In fact, we can find examples even of the particle construction which show a marked word order: *Satan than whom none higher sat, thus spoke*;[34] *Whatever the reason, the crew cut has won the endorsement of Gentlemen's Quarterly, than which can a haircut do better?* (from the Daily Mail, Friday, October 8,1982, page 4). (b) In the investigation of the word order of comparative constrcutions for the purpose of reconstruction, the etymons of the link and marker are of utmost importance, since only through a correct interpretation of these components can the specific construction type in question be determined (cf. §3.1.3. above, and Andersen (1980b)). (c) The word order patterning of a specific language cannot be determined alone by the order of elements in a comparative construction (see §3.1.1. above): cf. Modern Persian with *marker* (=preposition) + *standard* + *adjective* in the comparative construction, but SOV with prepositions.

Since it has been shown that a reanalysis of the word order in comparative constructions is now needed, the next chapter will represent an in-depth investigation of the word order of the case construction in a specific language, namely, Old Indic. This should serve as

a model and at the same time serve to point out certain problems connected with such a reanalysis.

Endnotes

1. Cf. Small (1929:11): "The positive degree is really a relative expression based ultimately upon an active comparison; for no adjective or adverb in the language is quite absolute. We say that an object is *bitter, soft, high,* etc. only after having mentally placed it beside various other similar objects *one at a time* and deciding that it is more or less intense in quality than each one in turn. A *high* fence, a *sweet* apple, etc. are at bottom comparisons, but only the result appears and not the process."
2. This is particularly evident in verbal constructions in which only the number of the standard NP differentiates 'comparatives' from 'superlatives': *John outran his friend; John outran his friends.* Cf. §3.4.4. below.
3. Lehmann (1972c:977).
4. Cf. Lehmann (1972b:171; 1972c:985; 1972e:241; 1973b:90) and Friedrich (1975:27).
5. Cf. Lehmann (1972b:172).
6. See also Lehmann (1972c:988): "We would also expect to find a similar consistency of patterning for verbal constructions, among them comparatives which Delbrück already equated with verbs." A slightly different approach is offered at Lehmann (1972c:988): "When we examine how comparative constructions are produced, we note that an adjectival sentence containing a standard is embedded in another sentence with the same adjective"; cf. also Lehmann (1972c:989; 1978a:17).
7. Cf. Lehmann (1976b:447).
8. Notice that not all *-er* suffixes are comparatives; e.g. in *outer* and *upper* these are merely locative suffixes eventhough they are usually termed comparative - cf. Andersen (Forthcoming b).
9. Cf. Lehmann (1972c:988-9): "When comparison is explicit, the standard is marked by a pivot, often one of ablative value" and Lehmann (1972a:329): " ... in comparison, the marker of comparison precedes the standard."
10. See Andersen (1980b).
11. See Radford (1981: chapter two; esp. 69).
12. I am referring here to his patterns PSA, SPA, etc. given in §3.1.3. above.
13. In the following paragraphs I will be concerned mainly with Jensen (1934), but I will incorporate into this discussion some aspects of the following works: Ziemer (1884), Panagl (1973) and

Puhvel (1973).

14. Cf. Jensen (1934:113): "Wenn ich im Folgenden versuche, eine Anzahl solcher Vorstufen, von der einfachsten, anschaulichsten zu den abstraktesten fortschreitend, aufzuweisen, so soll damit zunächst nicht eine historische, sondern eine *psychologische Entwicklungsreihe* gegeben werde."

15. See Andersen (1982d). In this connection I would also like to refer to the comprehensive studies of comparison by Reiter (1979) and Hellan (1981).

16. See Jensen (1934:116-117), Panagl (1973:361) and Puhvel (1973: 146): "*ars longa, vita brevis est*, meaning that art is longer than the lifetime allotted to mastering it." Cf. Ziemer (1884: 10). This construction is also common in Australian languages, see Mallinson and Blake (1981:382).

17. See Jensen (1934:117), Puhvel (1973:146), Ziemer (1884:10). Panagl (1973:361) recognizes only one type encompassing our types 1 and 2: "x ist groß, y ist klein/nicht groß." According to Puhvel (1973:146) "Such a construction is not unknown in old-line Indo-European, e.g. Sanskrit *varam hi mṛtyur nākīrtiḥ* 'good is death, not dishonor', i.e. 'better death than dishonor' or death before dishonor'." *varam* , however, means 'select, choicest, best, best, etc.' and as far as I can determine never 'good'. Theoretically then, this example is of a type 'A is bigger, B is not.' Notice too, that the specific construction referred to by Puhvel with *na*, although quite frequent in Classical Sanskrit, is not found in Old Indic proper, see Andersen (1981: 182 fn.1,2; Forthcoming c:§3.1.7). This general type of construction is found in the Rigveda, but only with *mā́* 'not'; *na*, on the other hand, is a marker of a comparison of equality in the Rigveda: RV 9,97,78 *siṃhó ná bhimó* 'terrible as (*ná*) a lion', cf. Sāyaṇa:'*siṃho na siṃho iva.*'

18. See Jensen (1934:117), Ziemer (1884:17) and Panagl (1973:361): 'x und y, groß ist y.' Cf. Friš (1950:180).

19. See Jensen (1934:118), Puhvel (1973:146-147) and Panagl (1973: 361): 'x bei/über/vor y ist groß'.

20. See Jensen (1934:118): "... eine Ausdrucksweise, die vielleicht die verbreiteste überhaupt ist", and Panagl (1973:361). Puhvel (1973:146) regards this and the following type as the same: "A is X with reference (or: starting from, from the vantage of)B."

21. See Jensen (1934:119-120), Puhvel (1973:147) and Panagl (1973:361).

22. Cf. Ziemer (1884:11).

23. See Jensen (1934:120-121) and Panagl (1973:361).

24. See Jensen (1934:113). Jensen, it seems, has overlooked the usage of comparative adjectives in parts of Finno-Ugric, e.g. Finnish *pitkä* 'long', *pitempi* 'longer'. Cf. Puhvel (1973:146),

Fris (1950:170), Berg (1958:202), Ziemer (1884:129-138) and Beke (1928:222f.). Friedrich (1926:186,fn.2) makes reference to a comparative in Arabic as the only example in Semitic, and Beke (1928:222,fn.1) mentions the Turkish comparative suffix *-rak*.

25. Cf. Jensen (1934:122) and Schwyzer and Debrunner (1950:99).

26. Cf. §3.2.2. above and Andersen (1980b:226).

27. Cf. §3.2.2. above and §3.4.3. below. See also Andersen (1981: 174f.) for various other types of the paratactical comparative construction in Old Indic.

28. Cf. Puhvel (1973:146), Melchert (1977:215), Friedrich (1960:127) and Andersen (1980b:226). See Ziemer (1884:137) for an example from Greenlandic with an ablative and a positive adjective.

29. Cf. Derbyshire (1979:26): "There is no construction of the adjective clause (relative clause) type. There are various means used to obtain the same effect as such a clause: simple nominalization; placing NPs together in a paratactic relationship, with intonational break ...", and the following endnote.

30. See Derbyshire (1979:31): "Subordinate clauses expressing degree, such as comparative and equative, take the form of derived nominals followed by certan postpositions: wyaro 'like', yoho 'above' ..."

31. This comparative constructions with *wie* is found quite often in many dialects, subsequently, it has even found its way into the *Duden* grammar, cf. Grebe (1966:233).

32. There is one example of the instrumental case in the Rigveda: RV 10,76,5.

33. If the particle construction always uses a comparative adjective as I have assumed (and shown the motivation for) in Andersen (1980b:22)), then the sentences would contain a comparative and a positive adjective. Only the unmarked positive adjective would be subject to deletion and not the marked comparative. For this reason 'gapping' is not applicable here.

34. Cf. Jensen (1934:123, fn.2).

4.0. WORD ORDER OF THE COMPARATIVE CONSTRUCTION IN THE RIGVEDA

Recent typological studies on word order draw their data from a wide range of languages. But since the majority of scholars do not have firsthand knowledge of the hundred or so languages referred to, we are all forced to rely on grammars and other secondhand sources to cull our examples from. Although it was not until the mid-1960s at the earliest that the impact of Greenberg's 1966 paper (first read at a conference in 1961) was to be felt in linguistics and encorporated into the writing of grammars, the majority of works on specific languages used for typological purposes still predate this important contribution to our understanding of word order. My contention now is that the data taken from pre-1965 (or, more realistically, 1970) grammars and other sources in which - and this generally holds true - word order played no *central rôle* are, to a great extent, unreliable: examples for constructions were usually given, but not for the specific word orders in question. The present chapter investigates one case in point: relying on the grammars and other pertinent literature on Old Indic and especially the Rigveda it is assumed *without exception* that the order of elements within the comparative construction is *standard + (marker +) adjective*. The construction type in question here is the case construction since there are no examples of either the particle construction nor the prepositional construction in the Rigveda. In keeping with Greenberg and subsequent theorists we will not bring the juxtapositional nor the verbal construction into this investigation.[1] In order to enable others to confirm or disconfirm the results reached here, a complete list of all examples found in the Rigveda and used in this investigation are listed in APPENDIX I below.

4.1. *Results of earlier investigations*

Let us once more recall what the current theory has to say about the word order within the comparative construction. Since Greenberg's remarks on comparison (1966:88-89) it has been assumed that one language type shows one order in this construction and the other language type another. Specifically, the general consensus is that VO languages exhibit the order *adjective + marker/pivot + standard* (AS) and OV languages the order *standard + marker/pivot + adjective* (SA). In addition to this the comparative construction is not liable to marking, which has as a consequence that if two orders are found in a language (cf. Latin: *maior quam tu* and *te maior*) one must say that the language is in a state of typological change.

In an earlier investigation of the word order of the Rigveda, Lehmann has shown that this language has postpositions as well as preposed adjectives, genitives and relative clauses,[2] thus indicating OV patterning. Together with Ratanajoti, Lehmann continued his research by investigating the next stage in the development of the Indic languages, i.e. the Brāhmaṇas. Their conclusion was that this later language showed the beginning of a shift from the OV patterning (of the Rigveda) to VO patterning. In accordance with the current theory, one would expect to find the order SA for comparative constructions in the Rigveda - since it is an OV language - and this has indeed been found to be the case, cf.:

(62) *ghṛtā́t svā́dīyo* (RV VIII,24,20d),[3]

(47) *gaurā́d vêdīyān* (RV VII,98,1c),[4] and

(4) *tvád anyó* (RV I,57,4c).[5]

But the order AS was found as well:

(15) *sudárśataro dívātarāt* (RV I,127,5b).[6]

The explanation for the contradictory patterns found in the Rigveda was given by Lehmann (1973c:55) as follows:

> In the Rigveda we find comparative constructions like those in OV type languages, as well as those of the VO type which came to predominate in later Sanskrit and most of the other IE dialects. In the OV pattern, a standard may precede the adjective ... or, es-

> pecially in later portions of the Rigveda, a standard may follow the adjective.

In other words, as long as the Rigveda was an OV language the order in comparative constructions was SA, but as soon as the language started changing its patterning from OV to VO the order AS appeared.

The assumption that the Rigveda reveals a SA word order in this comparative construction is unanimously accepted and/or supported. Perhaps the first to address himself to this problem in the Rigveda was Grace (1971:370-371):

> Latin and Vedic have two comparative constructions, one employing a conjunction and showing the Type II order:
>
> maior quam eqo
> bigger than I
>
> and another employing the ablative and showing the Type III order:
>
> me maior
> than me bigger
>
> ... Proto-Indo-European probably had the order standard - marker - adjective.

Since the particle construction - Grace's first example - is not attested in the Rigveda (see Andersen 1980b), this passage supports the claim that the word order in the *case construction* was SA. In her investigation of the fifth Maṇḍala of the Rigveda, Miehle (1974:425) gives support to the conclusion reached by Lehmann:

> Unfortunately there is only one clear example of a comparative construction in the archaic hymns of the Fifth Maṇḍala (R. 5.61. 6), which does in fact show the OV word-order: Standard-Pivot-Adject ...

Since the order in the Rigveda provides one of the cornerstones for the reconstruction of the PIE word order, supporters of an OV patterning for PIE must also accept the SA order for Old Indic, cf.:

> Though, for instance, it has long been believed that in IE the object preceded the verb, the fluid word order of Latin, Greek and Classical Sanskrit caused a lingering doubt. Lehmann has reargued the case on the basis of the order of comparative constructions in the earliest Vedic Sanskrit ... (Adams 1976:71).

> It does not matter in this context that owing to other typological and comparative considerations we can assume that the PIE comparative

> construction was probably Standard+Adj.+*-$y^{e}/_{o}s$ (:*tē maior*)
> and that a motivation for the rise of the construction with a pivot can be found along the lines sketched by Andersen (Ramat 1980:12).

Even Friedrich, who argues for VO patterning in PIE, must concede the SA order (i.e. OV patterning) for this construction in Vedic:

> Vedic Sanskrit also has SA order ... In both Hittite and Sanskrit the SA order is formed with the standard in the ablative case ... In sum, the two eastern stocks in question had SA order (Friedrich 1975:27).

To sum up, there seems to be absolutely no doubt that the word order within the comparative construction in the Rigveda was SA. This conclusion, however, is based upon only a very few examples, the majority of which have been taken from grammars and do not represent an in-depth investigation of the word order of this construction from the texts themselves: three of the four examples given above ((62), (47) and (15)) are taken from Delbrück (1888) and are, by the way, the only examples given there from the Rigveda:

> Comparative constructions, with the pattern *standard* ('ghee')-*pivot* (ablative)-*comparative* ('sweeter') (Delbrück 1888:113): [example (62)] ... (Lehmann 1974a:31).

> Delbrück in his unsurpassed *Altindische Syntax* cites examples from these earliest [Rigvedic] texts. His Archaic example [(62)] ... His Strophic example [(47)]... (Lehmann 1972c:985).

> In the OV pattern, a standard may precede the adjective, as in [(62)] ... or, especially in later portions of the Rigveda, a standard may follow the adjective as in [(15)] ... (Delbrück 1888: 113,188-96). (Lehmann 1973c:55).

At the two passages in question - Delbrück (1888:113 and 196)- reference is made *only* to the comparative construction and *not* to the *word order* within these constructions. The only remaining example, i.e. (4), is the very first passage for *anyá* with the ablative in the meaning "another than ..." given by Grassmann (1873:68); three of the seven passages referred to here show AS. What we have here, then, is a prime example of the situation referred to in the introductory part of

this chapter: data has been culled from pre-1965 grammars and the results obtained are taken for granted as reflecting the correct order in question.

4.2. *Preliminary remarks to an investigation of the word order within the comparative construction in the Rigveda*

Before starting with an investigation of the word order within the comparative construction in the Rigveda a few preliminary remarks need to be made which will, on the one hand, show the necessity of a reanalysis of the data, and, on the other hand, facilitate my argumentation.

4.2.1. *Chronology of the Rigveda*

As we have seen in §4.1. above, the examples of comparative constructions in the Rigveda have been grouped into *older* examples showing the order SA and *younger* examples showing the order AS. The criterion by which the examples have been relatively dated is to be found in Arnold (1905), cf. the following statements:

> E.V. Arnold *Vedic Metre in its Historical Development* ... presents the data on the basis of which he determines various structures of hymns in the Rigveda (Lehmann 1972c:993,fn.8).

> The relative construction in this study have been culled from poems of the Fifth Mandala of the Rig-Veda, which for metrical and linguistical reasons has been divided into the following chronological strata: archaic, strophic, normal, cretic and popular (Arnold: 1905,256-277). (Miehle 1974:408-409).

Now, taking another look at the examples for comparison already given and referring to Arnold, one finds that the one example for the order AS ((15) RV I,127,5b) , which was assumed to be from a relatively young portion of the Rigveda, in fact, belongs to the oldest.[7] Accordingly, the following distribution of the four examples can be established:

(15) RV I,127,5b: AS - archaic,
(64) RV VIII,24,20d: SA - archaic,[8]
(47) RV VII,98,1c: SA - strophic,[9] and
(4) RV I,57,4c: SA - strophic.[10]

Thus the four examples give evidence that the oldest layer of the Rigveda shows both orders for comparison, while the later layer shows only the pattern SA. Since this is at variance with the conclusions reached by Lehmann, namely, that only in the later stages of the Rigveda does the order AS occur, a reanalysis of the comparative constructions in the Rigveda is now warranted. It must be added here, though, that Arnold (1905) is by no means the only work done on the chronology of the Rigveda, nor the last word on the subject. I will, however, not enter into a discussion on the relative chronology of the Rigveda here.[11]

4.2.2. *Reanalysis of Lehmann and Ratanajoti 1975*

We have already seen in §4.1. above that Lehmann and Ratanajoti have proposed a typological shift from OV patterning to VO in the Brāhmaṇas:

> In summary, the verbal modifier constructions and constructions involving compound sentences [i.e. gapping] in the ŚB are in accordance with the VO pattern. Nominal modifiers on the other hand are for the most part OV, as are the government constructions, though newly developed adpositions are VO, as Delbrück pointed out (1878:47). The constructions involving a standard are largely OV, apart from the order of the teens.
>
> When we compare the patterns of the ŚB with those in later Classical Sanskrit, we find there a further development towards VO patterning (Lehmann and Ratanajoti 1975:157).

Summing up, we see that Lehmann and Ratanajoti regard the following typological characteristics in the ŚB as evidence for VO patterning:

(a) newly developed prepositions,
(b) preposed interrogative markers,
(c) preposed negative markers,
(d) the order in teens,
(e) gapping patterns, and
(f) the occurance of postverbal datives.

All other typological characteristics show OV patterning.

In Andersen (1982a) it has been shown that these six patterns do not, in fact, give sufficient evidence for VO patterning. The new-

ly developed prepositions have developed either from a primary pattern *modifier + modified*, or from adverbs which occurred preverbally; both of these origins reveal an underlying OV pattern (see Andersen (1979) and §2.2.3. above for more details). The interrogative and negative markers in Old Indic are expressed by adverbs and hence are placed before the verb in accordance with OV patterning (§2.2.1. above). The arguments regarding the order of elements within the teens as representing VO patterning are not consistent: the specific order referred to here - *ékādaśa-* ("one-ten", i.e. "eleven") - is found not only in the later Brāhmaṇic texts but also in the earliest Old Indic texts as well as in Avesta, and it has even been reconstructed for OV PIE (cf. Miller (1979) for additional remarks on the patterns in the teen). Finding only examples of one type of gapping in the ŚB, Lehmann and Ratanajoti conclude that this gives additional evidence for VO patterning. But not only is the other type of gapping attested[12] (cf. ŚB 11,5,1,4), gapping itself has been denounced as an indicator of typological patterning by its initiator Ross (1973:419, fn.16). Finally, although postverbal elements have given rise to a typological shift from OV patterning to VO in a number of languages throughout the world (see §2.5.4. above), this has not been generalized in the later stages of Indic and therefore has not given rise to a typological shift here. On the contrary, in Andersen (1980a) it has been shown that the postverbal placement not only of datives but also of various other elements is used for the expression of certain pragmatic categories such as *comment* - see Andersen (1982c) for more on postverbal elements.[13]

In summary, the word order patterns as stated by Lehmann and Ratanajoti (1975) cannot be used to support the claim that the ŚB was in a state of typological change from OV to VO. This explanation for these pattern, which were assumed to indicate VO patterning, has the advantage over Lehmann and Ratanajoti's assumption of a typological shift from OV to VO and back again to OV in Modern Indic: the two separate motivations for these shifts - first from OV to VO in Old Indic

(within an OV geographical area!) and second from VO to OV in post-Middle Indic - will not be needed. The fact that there was no typological shift in Indic is further supported by recent investigations of Early Middle Indic, see Andersen (1980a; 1982c and Forthcoming a).

4.2.3. *Marking and the comparative construction*

In the previous section I have shown that the contradictory patterns found in the Rigveda cannot be attributed to typological change. Recalling that exceptions to word order patterns in languages arise (a) in languages undergoing typological change, or (b) in marked patterns, the contradictory patterns for the comparative construction found in §4.1. above must indicate that one pattern is marked and the other unmarked. Notice, however, that the comparative construction has been assumed to be particularly resistent to marking:

> Among the patterns discussed ... some are susceptible to rearrangement for marking, such as the basic sentence pattern and the position of adjectives and genitives with regard to their nouns. Others are rearranged with difficulty, such as comparatives; it is unlikely that an English poet would produce an OV comparative construction such as *the oaks house from high* to express *the oaks are higher than the house* ... For this reason we ascribe great importance to constructions like the comparative in determining the basic patterns of individual languages (Lehmann 1974a:22).

Let us now take a look at two examples of comparison in the Rigveda:

(8) *ná tvád anyó* ... (RV I,84,19c)

(68) *nā́nyās tvác* ... *(= ná-anyás tvád)* (RV VIII,78,4c).

The construction in both cases is the same with the exception of the order of elements *standard* and *adjective*. But this difference has the effect of producing four syllables in the first example (8), but only three in the second (68). Keeping in mind that the Rigveda is a metrical text, one is immediately led to ask whether the meter can affect the order to be used in such constructions, i.e., where four syllables are needed the order found in (8) is chosen, and where only three are necessary, the opposite order is chosen. The conclusion which suggests itself here is that the order of constituents in the comparative construction is liable to metrical marking in the Rigveda.

4.2.4. *Meter in the Rigveda*

Under these circumstances a metrical analysis of the comparative constructions in the Rigveda becomes imperative. But before starting this analysis a few pertinent remarks should be made concerning the meter in the Rigveda. First, by way of introduction, I would like to quote Macdonell who gives a very clear synopsis of the principles governing Vedic meter:

> The main principle governing Vedic metre ... is measurement by number of syllables. The metrical unit here is not the *foot* in the sense of Greek prosody, but the *foot* (*pāda*) or *quarter* in the sense of the verse or line which is a constituent of the stanza. Such verses consist of eight, eleven, twelve, or (much less commonly) five syllables. The verse is further more or less regulated by a quantitative rhythm (unaffected by the musical accent) in which short and long syllables alternate. Nearly all metres have a general iambic rhythm inasmuch as they show a preference for the even syllables (second, fourth, and so on) in a verse being long rather than short. In every metre the rhythm of the latter part of the verse (the last four or five syllables), called the cadence, is more rigidly regulated than that of the earlier part. Verses of eleven and twelve syllables are characterized not only by their cadence, but by a caesure after the fourth or the fifth syllable, while verses of five and eight syllables have no such metrical pause (Macdonell 1916:436).

With the exception of only a very few examples the comparative construction is contained within one *pāda*. For this reason the *pāda* will serve as the focal point of the following investigation. For easy reference, I will now give a synopsis of the verses and stanzas employed in the examples from the Rigveda.

I. Verses:

A. Eight syllables: $|\overset{\cup}{-}\overset{\cup}{-}\overset{}{-}|\cup-\cup\overset{\cup}{-}|$

B. Eleven syllables: (a) $|\overset{\cup}{-}\overset{\cup}{-}\overset{}{-}\,,\cup\cup-|-\cup-\overset{\cup}{-}|$, or

(b) $|\overset{\cup}{-}\overset{\cup}{-}\overset{\cup}{-}\,,\cup\cup|-\cup-\overset{\cup}{-}|$

C. Twelve syllables: (a) $|\overset{\cup}{-}\overset{\cup}{-}\overset{}{-}\,,\cup\cup-|-\cup-\cup\overset{\cup}{-}|$, or

(b) $|\overset{\cup}{-}\overset{\cup}{-}\overset{\cup}{-}\overset{}{-}\,,\cup\cup|-\cup-\cup\overset{\cup}{-}|$

II. Stanzas - the separate verses are labled with letters for easy reference:

A. Gāyatrī (G): 8 8 / 8.
a b c

B. Anuṣṭhubh (A): 8 8 / 8 8.
a b c d

C. Paṅkti (P): 8 8 / 8 8 8.
a b c d e

D. Triṣṭhubh (T): 11 11 / 11 11.
a b c d

E. Virāṭ (Vi): 11 11 / 11.
a b c

F. Jagatī (J): 12 12 / 12 12.
a b c d

G. Uṣṇih (Us): 8 8 / 12.
a b c

H. Bṛhatī (B): 8 8 / 12 8.
a b c d

I. Atyaṣṭi (At): 12 12 8 / 8 8 / 12 8.
a b c d e f g

J. Pragātha (Pr): (K) 8 12 / 8 / 12 8 / 12 8.
a b c d e f g

(B) 8 8 / 12 8 / 12 8 / 12 8.
a b c d e f g h

4.2.4.1. *Metrical restoration*

The text used in the following investigation will be the *saṃhitā* text. At times, however, this text will need to be amended;[14] for example, the *pāda* (21) - a *Triṣṭhubh* - is given as follow in the *saṃhitā*:

(21) *nā́satyā kúha cit sántāv aryó.*

Now a *Triṣṭhubh pāda* should have eleven syllables whereas (21) has only ten. The text here will, accordingly, need to be amended in the following way: *náasatyā kúha cit sánta aryó.* In other words, *nā́satyā* will need to be read as containing four syllables, i.e. *náasatyā*,[15] and *sántāv aryó* must be read as *sánta aryó*.[16] In general, the restored text will be quoted in this investigation, but in APPENDIX I the original *saṃhitā* text will be quoted first with the restored forms noted in paren-

thesis. Arnold's metrical commentary[17] proves to be extremely useful in these matters.

4.3. *Investigation of the comparative constructions in the Rigveda*

An accurate account of the word order of the comparative constructions in the Rigveda can only be given when *all* examples have been collected and evaluated; in the recent literature a total of five or six examples have been cited in support of the current views. I have therefore collected all of the examples from the Rigveda - a total of 106 - which exhibit both the AS and the SA order. The fact that both orders are indeed found (i.e. contradictory typological patterns) indicates - according to the typological theory - either a typological shift in patterning or marking. Since I have shown that the language is not in a state of typological change, I will assume that one order represents the dominant - or unmarked - order and the other order the marked one. Because the Rigveda is a metrical text, it seems reasonable that the meter should have some effect on the choice of word order - as was shown in §4.2.3. above. I have, accordingly, devised the following method for determining the marked and unmarked orders.

First, the following four types of examples must be distinguished:

(a) Examples showing the order SA in which the opposite order AS does not conform to the metrical pattern.

(b) Examples showing the order AS in which the opposite order SA does not conform to the metrical pattern.

(c) Examples showing the order SA in which the opposite order AS is consistent with the metrical pattern.

(d) Examples showing the order AS in which the opposite order SA is consistent with the metrical pattern.

Since there is no choice available in the examples of the first two types (a) and (b), they cannot possibly give us any indication of the underlying order. We must, therefore, concentrate our efforts on the last two types (c) and (d). If we find examples of one type, but not of the other, this should reveal the unmarked, underlying word order.

In other words, if we find a number of examples whose opposite order is consistent with the metrical requirements, and assuming that the construction is not marked in any other way, then the choice of the order found in the text is not dependent upon the meter thus indicating the unmarked prose order. For this investigation an additional type will also need to be set up which contains examples exhibiting a particular type of marked pattern, i.e., *figura etymologica*.

4.3.1. *Type I*

A total of 42 examples of comparative constructions in the Rigveda show the order SA whose opposite order (AS) does not conform to the metrical requirements. An example of this type is the following *Gāyatrī* verse:

(35) *puṃsó bhavati vásyasī*

| – – ∪ ∪ | ∪ – ∪ – |

It should be noted now that "in all metres the rhythm of the latter part of the verse is much more rigidly defined than that of the earlier part" (Arnold 1905:9).[18] For this example, then, the last four syllables should coincide with the requirements of the *Gāyatrī* meter, while the first four syllables need not - as one can see. Now, the only word order which will produce the closing rhythm ∪–∪$\overset{\cup}{–}$ is the order found in the text; no other order will conform to this pattern:

* ... *bhavati*. = ∪∪$\overset{\cup}{–}$.

* ... *puṃso*. = – –.

Another example is the *Triṣṭhubh* verse

(34) *duḗ yád īm bibhṛtó mātúr anyé.*

| ∪ – ∪ – ‿ ∪ ∪ – – ∪ – – |

Here the order standard (*mātúr*) plus adjective (*anyé*) produces the closing rhythm –∪–$\overset{\cup}{–}$, while the opposite order *anyé mātúr* would produce the rhythm – – –$\overset{\cup}{–}$ which is metrically unacceptable. Still another example has already been mentioned in §4.2.3. above, i.e.

(8) *ná tvád anyó maghavann asti marditā́*

whose opposite order (found in (68)) produces a verse with one syllable less than required. Accordingly, all of the examples in APPENDIX

I listed as belonging to type I have been similarly investigated with the result that only the SA order found in the text conforms to the requirements of the meter.

4.3.2. *Type II*

The 17 type II examples represent those comparative constructions with the order AS in which the opposite order (SA) does not conform to the metrical requirements. One example has already been mentioned in §4.2.3. above, namely:

(68) *ná-anyás tvác chūra vāghátaḥ.*

In this example we find the order adjective (*anyás*) plus standard (*tvád*) whose opposite order - which, by the way, is found in (8) - produces one syllable more than is needed for the verse, i.e.: *ná tvád anyás* ... Still another example is the *Atyasti* verse

(15) *náktaṃ yáḥ sudárśataro dívātarād.*

|– – – ∪ – ∪ ∪|– ∪ – ∪ –|.

We see here that only when *divātarād* (|∪–∪–|) is in *pāda*-final position is the metrical requirement for the cadence fulfilled, while all others produce faulty patterns:

* ... *sudárśataro.* = ∪–∪∪–.

* ... *sudárśataro yáḥ.* = ∪–∪∪–∪.

* ... *sudárśataro náktam.* = ∪–∪∪––∪.

* ... *yáḥ náktam.* = ––∪.

* ... *náktaṃ yáḥ.* = ––∪.

This means then that only the order found in the text fulfills the metrical requirements for the cadence of this verse. All other examples in APPENDIX I which are attributed to type II have been examined with similar results.

4.3.3. *Type III*

There are 12 examples of comparative constructions with the order SA in which the order AS also conforms to the metrical pattern.

(a) *tvád* Three of these type III examples employ the pronoun *tvád (tuád)* as the standard:

(28) *yás tvád dhótā pū́rvo agne yájīyān.*

(31) *ná tvád dhótā pū́rvo agne yájīyān.*

(7) *nákiṣ tuád rathī́taro.*

For the first two examples there is only one other alternative order which will be in concord with the meter: **yás/ná hótā pū́rvo yájīyān tvád agne.* For the third example the other alternative is **rathī́taro nákiṣ tuád.* Theoretically then, the Rishi had two different word orders to choose from, and in all three cases he chose *one* of these two orders. The question that now arises is why was one order chosen over the other? In this case, the meter has no influence on the choice of word order since both orders are metrically acceptable. As will be shown in the next section there are also a number of type IV examples in the Rigveda, i.e., examples with the order AS which also permit the order SA as an alternative. If one order for the comparative construction is unmarked then all of the other orders must, accordingly, be marked. The immediate problem now is to find an indication that either the type III examples are marked or the type IV examples. In returning to the three examples (7), (28) and (31) we notice that the standard in each case is the pronoun *tvád.* Let us now take a closer look at this pronoun. *tvád* occurs 47 times in the Rigveda:

(i) 17 times in *pāda*-initial position,

(ii) 14 times in second position - after *nahí, nakís, ná, yás,* vocative, *ví* and *mā́*),

(iii) 7 times in the third position - after *ádhā ha, nakís* + vocative, *máhiṣīva, ví ca, ná ṛté* and vocative + *ná*),

(iv) 9 times in later positions: six of these examples are comparative constructions where no other order will fulfill the metrical requirements, i.e. (26), (40), (58), (68) and (94). *tvád* occurs twice in one *pāda* at RV V,25,7 and RV IV,11, 3 (not in a comparative construction). In the last example (RV X,18,13) there is again no other order possible (and again this is not in a comparative construction).

This indicated then that *tvád* is usually placed early in the *pāda* - either at the very beginning, in second or in third position after other

elements which as well usually occur early in the *pāda*. Only in those cases where no other word order is possible is *tvád* placed later in the *pāda*. Thus these three examples exhibit a pattern which is marked through the process I have called *pronominalization*, see §2.4.2. 8. above.

(b) *asmād* The next example is (33) in which the standard is the enclitic pronoun *asmād:*

(33) *ā́d asmād anyó ajaniṣṭa távyān.*

Here the order **... anyó asmād ...* produces a pattern which is metrically identical to (33). The choice made between the two orders here was in keeping with the rule of placing enclitic elements in second position.

(c) *ā́ váram* The next three type III examples are

(1) *yás te sákhibhya ā́ váram.*

(24) *kuvít tiṣṛbhya ā́ váram.*

(70) *devā́nt sákhibhya ā́ váram.*

For these examples the following order complies to the meter as well:

**yás te váraṃ sákhibhya ā́.*

**kuvít váraṃ tiṣṛbhya ā́.*

**devān váraṃ sákhibhya ā́.*

Let me now call to our attention the following fact: *váram* occurs a total of 14 times in the Rigveda with *ā́*:

(i) six times as *ā́ váram* (always as the end of the *pāda*) with the meaning "better than" + Ablative ((1), (24), (70) and (80)), or "according to wish" (RV I,119,3d and RV IX,68, 2d),

(ii) eight times as *váram ā́* (never at the end of the *pāda*) with the meaning "according to wish" (Grassmann: "nach Belieben").

In other words, only the order *Ablative + ā́ váram #* expresses the comparative "better than X". For this reason the alternatives to (1), (24) and (70) given above are not true alternatives which means then that the three examples should be added to type I.

(d) *cit* The next type III examples ((2), (18) and (95)) all

show the order *# standard + cit + adjective ...* Since *cit* is an enclitic emphasizing particle these examples exhibit a marked word order pattern through the process of *focus* (see §2.4.2.5. above), i.e., they are marked by means of the use of a focussing particle together with a change in word order which places the standard at the beginning of the *pāda*.

(e) *adjective + noun* Another type III example is

(41) *sutáḥ sómo ásutād indra vásyān.*

Again an alternative order fulfills the metrical requirements just as well: **sutó vásyan ásutād indra sómaḥ*. If we take a look at the distribution of *sutá-* and *soma-* in the Rigveda, we find 26 occurrences of both words in the same *pāda*. The order *sóma- + sutá-* occurs 16 times - only three times in contact position. The other order *sutá- + sóma-* occurs 10 times, which are either in contact position or separated by either an unaccented vocative (twice) or a main (unaccented) verb. This indicates a tendency to place the two words either next to each other with the order *sutá- + sóma-* (i.e. adjective + noun) or in the opposite order *sóma- + ... + sutá-* with accentuated words separating them. In other words, if we generalize the evidence here, the Rigveda - which is an OV language - shows a tendency to have the unmarked order *adjective + noun* and a marked order (for the expression of apposition) *noun + ... + adjective.* This may have been reason enough to choose the order found in (41) over its alternative.

(f) *end-weight* The last type III example is

(47) *gaurā́d védīyām avapā́nam índro.*

Here the order *védīyān gaurā́d ...* coincides with the metrical requirements. One aspect which may have led to the choice of the former order is the principle of *end-weight*, see §2.4.2.6. above.

We see then that the type III examples generally show some type of marking.

4.3.4. *Type IV*

There are 15 examples of comparative constructions showing the

order *adjective + standard* whose opposite order fulfills the metrical requirements just as well.

(a) *anyám asmád* The first two examples are (16) and (67):

(16) *anyám asmád ririṣeḥ kám cit adrivo.*

(67) *anyám asmád bhiyā́ iyám.*

The order *# asmád anyám ...* would be metrically identical to the order found in (16) and (67). In addition to this, *asmád* occurs eight times in *pāda*-initial position in the Rigveda (I,60,3b; I,134,2b; VII, 34,1b; VIII,8,8b; VIII,67,15c; X,5,1b; X,45,1b; and X,54,3b). In these two examples there seems to be no reason for choosing the order found in the text over the alternative order other than the preservation of an underlying order *adjective + standard* for comparative constructions. Similar to the previous two examples is the situation in the next three:

(27) *<á>nyáṃ te asmán ní vapantu sénāḥ.*

(36) *utá-anyó asmád yajate ví ca-ā́vaḥ.*

(51) *góbhir yád īm anyé asmán.*

Here *<a>nyám/anyó/anyé* and *asmán/asmád/asmán* could exchange their positions and still be metrically identical. And again there seems to be no other reason for the choice here than the underlying *adjective + standard* order for comparison.

(b) *adjective + noun* The next type IV example is

(69) *víśvā jātā́ni ávarāṇi asmāt.*

The alternative order **asmā́d jātā́ni ávarāṇi víśvā* also suits the metrical requirements ; *asmā́d* occurs in *pāda*-initial position in the Rigveda at I,171,4a; I,182,8c; and X,98,12c. Here as well, there seems to be no immediate reason for the choice made other than the preservation of the order *adjective + standard* for comparative constructions.

(c) *mát* (77) is the next type IV example:

(77) *anyéna mát pramúdaḥ kalpayasva.*

The order *# mát anyéna ...* also fulfills the metrical requirements. Although *mát* does not occur in *pāda*-initial position in the Rigveda, it does occur in this position at TB 2,8,8,4d. According to the principle of *end-weight* (see §2.4.2.6. above) the alternative order would even

be better than the chosen order, but was not chosen most likely in order to preserve the order *adjective + standard* in comparative constructions.

(d) Another type IV example is found in (102):

(102) *anyáṃ kṛṇuṣva-itáḥ pánthām.*

The order **pánthāṃ itáḥ kṛṇuṣva-anyám* also shows an acceptable metrical pattern. And again the order in the text was chosen in order to preserve the unmarked order *adjective + standard* for comparison.

(e) *two pādas* The last examples for type IV are (10), (54), (57) and (67).

(54) *kím anyé pári āsate / <a>smát stómebhir aśvínā //.*

In this example the comparative construction spreads out over two *pādas*. Since it would be possible here for *anyé* and *asmát* to exchange position without changing the metrical pattern, the order chosen indicates that the order *adjective + standard* was preferable to the opposite order. A similar situation is found in the other three examples listed here.

To sum up, these type IV examples , whose opposite order (i.e. *standard + adjective*) fulfills the metrical requirements just as well, indicate that the order chosen was not dependent upon the meter - in contrast to the examples of type I and type II above. In addition, these examples do not show signs of marking as was the case for the type III examples above. This indicates then that the unmarked order for comparative constructions in the Rigveda is *adjective + standard.*

4.3.5. *Type V*

All examples of type V comparative constructions are proverbial expressions, for the most part displaying *figura etymologica.* The reason for separating these expressions from the other comparative constructions will become evident in chapter five below.

(a) *... tavásas távīyān #* The first four examples ((37), (39) (48) and (88)) all close their *pādas* with the comparative construction

... tavásas távīyān #. The opposite order *... távīyān tavásas #* does not fulfill the metrical requirements (i.e. ... -∪-⏑-#).

(b) *... mánaso jávīyān #* The next five examples ((12), (13), (19), (74) and (96)) all have the comparison *... mánaso jávīyān #* at the end of their *pādas*, and - as in the previous four examples - the opposite order *... jávīyān mánasas #* does not agree with the metrical requirements. Examples (20) - *... mánaso yó jávīyān #* - and (82) - *... mánaso jávīyasā #* - represent slight modifications of this pattern; they are latter examples[19] and their opposite orders do not concur with the metrical pattern.

(c) *end-weight* Four examples displaying *figura etymologica* show the order *standard + adjective*:

(11) *# svādóḥ svā́dīyaḥ ...*

(42) *# dūrā́d dávīyo ...*

(43) *# urór várīyo ...*

(99) *# svādóh svā́dīyaḥ ...*

When compared with examples (103) and (104) -

(103) *úttarā-ít úttarābhyaḥ.*

(104) *ádharā sā-ádharābhyaḥ.* -

which show the opposite order (i.e. adjective + standard), one notices that although in some of these cases the opposite order fits the metrical pattern, all examples show the order *shorter word* (bisyllabic standards in the first three cases and trisyllabic adjectives in the last two cases) followed by a *longer word* (trisyllabic adjectives in the first three examples and pentasyllabic standards in the last two examples). A possible explanation for the choice of word order in these examples is, accordingly, the principle of *end-weight*.

(d) *cit* The last three examples (71), (72) and (106) show the order *# standard + cit + adjective* and hence indicate a marked pattern through the process of *focus*.

4.3.6. *Results*

The results of this investigation can be summarized as follows:

(a) The meter has an influence on the word order with compar-

parative constructions in the Rigveda.

(b) Only in those cases where both orders fulfill the metrical requirements can the unmarked order for comparison be determined. Although there are examples for both type III and type IV, i.e. examples where the opposite order is also metrically permissible, there are other reasons for regarding the order found in the type III examples as indicative of marked patterns. For the type IV examples there is no reason for choosing one order over the other order - in the majority of cases both orders are metrically identical - other than the preservation of the unmarked, underlying order *adjective + standard* for comparative constructions.

4.4. *Support*

Since the results of the preceding investigation are at variance with the *opinio communis* additional support will now be given.

4.4.1. *Internal support*

Although the most important support for the word order within comparative constructions in Old Indic should come from Old Indic prose because the word order here is not influenced by the meter, there is some internal evidence in the Rigveda itself which supports an unmarked *adjective + standard* word order for comparison.

(a) *cit* This enclitic particle is used to add special emphasis to the word it is attached to, or, in other words, it is used to mark a syntagma through the process of *focus* (see §2.4.2.5. above). Accordingly, there are 22 examples in the Rigveda with the order *# standard + cit + (...) adjective ...* while there is only one example with the order *# adjective + cit + standard.* This fact indicates that the order *standard + cit + adjective* is to be regarded as marked, whereas the order *adjective + standard* unmarked, thus supporting the results of the preceding investigation.

(b) *Meter* Some cases of type IV comparatives ((52) and (55)) show the order *adjective + standard* whose opposite order (i.e. SA) conforms to the metrical requirements *better* that the order found in

the text. In other words, the order SA is metrically preferable to the order AS which was nevertheless chosen in order to preserve this underlying order for comparative constructions.

4.4.2. *External support - word order in the Brāhmaṇas*

I am in agreement with Nagy (1974:162-163) when he writes:

> Since poetic forms may blur current phrases in the natural language, we may best ascertain the Indic trends in word-order from prose, such as that of the Brāhmaṇas.

Since there was no typological shift from (S)OV to (S)VO in Old Indic - as was shown in §4.2.2. above - the word order for comparison found in the prose portions of the Vedas and Brāhmaṇas should be regarded as the unmarked word order in Old Indic in general. If the results of an investigation of Old Indic prose should be at variance with the proposed word order for the Rigveda, precedence should be given to the word order found in the prose texts.

Although a detailed investigation of the entire Old Indic prose was not possible, I have been able to collect - from the texts themselves - 59 examples of comparison in the prose portions of the Vedas and Brāhmaṇas which are listed in APPENDIX II. One notices immediately that both order for comparison are found, although they cannot be affected by the meter (as was the case for the Rigveda). Our task now is to determine whether one of these orders can be shown to be marked (whereas the other is not) or whether both orders can be shown to be unmarked.

4.4.2.1. *The data*

59 examples of comparative constructions have been found in the texts of the prose portions of the AV and TS along with additional examples from the ŚB, AB and AA.

(a) *pronouns* A total of six examples of comparison ((21), (22), (23), (38), (39) and (51)) were found in which the standard was *tvad*. In all of these examples the order was *tvad plus adjective*. Similarly, all examples of comparison in which the standard was *mad* ((34) and

(54)), *tasmāt* (3) and *yasmāt* (7) exhibit the order SA as well. Furthermore, seven examples ((5), (6), (45), (46), (47), (49) and (50)) with the pronoun *asmāt* as standard show the order SA, while two examples with *asmāt* show the opposite order:

(12) *paras asmāt lokāt,* and

(44) *śreyāṃsas śreyāṃsas haiva asmāt.*

In the first of these two examples (12) *asmāt* modifies *lokāt*, i.e. the standard is not merely *asmāt* but the entire ablative NP *asmāt lokāt,* whereas in all other examples *asmāt* is an anaphoric pronoun and stands alone as the standard. The second example (44) is to be regarded as exhibiting a marked pattern through focussing of the adjective by means of a change in word order and the addition of an emphasizing particle *haiva*. Furthermore, there are four examples with the anaphoric pronoun *atas* as the standard, two showing the order SA ((29) and (48)) and two showing the marked order *adjective + vai* (= emphasizing particle) *+ standard* ((31) and (32)). The last three examples employ the pronouns *asmat* ((9) and (15)) and *etasmāt* (43) revealing the order AS.

(b) *emphasizing particles* I have noted eight examples of comparison ((13), (24), (25), (26), (31), (32), (33) and (44)) with the order *adjective + emphasizing particle + standard* which exhibit, accordingly, marked patterns through the process *focus*.

(c) *end-weight* In one passage the order SA seems to exhibit a marked pattern due to the principle of end-weight, i.e. ŚB 14,4,2, 15 (= (55)-(59)). At this passage we have altogether five comparative constructions, four of which show the order AS, the last construction, however, the opposite order:

(55) *preyas putrāt,*

(57) *preyas vittāt,*

(58) *preyas anyasmāt,*

(56) *anyam ātmanas,*

(59) *sarvasmāt antarataram.*

In this case the principle of end-weight (see. §2.4.2.6. above) may very well be responsible for the choice of the word order.

(d) *stylistically marked pattern* One SA example may be affected by stylistic principles, namely (11):

(11) *juhvad eva-ajuhvato vasīyān.*

(e) *varying patterns* The only remaing examples of SA order does not seem to be marked in any way:

(16) *brahma khalu vai kṣatrāt pūrvam;*

(f) *AS examples* The 21 remaining examples of comparison all show the order AS without any sign of marking.

4.4.2.2. *Results*

The data given in the preceding section clearly indicate an unmarked order *adjective + standard* together with a marked order *standard + adjective.* Concerning the marked patterns one notices that the first and second person pronouns regularly stand before the comparative adjective, as does the anaphoric pronoun *atas* as well as the pronouns *tasmāt* and *yasmāt.* The pattern exhibited by (11) - when compared to RV X,117,7c (97) and RV VI,41,4a (41), see section §4.3.3.d above - points towards a marked (stylistic) pattern as well. The principle of end-weight has an effect on the word order in (59). Although the examples of *adjective + emphasizing particle + standard* are to be regarded as exhibiting marked patterns, it is evident - especially in light of the fact that 21 examples of unmarked patterns show the order AS - that before the adjective was moved up front it was still placed before the standard, i.e.

(i) unmarked: adjective + standard,

(ii) marked: adjective + emphasizing particle + standard.

Only one problematic example remains, i.e. (16); a possible explanation for this could be as follows. In the next chapter it will be shown (see §5.1. below) that the word order in the Upaniṣads is changing towards an unmarked SA order. This tendency increases in Middle Indic where, at the later stages, the change is complete. Returning to (16) and comparing it with (17) one sees that the tendency which was to be completed in Middle Indic had already started at this early stage.

To sum up, the examples of comparison in the prose portions of the Vedas along with the Brāhmaṇas and the AA show an unmarked order *adjective + standard* and under certain conditions a marked order *standard + adjective*, thus supporting the order proposed for the Rigveda above.

4.4.2.3. *Comparison of the order in the Rigveda with the order in later Old Indic Prose texts*

The results of the investigation of comparative constructions in the prose portions of the Vedas and Brāhmaṇas support the conclusion reached in §4.3.6. above for the Rigveda, namely, that the unmarked order for comparison in Old Indic is AS. Returning to §4.3.3. (i.e. the type III examples in the Rigveda) one finds additional support for the view that these examples are indeed marked.

(a) The second person pronoun *tvád* is generally placed early in the clause in Old Indic which thus overrides the order AS for comparative constructions. In this connection it is interesting to note that of the 26 examples of comparative constructions in Homer with the second person pronoun as the standard, 22 examples show the order SA and only four AS (see §5.2.4. below).

(b) Examples such as (41) - as I have already pointed out in §4.4.2.2. above - do show a *stylistic* pattern attested in a number of other - even prose - examples.

(c) The principle of *end-weight* as well may override the order in comparative constructions, thus indicating that (47) was marked.

4.5. *Remarks on the notion of marking*

I would now like to add some remarks on the notion of marking. In the preceding sections it has been shown that the unmarked order of constituents within the comparative construction in Old Indic was AS. Now, if one were to take a superficial look at the examples of comparative constructions in the Rigveda, one would notice that the order SA is more frequent than the opposite order AS. Those who regard marking as a *purely statistical* notion - i.e. an entity which is more frequent is unmarked with respect to another entity which oc-

curs less frequently[20] - would immediately conclude that the unmarked order here is SA. We see, then, that a frequency based determination of marking *here* leads to completely different results than the determination of marking based on formal concepts. Because of the specific nature of this and similar texts it is conceivable that the poet could employ marked patterns *more frequently* than the corresponding unmarked patterns. In this connection I would like to emphasize again the hierarchical distribution of the different notions of markedness proposed by Enkvist (§2.4.1. above) which makes it evident that our primary concern in matters of marking is a formal distinction between marked and unmarked patterns especially in older literary texts.

4.6. *Conclusions to chapter four*

In the preliminary remarks to this investigation of the word order of the comparative constructions in the Rigveda it has been shown that:

(i) There was no typological shift from (S)OV patterning to (S)VO in Old Indic, as was assumed by Lehmann and Ratanajoti (1975).

(ii) The meter does have an effect on the word order of comparative constructions in the Rigveda, the fact of which casts some doubt on the assumption that the word order in comparative constructions are rearranged for marking only with difficulty.

Since both orders for comparison are found in the Rigveda, this investigation attempted to determine whether one of the word orders could be regarded as exhibiting a marked pattern while the other an unmarked pattern. The results were

(iii) Although the examples given in the grammars[21] suggest an unmarked word order SA, the investigation of *all examples* found in the text itself indicates that the opposite order AS is the unmarked word order for comparative constructions in the Rigveda.

A further investigation of 59 examples of comparative constructions in

the prose portions of the Vedas and Brāhmaṇas confirms the results reached in the investigation of the Rigveda. It should be added here that a *purely statistically* based determination of an unmarked word order in such poetic texts as the Rigveda is not reliable.

This investigation has also shown that grammars and secondary literature predating the impact of Greenberg's original work are quite unreliable in matters concerning word order. For the most part, examples are given for specific constructions without reference to word order. Let me now single out one more typical example of this shortcoming. In her investigation of word order variation, Steel (1978) bases her data on a large number of grammars; of the 52 mentioned in her references 40 predate 1970 and only 12 have been published after 1970. The fact that her investigation of particular languages is not as thorough as we should expect can be seen in the following remark made by Mallinson and Blake (1981:170):

> [Steel] establishes this by pointing out that Classical Aztec, Karok, Achi, Wiyot, Tuscarora, Garadjari and Maleceet-Passamoquoddy have free word order but no case marking. In fact Garadjari has case marking and this is clearly indicated in her source, Capell 1962.

Endnotes

1. For a discussion of other comparative constructions in the Rigveda see Andersen (1981; Forthcoming c).
2. Cf. Lehmann (1973b:183; 1974a:30-32).
3. The number of the examples from the Rigveda refer to the number in APPENDIX I where all examples are translated. For this specific example cf. Lehmann (1972c:985; 1973c:55; 1974a:31), Delbrück (1888:113), Speijer (1886:78) and Macdonell (1916:317).
4. Cf. Lehmann (1972c:985) and Delbrück (1888:113).
5. Cf. Lehmann (1974a:195). RV VIII,76,12 has also been given as an example of a comparative construction in the Rigveda, see Lehmann (1972c:985; 1973c:56). I have been unable to interpret this example as a comparative constructions.
6. Cf. Lehmann (1973c:55) and Delbrück (1888:196).
7. Cf. Arnold (1905:272).
8. Ibid.: 281.

9. Ibid.: 280.

10. Ibid.: 271.

11. As I will show in the next section, there was no typological shift from OV to VO in the later portions of the Rigveda nor in Old Indic at all. Thus such a discussion is irrelevant for this investigation. For a discussion of the relative chronology of the Rigveda see Wüst (1928), Hoffmann (1967:36-37), and Gonda (1971:8ff.; 1975: 26ff.).

12. See §2.2.5. above for the example ŚB 11,5,1,4.

13. See §2.4.2.4. above.

14. See Arnold (1905: Chapters IV, V, and VI).

15. Cf. Arnold (1905:99, 106) and Graßmann (1873:726) ; see however Seebold (1972:284) with references.

16. See Arnold (1905:137).

17. Arnold (1905: Chapter XI).

18. See also Macdonell (1916:436).

19. According to Arnold, examples (19) and (74) belong to the archaic period of the Rigveda, (12) and (13) to the normal and (96) to the cretic. Example (20) belongs to the strophic period and (82) to the cretic.

20. Cf. e.g., Heine (1976:19).

21. It is infortunate that many in-depth investigations of word order and language typology in general are carried out on grammars and other secondary literature rather than on the languages/texts themselves; cf. Friedrich (1975:15): "The sample of 93 comparative constructions is drawn from all the forms cited in Chantraine ... But the main source was the lists of irregular comparatives in the grammars ..."; but see §5.2.5. below. Notice too that Lehmann (1972c:985; 1973c:55) refers to Delbrück (1888). This is true not only in Indo-European linguistics but in language typology in general, but I am also well aware of the fact that the majority of us do not have first hand knowledge of the numerous languages referred to, and hence it may not be possible to remidy this problem.

5.0. DIACHRONIC ASPECTS OF THE WORD ORDER WITHIN COMPARATIVE CONSTRUCTIONS

Since there has been a recent revival of interest in historical linguistics I would like to discuss some historical aspects of word order typology using the comparative construction as a point of departure. This chapter will, therefore, be concerned with some diachronic aspects of the word order within comparative constructions. The first half will be a continuation of the preceding chapter in which a synchronic investigation of this construction in the oldest stages of Old Indic was undertaken and will trace the subsequent development of this syntagma into Middle and Modern Indic. The second half will be concerned with the problems of reconstructing the word order of this construction in PIE.

5.1. *Development of the word order of comparison in Indic*

In the preceding chapter it has been shown that the underlying or unmarked word order of comparative constructions in the oldest Indic texts was AS which existed side-by-side with a marked order SA. The purpose of the following sections is to continue this investigation in Indic, whereby data from the Upaniṣads, Middle Indic texts as well as Modern Indic (especially Hindi) will be used.

5.1.1. *Upaniṣads*

The Upaniṣads represent a later period of Old Indic situated between the Brāhmaṇas and Middle Indic, and hence they can be considered the next stage in the development of Indic. A total of 96 examples from this period, which are listed in APPENDIX III, were culled from ten different Upanisads.

5.1.1.1. *Data*

In the Upaniṣads both word orders for the comparative construction were found, 21 examples of the order AS and 75 examples of SA.

(a) *anya-* All 13 examples with the adjective *anya-* or its derivatives *anyatra, anyathā,* etc. exhibit the order AS.[1]

(b) *pronouns* The standard appears as a pronoun in 14 examples, only three of which show the order SA ((1) *itas*, (5) *tasmāt* and (9) *asmāt*) - here the adjective is *anya-*. All other examples show the order SA, cf:

(47) *tatas jyāyān* (SA: pronoun + adjective), but

(48) *jyāyān pṛthivyās* (AS: adjective + noun).

(c) *para-* *para-* appears as the adjective in 18 examples of which only two show the order AS:

(22) *pareṇa nākāt.*

(42) *paras trikālāt*

(d) *bhūyas* All 44 examples with *bhūyas* as adjective show the word order SA, e.g.:

(55) *nāmnas bhūyas.*

(e) *proverbial expressions* All nine examples displaying *figura etymologica* ((11), (12), (23), (24), (28), (29), (30), (40) and (41)) show the order SA, e.g.:

(12) *mahatas mahīyān.*

The remaining two proverbial expressions exhibit both orders:

(2) *manasas javīyas.*

(6) *aṇīyān ... aṇupramāṇāt.*

(f) *jyāyān* The remaining four examples have *jyāyān* as their adjective and show the word order AS:

(50) *jyāyān divas.*

5.1.1.2. *Comparison with the Brāhmaṇas*

When we compare these examples from the Upaniṣads with those from the Brāhmaṇas (in §4.4.2.1. above), we find the following tendencies:

(a) Although in the Brāhmaṇas some pronouns showed the tendency to appear before their adjectives in comparative constructions and others after, in the Upaniṣads there seems to be the tendency for all pronouns to appear before their adjectives in these constructions.

(b) In the Brāhmaṇas all examples of *bhūyas* as adjective ((25), (26), (31), (32), (35) and (40)) stood before their standards, in the Upaniṣads, on the other hand, the opposite order is found in all 44 cases.

(c) *para-* usually stood before its standard in the Brāhmaṇas ((12) and (37)) the only exception being (48) with the anaphoric pronoun *atas* as standard, but in the Upaniṣads the opposite order seems to be the usual one.

(d) The examples with *anya-* as adjective show the word order AS in all periods of Old Indic.[2]

(e) Although no examples of *figura etymologica* were found in the Brāhmaṇas, all examples in the Upaniṣads show the word order SA. In the Rigveda only two of a total of 13 such examples show the order SA, while in the remaining examples the same order is found as in the Upaniṣads.

5.1.1.3. *Results and conclusions*

The examples of comparison from the Upaniṣads show both orders. In comparing these examples with those from the Brāhmaṇas, one sees that there has been a shift in word order. Not only are there many more examples of SA which cannot be easily explained as exhibiting a marked pattern, but the order of comparisons with *bhūyas* and *para* has changed as well. This indicates, then, that there is a change in the word order of comparative constructions going on in the later period of Old Indic literature. In the next sections the order in Middle Indic will be discussed.

5.1.2. *Middle Indic*

For many scholars the next stage in the development of the Indic

languages after the Upaniṣads (and the Vedāṅgas) is represented by Classical Sanskrit. In fact, we are almost led to believe that the development in Indic progressed from Old Indic (represented by the Vedic, Brāhmaṇic and Upaniṣadic literature) to Classical Sanskrit and from there to the Modern Indic dialects:

> When we compare the patterns of the *ŚB* with those in later Classical Sanskrit, we find there a further development towards VO patterning. ... Classical Sanskrit then is comparable to early Old English in development from OV to VO structure, but it is somewhat more archaic. ... Since, however, Classical Sanskrit is attested from a period older than even the *Beowulf*, one might assume that the Indic languages may well have continued to develope towards VO patterning as English has done.
> Yet the Sinhalese examples ... may serve to indicate that the Indic languages not only failed to develop towards VO structure but that instead they have returned to the OV pattern. This development presents numerous opportunities for syntactic research (Lehmann and Ratanajoti 1975: 157-158).

I might add, in passing, that a number of scholars view Classical Sanskrit as a part of, if not synonymous with, Old Indic:

> Such a construction is not unknown in old-line Indo-European, e.g. Sanskrit *varam hi mṛtyur nākīrtiḥ* 'good is death, not dishonor', i.e. 'better death than dishonor' or 'death before dishonor'. ... Similar constructions linger on in other old forms of Indo-European, e.g. Sanskrit *Maghavato 'pi bhāgyavantam* 'fortunate even from (the vantage of) Indra' (Puhvel 1973:146-147).

This view is further illustrated unequivocally by Klaiman (1978) in her division of Indic into (a) Old Indo-Aryan (Classical Sanskrit), (b) Middle Indo-Aryan (Prakrit) and (c) New Indo-Aryan (Hindi). Although the specific constructions referred to in these passages are attested in the Classical Sanskrit literature, none of them can realistically be attributed to Old Indic. Puhvel's first construction is attested for the very first time in Classical Sanskrit literature - at least 400-500 years *after* the Middle Indic texts of Aśoka, cf. Andersen (1981 and Forthcoming c). His second construction, I might concede, is attested in the later Upaniṣads, but is more usual in the Classical Sanskrit literature - certainly not in the Vedas and Brāhmaṇas. The same holds true for Klaiman's examples with the difference that the

one construction supposedly not attested in Old Indo-Aryan *is attested* in the Vedas.

My own view on this matter coincides with Bloch (1965:14) who sees a quite different development from Old Indic to the Middle Indic dialects and from these into the Modern Indic dialects with Classical Sanskrit taking no essential part in this development:

> It follows from what has been said above that this language [i. e. Classical Sanskrit] too is not material, which can be utilised by the linguist directly. It has for him the convience of demonstrating in a Sanskrit form the changes experienced by the old language, but one must consider it as Middle Indian transformed. It is no accident that a number of verses are found in the Mahābhārata, which correspond with strophes occurring in the Buddist canon, more closely even than the Avesta with the Veda. They are two versions of one language, the evolution of which is masked in classical Sanskrit and its tendencies reflected more exactly by Middle Indian.

I have, therefore, concentrated my efforts on the Middle Indic dialects in this investigation of the development of the word order in comparative constructions.

5.1.2.1. *Data*

A total of 52 examples of comparative constructions were culled from the following texts: Aśokan Inscriptions (three examples), the Prakrit portions of the Śakuntalā (Śak) of Kālidāsa (two examples) and Pāli (47 examples). Nine examples exhibited the word order AS while 43 examples the order SA.

(a) *Aśoka* In the oldest Middle Indic texts of the Aśokan Inscriptions both orders are still found; on the basis of only three examples it is very difficult to determine the unmarked or underlying word order. Two examples of the order SA both have pronouns as their standards (*imena, tato*), while the remaining examples shows the order AS with the progression from four syllables (for the adjective) to seven syllables (for the standard).

(b) *Śak* Both examples from the Prakrit show the order SA; the standard is in both of these cases a pronoun, but this is not sufficient to give any conclusive evidence for an unmarked word order for these

dialects.

(c) The 47 examples of comparison from Pāli, however, suffice to indicate an unmarked word order SA; the marked order AS occurs eight times and there only in verse.

5.1.2.2. *Conclusions*

The examples from Pāli clearly show that in Middle Indic the unmarked word order for comparison is SA, and hence the shift in word order from AS in Old Indic to SA is complete. Even *anya*, which regularly stood before the standard in Old Indic and even in the Upaniṣads, is placed after the standard in Pāli, cf. (16). The examples (19) to (25) show, moreover, that there is a difference in word order between prose and poetic (metrical) texts.

5.1.3. *Modern Indic*

In Modern Indic the case construction of Old and Middle Indic is replaced by a postpositional construction, the order of adjective and standard remaining the same as in Pāli. This gives us the following order of constituents: *standard + postposition + adjective*.[3]

5.1.4. *Summary of the Indic development*

To sum up the preceding investigation, it can now be said that in the oldest Indic texts the unmarked word order of comparison was AS which occurred side-by-side with a marked word order SA. This marked pattern extended a growing pressure on the unmarked pattern in later Old Indic texts and finally became the unmarked word order of this construction in Middle Indic. This word order is still the rule in Modern Indic; the case construction, however, has been replaced by the postpositional construction. Furthermore, it should be emphasized that the word order patterning of the Indic languages has not changed, i.e. Old Indic, Middle Indic as well as Modern Indic all exhibit (S)OV patterning. In other words, although the word order patterning of the Indic languages has not changed, the order of elements within comparative constructions has done so.

I would now like to briefly discuss the question as to *why* the

word order of comparison should have changed, and *how* this change was carried out. To answer the first question, there seems to be no *internal* motivation for the change in Old Indic, i.e. the word order patterning and especially the placement of modifying and modified elements is quite stable. Following Lehmann's views on word order change, I am led to seek the motivation for this word order change in some *external* factor, i.e. borrowing from surrounding languages: this finds support in the studies by Masica (1974 and 1976). In other words, it seems likely that as the speakers of the Indo-European language migrated into the Indian subcontinent their language conformed to the neighboring languages in most of the (word order) typological patterns: OV, postpositions, modifier + modified, etc. The only major pattern which did not conform was the order in comparative constructions; this was consequently changed to conform to the pattern SA present in the neighboring languages.

As to *how* this change was carried out I would like to suggest the following. In the oldest texts where the unmarked order was AS, if the standard was *tvád* (second person pronoun) or an anaphoric pronoun it was placed early in the clause regardless of its function or connection with other elements. In later texts all pronouns regularly came to stand before the adjective. At first some frequently used substantives followed suit, and soon afterwards all standards were placed before the adjective. In other words, it seems likely that the marked position of pronouns within the comparative construction precipitated the subsequent change in word order of the comparative construction.

5.2. *Reconstruction of the word order within comparative constructions in PIE*

The next problem to be discussed is the reconstruction of the word order of comparison in PIE. The main emphasis here will be to point out some problems which arise from previous statements about the reconstructed order and on suggesting certain solutions. I will not attempt, at this time, to actually reconstruct the order in question.

5.2.1. *Results of previous reconstructions*

The word order patterning of PIE has been reconstructed by Lehmann as OV with which I am in agreement; I have many objections to the alternative reconstructions proposed by Friedrich (1975 and 1976), Miller (1975) and others, but I will not enter into a discussion of these matters here. Since PIE has been reconstructed as an OV language, which, according to the typological theory, should have the word order SA for comparative constructions, many linguistis have almost been forced into postulating such an order for comparison in PIE, cf., e.g., the following argument:

> Latin and Vedic have two comparative constructions, one employing a conjunction and showing the Type II order: maior quam ego
> bigger than I
> and another employing the ablative and showing the Type III order:
> me maior
> than me bigger
> Hittite usually has the Type III construction ... Proto-Indo-European probably had the order standard - marker - adjective. This order is to be expected ... (Grace 1971:370-371). [4]

As can be seen, it is assumed that the word order of comparative constructions in PIE was SA in accordance with OV patterning.

5.2.2. *Problems with earlier reconstructions*

I would now like to point out some severe problems with the previous reconstructions. First, due to the facts that Vedic does *not* have both comparative constructions as was suggested by Grace, and both (Old) Latin and Vedic exhibit *both* orders for the case construction, i.e. *me maior* as well as *maior me*, the statement quoted in the preceding paragraph is rendered useless for the purpose of reconstruction (see Andersen 1981 and Forthcoming c). Secondly, I disagree with Lehmann when he says that for reconstructions of comparison it is not essential to determine the etymology of the Pivot, but rather, we must determine the order of standard and adjective, see §3.1.3. above. Only when we know what type of comparative construction was used in PIE can we then go on and attempt to reconstruct the word order of that specific construction. In this respect it is generally as-

sumed that both the particle construction and the case construction for comparison were features of PIE. In Andersen (1980b), however, it has been shown that only the case construction, and not the particle construction, can be reconstructed for PIE. Thirdly, the reconstruction of the word order of the case construction in PIE must rely on the data collected and evaluated from the Indo-European dialects. And Old Indic which, according to the *communis opinio*, shows the order SA for comparison is just one of the important dialects. However, a reanalysis of the word order in this language in chapter four above has shown that the opposite order is indeed the unmarked order in Old Indic. The immediate consequence of this fact should be a reanalysis of the data from the other dialects. During this reanalysis the following points should be kept in mind:

(a) The most reliable texts for word order purposes are prose.

(b) In dealing with metrical texts it should be borne in mind that the meter may very well have an influence on the choice of word order pattern.

(c) The examples collected for comparison should be divided into the different construction types - particle, case, etc. - and then evaluated accordingly.

In the following sections I will discuss the word order of comparison in the following four languages: Hittite, Latin, Homeric Greek and Old Indic. This should suffice to show up the severe problems encountered in the reconstruction of the word order of this construction.

5.2.3. *Hittite*

The nominal construction type found in Hittite is the case construction employing a positive form of the adjective.[5] There are two variations of this construction, one using the dative-locative case for the standard as in (i) below, and another using a prepositional phrase with *ANA* "by, for" as in (ii) below.

(i) *namma-kan anzēl* TI-*anni* *UL SA BELU-NI*
moreover-PCL of-us life(DAT/LOC) not GEN lord-our
TI-*tar nakki.* (KUB XXXI 42 II 18f.)
life important
"Moreover, (if) the life of our lord is not more important than our life ..." (Lehmann 1974a:34).

(ii) *ANA* ERÍN^{MES}-*KA* ERÍN^{MES}-*YA mekki* (KUB XIX 29 IV 18).
by Troops-your troops-mine large
"My troops are larger than your troops."[6]

In these examples we find the following order of constituents: *standard + subject + adjective.* The following passage from Old Hittite has often been cited as containing a number of comparative constructions, one of which preserving an archaic use of the ablative (i.e. *kapruaz*) as the comparative case; this is the same usage we find in other Indo-European dialects (KUB XLIII 53 I 19f.):

(19) *ēssari-sett-a ēssari* GAL-*li*
SAG.DU.*SÚ ANA* SAG.DU-*S*[*U* GAL-*li* ...] ...

(20) [*kap*]*ru-set-asta kapruaz* GAL-*li*
mieli-sset-a (23) [*mi*]*elias* GAL-*li*
iskis-(s)et-asta iskisi GAL-*li*

(24) [*paltan*]*as-sis-asta paltanī sallis* ...
"His stature is larger than (ordinary) stature. His head is larger than (an ordinary) head. ... His throat (?) is larger than (an ordinary) throat etc..." (Melchert 1977:215).[7]

There are, however, certain difficulties associated with this passage. It is true that we would like to find an ablative in this function especially since this has been reconstructed for PIE,[8] but as Neu has pointed out[9] this ablative (i.e. *kapruaz*) is not present in an earlier variant of this text and is to be regarded here as a later addition. Furthermore, it is also possible to render these constructions literally (without a comparison) as: "His stature is larger for a stature, his head is big for a head, etc."[10] In this connection we notice that the order of elements here differs from the order found in the two comparative constructions above:

here - subject + standard + adjective,

above - standard + subject + adjective.

Could this difference in word order signal a difference in correct interpretation, i.e. the order dative/locative + subject + adjective is used for comparison, the order subject + dative/locative + adjective for other dative constructions such as "his stature is large *for* a stature", etc. where no comparison in the usual sense is intended?

Regardless of the ultimate interpretation of the passage from Old Hittite, all comparative constructions found in Hittite show the same order of constituents in comparative constructions, namely SA. This brings us now to a crucial problem: both Hittite and Old Indic reveal OV patterning, but they also reveal two different orders for the comparative (case) construction, i.e.:

Hittite - standard + adjective,

Old Indic - adjective + standard.

The Hittite data clearly show the order SA for comparative constructions; what the data do not show is if this order is the marked or unmarked order or still whether this order has been influenced by neighboring languages. Until these questions can be answered we will not be able to reconstruct the order of comparative constructions in PIE with certainty.

5.2.4. *Latin*

According to Lehmann Latin represents an intermediate stage in the development from an OV PIE to VO Romance, i.e. the patterning of Latin is considered as being in transition from an older OV to a newer VO. As a result of this change two different orders for comparison are found in Latin:

> In ... languages [undergoing typological change] two contrasting patterns of characteristic constructions may be attested, as in Latin with VO comparatives like *major quam tū* and OV comparatives like *tē major* 'bigger than you' (Lehmann and Ratanajoti 1975:150-151).

From this and other statements, such as

> ... it is unlikely that an English poet would produce an OV comparative construction such as *the oaks house from high* to express *oaks are higher than the house* (Lehmann 1974a:22),

one could easily infer that the particle construction with the order adjective + particle + standard is thought to be the typical construction for VO languages and the case construction with the order standard + case ending + adjective for OV languages.

In support of Lehmann's theory Adams (1977:83) has recently discussed the word order of Latin and added the following remarks on the order of comparative constructions:

> In the earliest period the position of the limiting element (the ablative of comparison) was before the comparative adjective (e. g. *filio maior*). Already by the time of Plautus the ablatival element was shifting position, and the *quam*-construction, which was replacing the ablative of comparison, regularly came after the comparative.

Taking an objective look at the examples for comparison in Latin and expecially in the older stages of the language,[11] the following aspects can be identified:

(a) Both construction types are found, i.e. the particle construction and the case (ablative) construction.

(b) The order of elements in the particle construction is comparative adjective + particle (*quam, atque*) + standard at all stages of the language.[12]

(c) The examples of the case construction reveal *both orders*: standard + ablative ending + adjective and adjective + standard + ablative ending.

The order of elements within the particle construction - as I have already pointed out in §3.4.3. above - is not dependent upon the word order patterning and therefore must be separated from the examples of the case construction in investigations of word order. Our immediate problem, then, is to determine the order of elements in the case construction; since both orders do occur, we must try to determine whether one order can be regarded as marked (and the other not), or whether both orders freely occur.

In his chapter on the ablative of comparison,[13] Bennett was primarily interested in the difference between the case construction and the particle construction. He found that the case construction with the ablative is used instead of the particle construction in seven distinct types of expression. Adams (1977:83-84) notices that in some of these expressions one order of elements is usual, in other expressions the other:

> In Plautus there are some significant variations of practice. In certain types of expressions which are likely to be old and therefore to retain the original order, the ablative precedes the comparative. In another type of expression which can be shown to be more recent the ablative comes after the comparative.
>
> The ablative precedes the comparative in the following contexts: (1) In negative expressions ... (2) In rhetorical questions which imply a negative answer ... (3) In proverbial expressions.

Although the distinction in order made by Adams does reflect the *general tendencies* there are some exceptions in the order for all three expression types.[14] Problematic, however, is his distinction between "certain types of expressions which are likely to be old and therefore to retain the original order" (Adams 1977:83) and all other types which are, supposedly, newer and show the opposite order. Does this mean then that the Indo-European speakers only used comparative constructions for the three types given (i.e. in negative expressions, rhetorical questions, and *figurae etymologicae*)? I should not think so. Another possible explanation for the two word orders found in Old Latin is that one represents a marked patterns whereas the other an unmarked. Even though in expressions with *plus, minus* and *amplius* used with numerical expressions "the appositional expression was probably earlier than the ablatival" (Adams 1977:85), the order chosen in the oldest texts for this type of construction was generally adjective + ablative. Furthermore, a distinction is made between those proverbial expressions which display *fig. etym.* with the order standard + adjective and those which do not display *fig. etym.* and consequently show the order adjective + standard. These examples of *fig. etym.* may, however, be interpreted as showing a marked pattern[15]

just as many of the examples of negative expressions with pronouns as standards do.[16] Another aspect which has not been considered is to what extent (if any) metrical constraints may have an effect on the order especially in such works as those of Plautus and others.

In conclusion, a reevaluation of the data for the word order of comparative constructions in Old Latin is warranted. This reevaluation should take into consideration the following: (i) Many of the examples already given are from texts in which metrical constraints may have an influence on the choice of the word order pattern. (ii) A distinction between a formally marked order and an unmarked order should be attempted. (iii) Other investigations have shown exceptions to the generally accepted assumption that OV languages have an unmarked standard + adjective order for comparisons.

5.2.5. *Greek*

An investigation of the word order of comparative constructions in Homer[17] is given by Friedrich (1975:15-17), who collected a total of 72 examples of comparative constructions, 37 of which show the order SA and 35 the order AS. He concludes that "the equal frequency of AS and SA ... indicates an underlying SVO structure" (Friedrich 1975:17). There was, however, no distinction made between the different construction types, nor any attempt made at determining a marked and unmarked order. And since his examples are nowhere listed, a reevaluation of those examples is not possible.

In a preliminary investigation of the Iliad on my own part 75 examples of comparative constructions have been found. After collecting these examples from the Iliad I compared my examples with those given by Mørland (1948b). Since our results did not differ substantially - I had found only eight constructions more than Mørland - I have not investigated the Odyssey but assume that the 56 examples from it listed by Mørland represent the majority of examples which could have been found. A total of 131 examples of comparison have therefore been found in the two Homeric poems. The passages where these examples are to be found will be listed below. The 45 examples of the particle

construction - all of which exhibit the order adjective + particle + standard - are separated from the examples of the case construction. These are subsequently divided into those 32 examples which show the order AS and those 54 which have the opposite order SA. In each group the passages found by Mørland will be listed first followed by those additional ones found by myself. For the case construction all passages which are underlined have the second person singular pronoun as the standard.

(a) *Particle construction*

I,260; II,453; III,42; IV,277; V,531; VIII,190; X,556; XI,162; XI,395; XIII,638; XIV,81; XIV,468; XV,512; XV,563; XVI,302; XVI,688; XXI,486; XXII,374; XXIII,315; XXIII,552.

1,165; 1,322; 4,819; 6,39; 6,183; 8,148; 8,154; 8,188; 9,6; 10, 395; 12,110; 12,209; 16,216; 17,18; 17,417; 18,162; 19,168; 20, 317; 21,155; 24,369.

I,117; X,404; XI,13; XVII,78; XVII,331.

(b) *Case construction - adjective + standard*

I,186; I,259; II,129; III,193; VII,358; IX,104; XII,232; XIII,819; XVII,446; XVIII,109; XVIII,610; XIX,217; XXI,190; XXI,191; XXI,264; XXII,106; XXIII,311; XXIII,588.

4,606; 8,138; 9,28; 9,34; 11,427; 14,56; 15,343; 15,533; 18,130; 18,196; 19,244; 23,103.

V,411; V,898.

(c) *Case construction - standard + adjective*

I,114; I,249; I,404; II,201; II,239; II,248; III,11; III,365; III, 430; IV,324; IV,405; V,173; VI,479; VII,111; VII,114; VII,358 (!); VII,457; VIII,483; IX,60; X,124; X,352; X,437; XIV,107; XV,139; XV,165; XV,181; XV,509; XV,569; XV,641; XVI,709; XVI,722; XVII,168; XVIII,333; XX,334; XX,434; XXI,107; XXIII,247; XXIII,439; XXIII,789; XXIV,94.

2,180; 5,170; 5,211; 6,182; 8,211; 8,585; 14,176; 18,334; 20,201; 20,376; 21,134; 21,372; 22,374.

IV,400.

I have now attempted to determine the influence of the meter on these examples of the case construction in order to find out whether one or the other order can be viewed as marked. Unfortunately, I have not come to any conclusive resutls. A few aspects do, however, deserve to be pointed out here. First, there are 26 examples of comparison with the second person pronoun as the standard; 22 of these examples show the order SA and only four examples AS. Comparing this with the results of the investigation of the comparative constructions in Old Indic - see chapter four - I am inclined to regard 22 of the 54 examples for SA (i.e. 40%) as being marked in the same way as the respective Old Indic examples.[18] Secondly, I disagree with Friedrich (1975:16) when he writes:

> There is no evidence ... that metrics constrains or determines the relative frequencies of these different subtypes of comparative.

I think that the following two examples will be sufficient to cast some doubt on Friedrich's claim:

XVIII 109 - (πολὺ) γλυκίων μέλιτος (κατα-)
sweeter honey-from
"sweeter than honey".

I 249 - (γλώσσης) μέλιτος γλυκίων (ῥέεν)

The same words are used in both of these examples producing identical metrical patterns - (-)υυ-υυ- - in each case. In the first example the opposite order - πολὺ μέλιτος γλυκίων - produces an unacceptable metrical pattern (υ)υυ-υυ-. In other words, with the original order the last syllable in πολὺ is positionally long (vowel plus two consonants) whereas with the opposite order it is no longer a long syllable. The second example, on the other hand, produces the same pattern even when the order is reversed, because the last syllable in the previous word is naturally long. This shows then that the meter has had an influence on the choice of order in the first example. It also shows that the second example - since the choice is not influenced by the meter - reveals the underlying order for this construction. The construction is, however, an example of *fig. etym.*

and corresponds to the same - but for that very reason marked - examples in Old Indic and Latin.

To sum up, the unmarked order of the comparative construction in Greek has not been determined. There is some evidence for the underlying order SA for *fig. etym.* , i.e. a type of construction which has been shown to represent a marked pattern in Old Indic and probably in Latin as well. Further research is, indeed, needed which should take meter into consideration as far as Homer is concerned. The most valuable data, however, would come from Mycenaean if future finds should turn up some comparative constructions.

5.2.6. *Old Indic*

In the Rigveda no examples of the particle construction have been found. The case construction shows an unmarked AS order and a marked SA order. The neighboring languages have had an influence on the order which was subsequently changed to the unmarked order SA in the later stages of the language. This indicates, then, that the original order in pre-Indic was AS.

5.2.7. *PIE*

At present the word order of the case construction cannot be reconstructed with certainty. Preliminary investigations here do give some evidence for an unmarked order AS and for certain types of marked constructions a marked order SA. But more research is needed which will have to distinguish between the particle construction and the case construction and take meter into consideration. If future research does lead to a reconstruction of an unmarked order AS, it *cannot* be used to prove or support the theory that PIE was not an OV language, but will have an effect on the typological theory itself. In this connection I would like to add that I support Lehmann's reconstruction of OV patterning for PIE, but this is independent of the question of the word order in comparative constructions as was shown in chapter three above.[19]

5.3. *Conclusions*

In this chapter two different diachronic aspects of the word order of comparative constructions have been discussed. The first part investigated the development of the comparative construction in the Indic languages. Here it has been shown that although the word order patterning of the Indic languages has not changed the word order of the comparative construction did change from AS to SA already in Middle Indic. This word order is preserved even today although the case construction has been replaced by a postpositional construction. It also seems evident that the neighboring languages had an effect on the word order of this construction; in other words the change in word order here is due to borrowing.

The second part of this chapter dealt with the reconstruction of the word order within comparative constructions in PIE. The main emphasis here was directed at pointing out some problems with earlier reconstructions. Specifically, no attempt has been made to determine whether there is a marked and unmarked word order in the dialects, no attempt has been made to differentiate between the various construction types, and metrical influence on word order has likewise been neglected. Since these problems have not been considered before, a reexamination of this reconstruction is now warranted. There is, in this connection, some evidence for the reconstruction of an unmarked AS as well as a marked SA word order for the (ablative) case construction in PIE.

Endnotes

1. Cf. examples 1,3,4,5,6,8,9,10,11,26,33,53 and 54 in Appendix III below.
2. Cf. Delbrück (1878:47).
3. See Masica (1976:24f.; 35f.), Bloch (1965:184f.) and Vermeer (1969:80f.). Examples from Hindi can be found on pages 101,109, 113, 116 and 125 above.
4. See also Ramat (1980:12) quoted on pages 143-4 above.
5. See Friedrich (1926:185; 1960:127) and Kammenhuber (1969:257).

6. With the exception of the examples from Old Hittite discussed further on and paratactical constructions (see Andersen 1980b: 226), I have been unable to find other examples of comparative constructions in Hittite texts.
7. See Sommer and Falkenstein (1938:219f.).
8. See Andersen (1980b).
9. Personal communication.
10. This was suggested to me by Szemerényi.
11. Many examples can be found in Bennett (1966:292ff.), Mørland (1948a; 1950) and Wölfflin (1889).
12. Adams (1977:85, fn.39) does mention one exception to this.
13. Bennett (1966:292ff.).
14. See ibid.: 293-295.
15. See §5.1.1.2.(e) above.
16. See §4.4.2.3.(a) above.
17. To my knowledge no comparative constructions have been found in the Mycenaean texts.
18. See §4.3.3.(a) above.
19. See §3.4. - §3.4.4. above.

6.0. SUMMARY AND CONCLUSION

In the course of our discussion of current work on word order typology I have pointed out various theorectical and methodological problems. Let us now review these problems and my own proposals for their solutions.

The first theorectical problem that I discussed concerned the basic goals of typology. At the very beginning two different goals were recognized: (a) the classification of languages and (b) the investigation and determination of certain typical mechanisms of language. Now for the most part, word order typology in the past ten years has been concerned with only the first goal, i.e., with the classification of languages. Consequently, the second goal has virtually been totally neglected with a few notable exceptions. At the present there are three generally recognized methods of classifying languages: (a) the genetic method, (b) the areal method and (c) the structural typological method. Throughout our discussion I have repeatedly pointed out that the various word order patterns are not only independently borrowable but they also define geographic areas; hence they should be used in connection with the areal method and not, as is generally the case, with the structural method. Furthermore, I have also pointed out many times that word order functions in grammar, and consequently the investigation of its typical functions in connection with the second original goal of typology begs attention. My proposal here would be the following. First, since word order does have specific functions in grammar, it should be investigated for its use in the determination of certain typical mechanisms of language. We will find that word order in one language functions in the same way as other features of grammar

do in other languages. It might therefore prove advantageous to view word order not as the pivot point of such investigations but along with numerous other features. This is envisaged among others in the typological model developed by Seiler. Secondly, as a criterion for the classification of language, certain word order patterns can be used independently as structural features for all three methods of classification. The particular patterning of all relevant word order characteristics define geographical areas and are independently borrowable and hence should be used for the areal method.

The next theorectical problem concerns the various word order patterns or characteristics themselves. Of the more than forty characteristics referred to in the literature, a small number are of primary importance for the current typological theories. Among these, the word order in comparative constructions and the existence of either prepositions or postpositions are perhaps the most important. But in our discussion of these patterns it has been shown that there is no direct connection of these to the basic order of verb and object. This thus shows the necessity of a reanalysis of all other word order patterns. When viewed in the proper scientific perspective, the investigation into the motivation for these word order patterns should naturally follow from the statement of such correlation; in other words, in the investigation of typological characteristics our preliminary step is to collect the various correlations found in the languages at our disposal. Once this necessary but still preliminary step has been accomplished, it is then time to determine the motivation for these correlations. By merely stating that they are typical for certain language types, nothing has been explained. Again my proposal would be to investigate the motivations for these patterns in terms of the theoretical position word order plays in typology, i.e., as a criterion for areal classification or as one typical mechanism of language.

Since word order has been studied for its use in classifying languages in terms of the structural typological method and since the explanation of the various patterns have been found in the general nature

of the specific language types, all exceptions have had to be explained. For the most part, these exceptions have been explained in terms of either marking or typological change. Both of these explanations in the current work on word order typology entail a certain amount of circularity. If we were to view word order patterns in terms of the areal method of classifying languages, the majority of explanations would not be needed. Furthermore, marked patterns should also be investigated in relation to their respective functions; this would of course be a natural approach when viewing word order in terms of the second original goal of typology.

The final theorectical problem concerns the limitation of the investigation of word order to syntax. specifically to isolated sentences. By concentrating on isolated sentences we exclude from the very onset relevant discourse features and functions. In many languages, for example, there is great variation attested for word order in isolated sentences; thus, according to the current theories, these languages have free word order. In the majority of these cases, however, we notice that the variations in word order are directly related to certain discourse features and hence function on this level of grammar. Any analysis of word order restricted to syntax and excluding discourse and possibly other areas of grammar will therefore be incomplete.

The biggest methodological problem facing word order typology has to do with the dependency on the availability and reliability of data. Since we do not have first-hand information on the various languages used in our investigations (in the sense of native speaker intuition), we must rely on other sources, typically grammars. Mallinson and Blake (1981:12-14) have pointed out that grammars and other second-hand sources can be unreliable. In my investigations I have not only made this same claim but I have also backed it up with a concrete example: relying on the grammars and other sources of Old Indic, it is assumed without exception that the basic, unmarked word order in comparative constructions in the earlier stages of this language is standard + adjective. But an analysis of the texts themselves shows

quite clearly that the opposite order is indeed the basic order. My contention has been that grammars predating the empact of Greenberg's original study are generally unreliable. But unfortunately, we are not able to check all data in the various languages in such detail, and hence there is no ready solution to this problem.

The other methodological problem I would like to mention here is associated with the use of typology for language reconstruction. In theory, I think that this is useful for reconstruction, but only when definitely clear features of the structural typological method are employed. Many of the word order patterns have been shown to be features not of this method but rather of the areal method and hence cannot be used with certainty for reconstruction.

In conclusion, for the light that word order shows on a better understanding of the profound unity underlying languages, the initial step has been taken. The work of Lehmann and others, when viewed in their proper perspective are of great use. Remember that in Indo-European linguistics syntax has made virtually no progress in almost an entire century. This is particularly sad in view of the tremendous progress in general linguistics in this area since 1957. Lehmann is one of the first Indo-Europeanists to use modern syntactic theories to such a great extent in investigating the various Indo-European languages. And again the theories developed by him for Indo-European linguistics have found their way into general linguistics as was the general direction a century ago. We may not agree with everything that Lehmann has written, but he does deserve to be credited with the directing of the attention of Indo-Europeanists to syntax. Now, in collecting the various correlations related to word order patterning the preliminary step in our ultimate typological investigation has been made. It is therefore time to go on to the next step, i.e., the investigation into the motivation for these correlations in terms of the function of word order as a typical mechanism of grammar not only in syntax proper but also in discourse.

APPENDICES

To enable others to confirm or refute the results reached in the previous investigation, all examples of comparative constructions used from Old and Middle Indic will be given here along with my own translations or glosses.

(a) *APPENDIX I* In Appendix I the examples from the *Rigveda* are listed. The examples are numbered from 1 to 106 in the first column with the passage given in the second column. In the third column reference is made to the meter - see §4.2.4. above - and in the fourth to the five types distinguished in §4.3. above.

(b) *Appendix II* The examples used in §4.4.2. from the Old Indic prose texts are listed in appendix II. The texts used were *Atharvaveda* (AV), *Taittirīya Saṃhitā* (TS), *Aitareya Brāhmaṇa* (AB) - the examples were taken from Delbrück (1888:113) and Verpoorten (1977) -, *Tāṇḍya Brāhmaṇa* (Tāṇḍ) - Delbrück (1888:113) -, *Aitareya Āraṇyaka* (AA) and *Śatapatha Brāhmaṇa* (ŚB).

(c) *Appendix III* Here the examples from the Upaniṣads used in §5.1.1. are listed. The texts were *Īśa, Kaṭhā* (Ka), *Kaivalya* (Kaiv), *Kauṣītakī Brāhmaṇa* (KausBr), *Kena, Maitrī, Māṇḍūkya* (Māṇḍ), *Śvetāśvatara* (Śvet), *Taittirīya* (Tait), and *Chāndogya* (Chān) Upaniṣads.

(d) *Appendix IV* The examples used in §5.1.2.1. from Middle Indic are given in this appendix. The first three examples are taken from the rock inscriptions of Aśoka and are cited from Schneider (1978: 104-118). The next two examples I have found in the *Abhijñanaśākuntalam* (Śak) of Kālidāsa. The remaining examples are from the *Pāli* canon (D = Dīghanikāya, M = Majjhimanikāya, S = Saṃyuttanikāya,

A = Aṅguttaranikāya, J = Jātaka, Sn = Suttanipāta, Thīg = Therīgāthā). The edition used was that of the Nālandā-Devanāgarī-Pāli Series, the references correspond to the numbering of the Roman (= Pāli Text Society) edition. Those examples marked with (M) are taken from metrical texts.

APPENDIX I

RIGVEDA

Nr.	Passage	M	T	
1.	I,4,4c	G	3	*yás te sákhibhya ā́ váram* who your than friends better "Who is better than your friends".
2.	I,10,9d	A	3	*kṛṣvā́ yujáś cid ántaram* let than companion even closer "Let (this praise of mine) come closer than even a companion."
3.	I,34,10c	J	2	*yuvór hí pū́rvaṃ savitā́- uṣáso ráthaṃ* your for earlier Savitar than dawn chariot "For Savitar (sends) your chariot before (lit. earlier than) dawn."
4.	I,57,4c	J	1	*nahí tvád anyó girvaṇo* for not than you other O lover of praise *gíraḥ sághat* praise shall take upon himself "For no one other than you, O lover of praise, shall take (our) praise upon himself."
5.	I,60,2c	T	1	*diváś cid pū́rvo ní-asādi hótā* than day even earlier takes his seat priest "The priest takes his seat before the break of dawn (lit. earlier than even the day)."

6. I,74,8b G 1 *<a>bhí pū́rvasmād áparaḥ*
towards than the former later
"(He goes) forth after the first (one) (lit. later than the former)."

7. I,84,6a A 3 *nákiṣ tvád rathī́taro*
no one than you better charioteer
"No one is a better charioteer than you."

8. I,84,19c B 1 *ná tvád anyó maghavann asti marḍitā́*
not than you other O Maghavan is comforter
"There is no other comforter than you, O Maghavan."

9. I,109,1c T 2 *ná- anyā́ yuvát prámatir asti máhyam*
not other than both of you providence is for me
"For me there is no other providence than both of you."

10. I,109,2ab T 4 *áśravaṃ hí bhūridā́vattarā vāṃ /*
I have heard for more munificent of you both
víjāmātur utá vā ghā syālā́t //
than son-in-law and or surely than brother in-law

11. I,114,6b J 5 *svādóḥ svā́dīyo rud<a>rā́ya várdhanam*
than sweet sweeter for Rudra strengthening
"sweeter than sweet, strengthening for Rudra."

12. I,117,2a T 5 *yó vām aśvinā mánaso jávīyān*
which yours O Aśvins than thought swifter
"Your (chariot) which is swifter than thought, O Aśvins."

13. I,118,1c T 5 *yó mártyasya mánaso jávīyān*
which mortal's than thought swifter
"which is swifter than mortal's thought".

14. I,123,2a T 2 *pū́rvā víśvasmād bhúvanād abodhi*
earlier than entire than world woke
"She woke earlier than the entire world."

15. I,127,5b At 2 *náktaṃ yáḥ sudárśataro dívātarād*
at night who more conspicuous than by day
"who is more conspicuous at night than by day".

16. I,129,10f At 4 *anyám asmád ririṣeḥ káṃ cid adrivo*
other than us hurt who even O one armed with thunderbolts
"Hurt (someone) other than us, O one armed with thunderbolts."

17. I,140,11b J 1 *priyā́d u cin mánmanaḥ préyo*
than dear and even than prayer dearer
astu te
may be to you
"May (this) be dearer to you than even a dear prayer."

18. I,173,5c T 3 *pratī́cáś cid yódhīyān* vṛ́ṣaṇvān*
than (one) even superior borne by
turned in battle stallions
"Borne by stallions (he is) superior in battle even than (those) turned towards (him)."
* read -ó- as two short syllables.

19. I,181,3c T 5 *vṛ́ṣṇaḥ sthātārā mánaso jávīyān*
of great O charioteers than thought swifter
"O you two charioteers of the great (chariot) (which is) swifter than thought."

20. I,183,1a T 5 *tám yuñjāthām mánaso yó jávīyān*
the yoke than thought which swifter
"Yoke the (chariot) which is swifter than thought."

21. I,184,1cd T 1 *nā́satyā kúha cid sántāv aryó /*
(náasatyā) (sánta)
O Nasatyas where even being than godless
divó nápātā sudā́starāya (sudáast-) //
heaven's grandsons for him who is more liberal
"O Nasatyas, wherever you are, Heavens's grandsons, for him who is more liberal than the godless."

22. I,185,9c T 1 *bhū́ri cid aryáḥ sudā́starāya (-áa-)*
much even than godless to him who is more liberal
"(Give) to him who is more liberal than the godless also much."

23. II,3,3b T 1 *devā́n yakṣi mā́nuṣāt pū́rvo adyá*
Gods you should serve than human earlier to-day
"(Agni) you should serve the Gods before the mortals (lit. earlier than the human) to day."

24. II,5,5c A 3 *kuvít tisṛ́bhya ā́ váram*
whether than three better
"Is (he) not (lit. whether) better than three?"

25. II,23,16d J 2 *bṛ́haspate ná paráḥ sā́m<a>no viduḥ*
O Brhaspati not more than Saman they know
"O Brhaspati, they do not know more than (their) Sanam."

26. II,33,10d T 2 *ná vā́ ójīyo rud<a>ra tvád asti*
not truly mightier O Rudra than you is
"Truly there is no (one) mightier than you O Rudra."

27. II,33,11d T 4 *<a>nyám te asmán ní vapantu sénāḥ*
other your than us let them suppress missiles
"Let your missiles suppress (someone) other than us."

28. III,17,5a T 3 *yás tvád dhótā pū́rvo agne yájīyān*
who than you priest earlier O Agni worshipping more
"The priest who is before (lit. earlier than) you, O Agni, (who) worshipps more..."

29. III,36,6c T 1 *átaś cid índraḥ sádaso várīyān*
than this even Inrah than assembly vaster
"Indra is vaster than even this assembly."

30. IV,30,1a G 1 *nákir indra tvád úttaro*
nobody O Indra than you superior
"Nobody is superior to you, O Indra."

31. V,3,5a T 3 *ná tvád dhótā pū́rvo agne yájīyān*
not than you priest earlier O Agni worshipping more
"There is no priest before (lit. earlier than) you, O Agni, (who) worshipps more..."

32. V,31,2c T 1 *nahí tvád indra vásyo anyád ásti*
for not than you O Indra better other is
"For there is no one else better than you, O Indra."

33. V,32,3d T 3 *ā́d asmād anyó ajanista távyān*
then than him other had been born stronger
"Then another had been born stronger than him."

34. V,47,5c T 1 *dvé (dué) yád īṃ bibhṛtó mātúr anyé*
two that him they two than others
carry mother (dual)
"..., that two carry him, two other than (his) mother."

35. V,61,6b G 1 *puṃsó bhavati vásyasī*
than man becomes better
"(She) develops into something better than a man."

36. V,77,2c T 4 *utá - anyó asmád yajate ví ca ā́vaḥ*
and other than us worships il- and luminated
"And another than us worships when it has lit up."

37. VI,18,4c T 5 *ugrám ugrásya tavásas távīyo*
strong of the strong than mighty more mighty
"Strength (will come) to the strong, more mighty than the mighty."

38. VI,19,13b T 1 *śátroḥ śátror úttara ít syāma (siāma)*
than foe than foe higher indeed may we be
"May we indeed be superior to every foe."

39. VI,20,3a T 5 *tū́rvann ójīyān tavásas távīyān*
excelling more powerful than moghty more mighty
"excelling (as the) more powerful (one), more mighty than the mighty."

40. VI,21,10d T 2 *ná tvā́vām anyó amṛta tvád asti*
not like you other O Immortal than you is
"Other than you. O Immortal one, there is no one like you."

41. VI,41,4a T 3 *sutáḥ sómo ásutād indra vásyān*
pressed Soma than un- O Indra better
pressed
"Pressed Soma is better than unpressed Soma, O Indra."

42. VI,47,29d T 5 *dūrā́d dávīyo ápa sedha śátrūn*
than far farther away repel foes
"Drive the foes very far away (lit. farther than far)."

43. VI,75,18c T 5 *urór várīyo váruṇas te kṛṇo/tu*
than ample more Varuna you should offer
"Varuna should offer you more than ample."

44. VII,1,4a Vi 1 *prá agnáyo 'agníbhyo ('gnibhio)*
forth these Agnis than Agnis
váram níḥ
better away
"These Agnis (shall glow) (li.t shall shine forth and away) better than the (other) Agnis."

45. VII,32,19c Pr 1 *nahí tvád anyán maghavann ā́pyam*
for not than you other O Maghavan friendship
"For (there is) no other friendship than (with) you, O Maghavan."

46. VII,95,4d T 2 *rāyā́ yujā́ cid úttarā sákhibhyaḥ*
with wealth joined even higher than friends
"Even joined with wealth (she) is superior to friends (lit. higher than friends)."

47. VII,98,1c T 3 *gaurā́d védīyāṁ avapā́nam índro*
than buffalo finds better drinking (place) indra
"Indra finds (his) drinking (place) better than a buffalo."

48. VII,100,3c T 5 *prá víṣṇur astu tavásas távīyān*
before Viṣṇu let-be than mighty mightier
"Let Visnu excell (lit. be before), mightier than (the) mighty)."

49. VII,101,5b T 1 *hṛdó astv (astu) ántaraṃ táj jujoṣat*
than heart let-be closer this may-he-enjoy
"Let (this song) be closer (to him) than (his) heart, may he enjoy this (song)."

50. VIII,1,6a B 2 *vásyām indra- -asi me pitúr*
better O Indra you-are to me father
"O Indra, you are better to me than a father."

51. VIII,2,6a G 4 *góbhir yád īm anyé asmán (mṛgáyante)*
with cows when him others than we (they-hunt)
"When others than we (hunt) him with cows."

52. VIII,2,22c G 4 *yaśástaraṃ śatámūtaḥ*
more renowned than one who has a hundred aids
"more renowned than one who has a hundred aids"

53. VIII,5,27b G 1 *áto vā bhūyo aśvinā*
than this or more O Aśvins
"or more than this, O Aśvins"

54. VIII,8,8ab A 4 *kím anyé páry (pári) āsate /*
why others around they-sit
<a>smát stómebhir aśvinā //
than we with hymns the Aśvins
"Do others than we sit around the Aśvins with hymns?"

55. VIII,15,11c Us 4 *ná--anyá índrāt káraṇaṃ bhūya invati*
not other than Indra deed greater achieves
"No one other than Indra achieves a greater deed."

56. VIII,20,18c Pr 1 *átaś cid ā́ na úpa vásyasā*

than this even toward us to with better

hṛdā́

heart

"(You turn) toward us with a better heart than even this (one)."

57. VIII,24,11ab Ua 4 *nū́ anyátrā́ cid adrivas /*

now elsewhere even O one armed with thunderbolts (stones)

tván (tuán) no jagmur āśásaḥ //

than you our they-went desires

"Never have our desires gone elsewhere than (to) you, O one armed with thunderbolts."

58. VIII,24,12ab Us 1 *nahy 1 àṃgá nṛto tvád (tuád) /*

for not indeed O Dancer than you

anyáṃ vindā́mi rā́dhase //

other I-find for a gift

"For I indeed find on (one) other than you, O Dancer, for a gift ..."

59. VIII,24,15b Us 2 *jajñé vīrátaras tvád (tuád)*

was-born greater hero than you

"(For there) was (no) greater hero born than you."

60. VIII,24,16a Us 1 *ā́- -ít u mádhvo madíntaram*

hither even further than mead more exhilarating

(sincá)

(pour)

"Further (pour) hither (that drink which is) more exhilarating than even mead."

61. VIII,24,20c Us 1 *ghṛtā́t svā́dīyo mádunaś ca vocata*

than ghee sweeter than mead and speak

"Speak (words) sweeter than ghee and mead."

62. VIII,25,9a Us 1 *akṣṇáś cid gātuvíttarā*
than eye even better pathfinders
"better pathfinders than even the eye"

63. VIII,33,18c G 1 *evá-ít dhūr vṛ́ṣṇa úttarā*
so even yoke than stallion higher
"Even so the yoke is higher than the stallion."

64. VIII,66,13c Pr 1 *nahí tvád anyáḥ puruhūta kaś caná*
for not than you other O much invoked anyone
"for no one other than you, O much invoked (one)"

65. VIII,73,2a G 1 *nimíṣaś cij jávīyasā*
than the winking of an eye even swifter
"swifter than even the winking of an eye"

66. VIII,74,15cd A 4 *ná--īm āpo aśvadātaraḥ /*
not him O Waters he who gives more horses
śáviṣṭhād asti mártyaḥ (mártiaḥ) //
than Śaviṣṭha is mortal
"There is no mortal, O Waters, who gives him more horses than Śaviṣṭha."

67. VIII,75,13a G 4 *anyám asmád bhiyā́ iyám*
other than us in order to frighten this
"(Let) this (misfortune follow) in order to frighten someone other than us."

68. VIII,78,4c G 2 *ná--anyás tvác chūra vāghátaḥ*
not other than you O Hero for the priest
"(There is) no (one) other than you, O Hero, for the priest."

69. VIII,96,6b T 4 *víśvā jātā́ny (jātā́ni) ávarāṇy (ávarāṇi) asmāt*
all creatures later than him
"(Let us praise him who made) all creatures after him (lit. later than him)."

70. IX,45,2c G 3 *devā́nt sákhibhya ā́ váram*
the Gods than friends better
"The Gods are better than friends."

71. IX,66,17a G 5 *yá ugrébhyaś cid ójīyān*
who than the strong even stronger
"who is stronger than even the strong"

72. IX,66,17b G 5 *śū́rebhyaś cic chū́ratarah*
than the brave even more brave
"more valiant than even the brave"

73. IX,66,17c G 1 *bhūridā́bhyaś cin máṃhīyān*
than the liberal even more liberal
"more generous than even the liberal"

74. IX,97,28b T 5 *siṃhó ná bhī́mó mánaso jávīyān*
lion like awful than thought swifter
"like an awful lion, swifter than thought"

75. X,10,8c T 2 *anyéna mád āhano yāhi tū́yam*
with other than me O Wanton go quickly
"Go quickly, O Wanton, with someone other than me."

76. X,10,10d T 2 *anyám icchasva subhage pátiṃ mát*
other seek O Fair One husband than me
"O Fair One, seek as husband someone other than me."

77. X,10,12c T 4 *anyéna mát pramúdaḥ kalpayasva*
with other than me pleasures prepare
"Prepare (your) pleasures with someone other than me."

78. X,18,1b T 2 *yás te svá (suá) ítaro devayā́nāt*
which your own different from leading to to the Gods
"(Pursue the pathway) which is your own (and which is) different from (the one) leading to the Gods."

79. X,25,8c P 4 *kṣetravíttaro mánuṣo*
more familiar with localities than man
"more familiar with localities than man"

80. X,25,11c P 1 *ayáṃ saptábhya á váram*
this than the seven better
"This is better than the seven."

81. X,28,6b T 1 *diváś cin me bṛhatá úttarā dhū́ḥ*
than heaven even my lofty higher carriage's pole
"Higher than even the lofty heaven is my carriage's pole."

82. X,39,12a J 5 *á téna yātaṃ mánaso jávīyasā*
with the come than thought with swifter
"Come (*á yātaṃ*) with the (chariot which is) swifter than thought."

83. X,64,2c J 2 *ná marḍitā́ vidyate anyá ebhyo (ebhio)*
not comforter is-found other than these
"No comforter is found other than these."

84. X,76,5a J 1 *diváś cid á́ vó 'mavattarebhy (-bhio)*
than heaven even to you stronger
"to you (who are) stronger than even the heaven"

85. X,76,5b J 1 *vibhvánā cid āśvàpastarebhyaḥ (-bhiaḥ)*
than Vibhvan even acting more quickly
"(to you who) act more quickly than even Vibhvan"

86. X,76,5c J 1 *vāyóś cid á́ sómarabhastarebhyo (-bhio)*
than Vāyu even to more intoxicated with Soma
"to (you who are) more intoxicated with Soma than even Vāyu"

87. X,76,5d J 1 *<a>gnéś cid arca pitukŕttarebhyaḥ (iaḥ)*
than Agni even I-sing (to those) providing more food
"(To you who) provide more food than even Agni I sing."

88. X,83,3a T 5 *abhí-ihi manyo tavásas távīyān*
come here O Manyu than mighty more mighty
"Come here, O Manyu, (who is) more mighty than the mighty."

89. X,86,1-23d P 1 *víśvasmād índra úttaraḥ*
than all Indra higher
"Indra is higher than all."

90. X,86,6a P 1 *ná mát strī́ subhasáttarā*
not than me woman having more beautiful buttocks
"No woman has more beautiful buttocks than me."

91. X,86,6c P 1 *ná mát práticyavīyasī*
not than me pressing closer against
"No (one) presses closer against (a man) than me."

92. X,88,19d T 1 *brāhmaṇó hótur ávaro niṣī́dan*
Brāhman to Hotar inferior sitting down
"the Brāhman sitting down below (lit. inferior to) the Hotar"

93. X,90,3b A 1 *áto jyā́yāṃś ca pū́ruṣaḥ*
than this greater and Puruṣa
"And greater than this is Puruṣa."

94. X,91,8d J 2 *tám ín mahé vṛṇate ná-*
him indeed at great they-choose not
anyáṃ (aniaṃ) tvát (tuát)
other than you
"At a great (sacrifice) they choose him indeed, no (one) other than you."

95. X,94,2d J 3 *hótuś cit pū́rve havirádyam āśata*
to Hotar even frior eating oblation obtained
"Prior to even the Hotar they have obtained the eating of the oblation."

96. X,112,2a T 5 *yás te rátho mánaso jávīyān*
which your chariot than thought swifter
"(Come with that) chariot of yours which is swifter than thought."

97. X,117,7c T 1 *vádan brahmā́- ávadato vánīyān*
speaking Brahman than not-speaking better
"The speaking Brahman is better than the silent (one)."

98. X,117,8a T 2 *ékapād bhū́yo dvipádo ví cakra/me*
one-footed more than biped has-advanced
"The one-footed (creature) has advanced more than the biped."

99. X,120,3c T 5 *svādóḥ svā́dīyaḥ svādúnā sṛjā sám*
than sweet sweeter with sweet mix
"Mix (that which is) sweeter than sweet with the sweet."

100. 121,10a T 1 *prájāpate ná tvád etā́ny (etā́ni) anyó*
O Prajāpati not than you these other
"O Prajāpati, no (one) other than you (protects) these ..."

101. X,129,2d T 1 *tásmād dha- anyán ná paráḥ kím canā́-*
than this indeed other not beyond anything
sa
there-was
"Other than this there was indeed not anything beyond (him)."

102. X,142,7c A 4 *anyám kṛṇuṣva-itáḥ pánthām*
other make than this here way
"Take (lit. make) another way than this (one) here."

103. X,145,3b A 5 *úttarā-ít úttarābhyaḥ (-bhiaḥ)*
higher indeed than the higher
"higher indeed than the higher (ones)"

104. X,145,3d A 5 *ádharā sā- ádharābhyaḥ (-bhiaḥ)*
lower she than the lower
"She is lower than the lower (ones)."

105. X,166,3d A 1 *yáthā mád ádharaṃ vádān*
that than me lower they-speak
"that they speak lower than me"

106. X,176,4c A 5 *sáhasaś cit sáhīyān*
than powerful even more powerful
"more powerful than even the powerful (ones)"

APPENDIX II

OLD INDIC PROSE I: *VEDAS; BRĀHMAṆAS*

1. AV 9,6,31 AS *pū́rvas átithes*
   earlier than a guest

2. AV 9,6,36 AS *pū́rvas átithes*
   earlier than a guest

3. AV 9,6,37 SA *tásmāt pū́rvas*
   than he earlier

4. AV 15,10,2 AS *śréyāṃsam ... ātmánas*
   better than himself

5. TS 2,4,1,4 SA *asmāt śreyān*
   than he better

6. TS 2,4,1,4 SA *asmāt pāpīyān*
   than he worse

7. TS 2,4,2,3 SA *yasmāt śreyān*
   than whom better

8. TS 5,1,2,3 AS *pāpīyān áśvāt*
   worse than a horse

9. TS 5,4,4,5 AS *anyám ... asmát*
   other than we

10. AB 1,3,18 AS *uttaram ... ulbāt*
    higher than the womb

11. AB 3,36,5 SA *juhvat eva ajuhvatas vasīyān*
    sacrificing even than non-sacrificing better

12. AB 6,20,14 AS *paras asmāt lokāt*
farther than this than world

13. AB 7,15,8 AS *bhūyān vai brāhmaṇas kṣatriyāt*
better truly Brahmana than a Kṣatriya

14. AB 7,18,1 AS *jyāyāṃsas madhuchandasas*
older than Madhuchandas

15. AB 7,24,1 AS *anyas ... asmat*
other than we

16. AB 8,1,5 SA *brahma khalu vai kṣatrāt pūrvam*
Brahma indeed to Kṣatra prior

17. Tānḍ 11,1,2 SA *brahma hi pūrvam kṣatrāt*
Brahma then prior to Kṣatra

18. AA 1,2,2 AS *anyas vasukrāt*
other than Vasukra

19. AA 3,1,3 AS *anyat kuśalāt*
other than suitable

20. ŚB 1,4,3,1 AS *atitarām ... itarasmāt agnes*
better than another than fire

21. ŚB 1,4,5,9 SA *tvad śreyas*
than you better

22. ŚB 1,4,5,10 SA *tvad śreyas*
than you better

23. ŚB 1,4,5,11 SA *tvad śreyas*
than you better

24. ŚB 2,3,2,18 AS *kanīyāṃsas hi devās manuṣyebhyas*
fewer then Gods than men

25. ŚB 2,3,2,18 AS *bhūyāsas hi manuṣyās devebhyas*
more numerous then men than Gods

26. ŚB 2,3,2,18 AS *bhūyāsas hi paśavas manuṣyebhyas*
more numerous then cattle than men

27. ŚB 3,1,2,16 AS *anyas puruṣāt*
other than man

28. ŚB 3,2,1,31 AS *anyena kṛṣṇaviṣāṇāyās*
with other than black deer's horn

29. ŚB 3,2,2,8 SA *atas anyena*
than this with other

30. ŚB 3,2,4,11 AS *purastāt vācas*
prior to speech

31. ŚB 3,3,3,1 AS *bhūyas vai atas*
more truly than this

32. ŚB 3,3,3,3, AS *bhūyas vai atas*
more truly than this

33. ŚB 3,3,4,2 AS *jyāyāṃsam eva badhāt*
superior even to the deadly shaft

34. ŚB 3,5,1,21 SA *mad ... śreyān*
than I better

35. ŚB 3,6,1,26 AS *bhūyas ardhāt*
more than one half

36. ŚB 3,6,3,8 AS *kanīyān badhāt*
inferior to the deadly shaft

37. ŚB 3,6,4,6 AS *paras avarebhyas*
higher than the inferior (ones)

38. ŚB 3,9,4,24 SA *tvad anyas*
than you other

39. ŚB 5,4,2,9 SA *tvad ... anyas*
than you other

40. ŚB 6,7,4,11 AS *bhūyas ardhāt*
more than one half

41. ŚB 6,7,4,11 AS *kanīyas ardhāt*
less than one half

42. ŚB 7,4,1,9 AS *anyas divas*
other than the sky

43. ŚB 10,2,2,1 AS *anyas etasmāt*
other than that one

44. ŚB 10,3,5,11 AS *śreyāṃsas ... haiva asmāt*
better even than he

45. ŚB 10,3,5,11 SA *asmāt ... śreyān*
than he better

46. ŚB 10,3,5,11 SA *asmāt jyāyān*
than he greater

47. ŚB 10,3,5,11 SA *asmāt pūrvās*
than he earlier

48. ŚB 11,6,2,10 SA *atas param*
than this higher

49. ŚB 12,1,2,3 SA *asmāt śreyān*
than he better

50. ŚB 12,2,2,23 SA *asmāt śreyān*
than he better

51. ŚB 13,5,2,23 SA *tvad ... anyas*
than you other

52. ŚB 13,8,3,4 AS *anyas itaras devayānāt*
other different from the path of the Gods

53. ŚB 14,4,2,1 AS *anyat ātmanas*
other than (him)self

54. ŚB 14,4,2,3 SA *mad anyat*
than I other

55. ŚB 14,4,2,19 AS *preyas putrāt*
dearer than a son

56. ŚB 14,4,2,19 AS *anyam ātmanas*
other than (him)self

57. ŚB 14,4,2,19 AS *preyas vittāt*
dearer than (that which has been) found

58. ŚB 14,4,2,19 AS *preyas anyasmāt*
dearer than another

59. ŚB 14,4,2,19 SA *sarvasmāt antarataram*
than all nearer

APPENDIX III

OLD INDIC PROSE II: *UPANIṢADS*

1.	Iśa 2	AS	*na anyathā itas* not other than this
2.	Iśa 4	SA	*manasas javīyas* than the mind swifter
3.	Iśa 13	AS	*anyat ... sambhavāt* other ... than being
4.	Iśa 13	AS	*anyat ... asambhavāt* other ... than non-being
5.	Kena 1,4	AS	*anyat ... viditāt* other ... than the known
6.	Kaṭh 1,29	AS	*na anyam tasmāt* not other than that
7.	Kaṭh 2,8	AS	*anīyān ... aṇupramāṇāt* subtler ... than subtle
8.	Kaṭh 2,14	AS	*anyatra dharmāt* elsewhere than right
9.	Kaṭh 2,14	AS	*anyatra adharmāt* elsewhere than wrong
10.	Kaṭh 2,14	AS	*anyatra asmāt* elsewhere than that
11.	Kaṭh 2,14	AS	*anyatra bhūtāt* elsewhere than past
12.	Kaṭh 2,20	SA	*aṇos aṇīyān* than small smaller
13.	Kaṭh 2,20	SA	*mahatas mahīyān* than great greater
14.	Kaṭh 3,10	SA	*indriyebhyas parā* than the senses farther
15.	Kaṭh 3,10	SA	*arthebhyas ... param* than the objects ... farther

16. Kaṭh 3.10 SA *manasas ... parā*
than the mind ... farther

17. Kaṭh 3,10 SA *buddhes ... paras*
than the understanding ... farther

18. Kaṭh 3,11 SA *mahatas param*
than the great farther

19. Kaṭh 3,11 SA *avyaktāt paras*
than the unmanifest farther

20. Kaṭh 3,11 SA *puruṣāt param*
than the spirit farther

21. Kaṭh 6,7 SA *indriyebhyas param*
than the senses farther

22. Kaṭh 6,8 SA *avyaktāt paras*
than the unmanifest farther

23. Kaiv 3 AS *pareṇa nākāt*
higher than heaven

24. Kaiv 16 SA *suksmāt suksmataram*
than subtle subtler

25. Kaiv 20 SA *anos aṇīyān*
than small smaller

26. KauṣBr 1,6 AS *anyat devebhyas*
other than the Gods

27. Maitrī 6,20 SA *atas parā*
than this higher

28. Maitrī 6,20 SA *anos aṇīyāmsam*
than small smaller

29. Maitrī 6,38 SA *anos ... anum*
than small small<er>

30. Maitrī 7,11 SA *anos ... anus*
than small ... small<er>

31. Maitrī 7,11 SA *suptāt paras*
than the sleeper farther

32. Maitrī 7,11 SA *tebhyas ... mahattaram*
than these ... greater

33. Māṇḍ 1 AS *anyat trikālāt*
other than the threefold time

34. Śvet 1,12 SA *na atas param*
not than this farther

35. Śvet 3,7 SA *tatas param*
than this farther

36. Śvet 3,8 SA *tamasas parastāt*
than darkness farther

37. Śvet 3,9 SA *yasmāt param*
than whom farther

38. Śvet 3,9 SA *yasmāt na aṇīyas*
than whom not smaller

39. Śvet 3,10 SA *tatas ... uttarataram*
than this ... still higher

40. Śvet 3,20 SA *aṇos aṇīyān*
than subtle subtler

41. Śvet 3,20 SA *mahatas mahīyān*
than great greater

42. Śvet 6,5 AS *paras trikālāt*
farther than the three kinds of time

43. Śvet 6,6 SA *vṛksakālākṛtibhis paras*
than the forms of the farther
world-tree and time

44. Tait 1,11 SA *asmat śreyāṃsas*
than us better

45. Chān 3,11,6 SA *tatas bhūyas*
than that greater

46. Chān 3,11,6 SA *tatas bhūyas*
than that greater

47. Chān 3,12,6 SA *tatas jyāyān*
than that greater

48. Chān 3,14,3 AS *jyāyān pṛthivyās*
greater than the earth

49. Chān 3,14,3 AS *jyāyān antariksāt*
greater than the atmosphere

50. Chān 3,14,3 AS *jyāyān divas*
greater than the sky

51. Chān 3,14,3 AS *jyāyān ebhyas lokebhyas*
greater than these than worlds

52. Chān 3,14,3 AS *<a>nīyān vrīhes*
smaller than a grain of rice

53. Chān 4,9,2 AS *anye manusyebhyas*
others than men

54. Chān 6,8,6 AS *anyatra adbhyas*
elsewhere than (in) water

55. Chān 7,1,5 SA *nāmnas bhūyas*
than name greater

56. Chān 7,1,5 SA *nāmnas ... bhūyas*
than name ... greater

57. Chān 7,2,1 SA *nāmnas bhūyasī*
than name greater

58. Chān 7,2,2 SA *vācas bhūyas*
than speech greater

59. Chān 7,2,2 SA *vācas bhūyas*
than speech greater

60. Chān 7,3,1 SA *vācas bhūyas*
than speech greater

61. Chān 7,3,2 SA *manasas bhūyas*
than mind greater

62. Chān 7,3,2 SA *manasas ... bhūyas*
than mind ... greater

63. Chān 7,4,1 SA *manasas bhūyān*
than mind greater

64. Chān 7,4,2 SA *saṃkalpāt bhūyas*
than will greater

65. Chān 7,4,2 SA *saṃkalpāt ... bhūyas*
than will ... greater

66. Chān 7,5,1 SA *saṃkalpāt bhūyas*
than will greater

67. Chān 7,5,3 SA *cittāt bhūyas*
than thought greater

68. Chān 7,5,3 SA *cittāt ... bhūyas*
than thought ... greater

69. Chān 7,6,1 SA *cittāt bhūyas*
than thought greater

70. Chān 7,6,2 SA *dhyānāt bhūyas*
than contemplation greater

71. Chān 7,6,2 SA *dhyānāt ... bhūyas*
than contemplation ... greater

72. Chān 7,7,1 SA *dhyānāt bhūyas*
than contemplation greater

73. Chān 7,7,2 SA *vijñānāt bhūyas*
than understanding greater

74. Chān 7,7,2 SA *vijñānāt ... bhūyas*
than understanding ... greater

75. Chān 7,8,1 SA *vijñānāt bhūyas*
than understanding greater

76. Chān 7,8,2 SA *balāt bhūyas*
than strength greater

77. Chān 7,8,2 SA *balāt ... bhūyas*
than strength ... greater

78. Chān 7,9,1 SA *balāt bhūyas*
than strength greater

79. Chān 7,9,2 SA *annāt bhūyas*
than food greater

80. Chān 7,9,2 SA *annāt ... bhūyas*
than food ... greater

81. Chān 7,10,1 SA *annāt bhūyas*
than food greater

82. Chān 7,10,2 SA *adbhyas bhūyas*
than water greater

83. Chān 7,10,2 SA *adbhyas ... bhūyas*
than water ... greater

84. Chān 7,11,1 SA *adbhyas bhūyas*
than water greater

85. Chān 7,11,2 SA *tejasas bhūyas*
than heat greater

86. Chān 7,11,2 SA *tejasas ... bhūyas*
than heat ... greater

87. Chān 7,12,1 SA *tejasas bhūyas*
than heat greater

88. Chān 7,12,2 SA *ākāśāt bhūyas*
than ether greater

89. Chān 7,12,2 SA *ākāśāt ... bhūyas*
than ether ... greater

90. Chān 7,13,1 SA *ākāśāt bhūyas*
than ether greater

91. Chān 7,13,2 SA *smarāt bhūyas*
than memory greater

92. Chān 7,13,2 SA *smarāt ... bhūyas*
than memory ... greater

93. Chān 7,14,1 SA *smarāt bhūyas*
than memory greater

94. Chān 7,14,2 SA *āśāyās bhūyas*
than hope greater

95. Chān 7,14,2 SA *āśāyās ... bhūyas*
than hope ... greater

96. Chān 7,15,1 SA *āśāyās bhūyas*
than hope greater

APPENDIX IV MIDDLE INDIC

Aśoka

1. VI K — AS *kaṃmatalā* *savalokahitena*
   more important than (promoting) the welfare of all men

2. IX L' — SA *imena* *kaṭaviyatalā*
   than this to be done more

3. XIII F — SA *tato* *gulumatatale*
   than this considered more deplorable

Prakrit

4. Śak I,17,3 — SA *tuvatto ... piṃadare*
   than you dearer

5. Śak III,17,5 — SA *asmāt* *param*
   than this higher

Pāli

6. D i 45 — SA *imehi* *sabbeh<i> ... uttaritaraṃ*
   to these to all superior

7. D ii 82 — SA *bhagavatā* *bhiyyo'bhiññataro*
   than the Lord more knowledgeable

8. D ii 154 — SA *bhikkhunā* *therataro*
   than Bhikkhu older

9. D ii 154 — SA *bhikkhunā* *navakataro*
   than Bhikkhu younger

10. D iii 86 SA *amheh<i> ... dubbaṇṇatarā*
than we uglier

11. D iii 86 SA *etehi vaṇṇavantatarā*
than these more beautiful

12. D iii 87 SA *amheh<i> ... dubbaṇṇatarā*
than we uglier

13. D iii 87 SA *etehi vaṇṇavantatarā*
than these more beautiful

14. D iii 88 SA *amheh<i> ... dubbaṇṇatarā*
than we uglier

15. D iii 88 SA *etehi vaṇṇavantatarā*
than these more beautiful

16. M i 119 SA *taṃhā nimittā aññaṃ*
than this than characteristic other

17. M i 329 SA *tayā bhiyyo*
than you more

18. S i 75 SA *attanā piyataro*
than (him)self dearer

19. S i 75 SA *attanā piyataro*

20. S i 75 SA *attanā piyataro*

21. S i 75 SA *attanā piyataro*

22. S i 75 SA *attanā piyataro*

23. S i 75 SA *attanā piyataro*

24. S i 75 SA *attanā piyataro*

25. S i 75 (M) AS *piyataraṃ attanā*
dearer than (him)self

26. S i 162 SA *tena pāpiyo*
than this worse

27. S i 163 (M) SA *tena pāpiyo*
than this worse

28. S i 202 SA *aṃhehi pāpiyo*
than we worse

29. S i 222 (M) SA *tena pāpiyo*
than this worse

30. S i 223 SA *tena pāpiyo*

31. S v 20 SA *sappurisena sappurisataraṃ*
than a worthy man a better man

32. S v 20 SA *asappurisena asappurisataraṃ*
than an unworthy man a more unworthy man

33. S v 159 SA *bhagavatā bhiyyo'bhiññataro*
than the Lord more knowledgeable

34. A ii 222 SA *pāpena pāpataraṃ*
than bad worse

35. A ii 222 SA *kalyāṇeṇa kalyāṇataraṃ*
than charming more charming

36. A ii 222 SA *sappurisena sappurisataro*
than a worthy man a better man

37. A ii 222 SA *asappurisena asappurisataro*
than an unworthy man a more unworthy man

38. J i 158 SA *rasataṇhāya pāpakataraṃ*
than lust of sensual enjoyment more sinful

39. J i 158 (M) SA *rasehi pāpiyo*
than pleasure more evil

40. J iii 340 (M) AS *dukkharataraṃ tato*
more difficult than this

41. J iii 340 (M) AS *dukkharataraṃ tato*

42. J iii 437 (M) AS *piyataraṃ tayā*
dearer than you

43. J iv 111 (M) AS *dukkhatarā tato*
more painful than this

44. J v 27 (M) SA *maraṇā ... dukkhataraṃ*
than death more painful

45. J v 87 (M) SA *mittaddubhā pāpiyo*
than a deceiving friend worse

46. J v 94 (M) AS *piyataro mayā*
dearer than I

47. J vi 80 (M) AS *dukkhataraṃ ito*
more painful than this

48. J vi 550 (M) AS *dukkhataraṃ ito*

49. J vi 561 (M) SA *tato dukkhataraṃ*
than this more painful

50. Sn 185 SA *asmā lokā paraṃ*
than this than world farther

51. Thīg 375 (M) SA *tayā piyataro*
than you dearer

52. Thīg 383 SA *tayā piyatarā*

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AASF	Annales Academiae Scientiarum Fennicae
AfO	Archiv für Orientforschung
ALHafn	Acta Linguistica Hafniensia
ALL	Archiv für Lateinische Lexikographie
AO	Archiv Orientalńi, Praha
CJL	Canadian Journal of Linguistics
CLS	Chicago Linguistic Society
CTL	Current Trends in Linguistics
FL	Foundations of Language
GL	General Linguistics
GURT	Georgetown University Round Table on Languages and Linguistics
IF	Indogermanische Forschung
IJDL	International Journal of Dravidian Linguistics
IULC	Indiana University Linguistic Club
JEGP	Journal of English and Germanic Philology
JEthS	Journal of Ethiopian Studies
JIES	Journal of Indo-European Studies
JL	Journal of Linguistics
KZ	Zeitschrift für Vergleichende Sprachforschung
LBer	Linguistische Berichte
Lg	Language
LIn	Linguistic Inquiry
LSA	Linguistic Society of America
MSS	Münchener Studien zur Sprachwissenschaft
MWPL	Montreal Working Papers in Linguistics
NTS	Norsk Tidsskrift for Sprogvidenskap
PICL	Proceedings of the International Congress of Linguistics
PIL	Papers in Linguistics
PMLA	Publications of the Modern Language Association of America
PRIÅAF	Publications of the Research Institute of the Åbo Akademi Foundation (= Meddelanden från Stiftelsens för Åbo Akademi Forskningsinstitut)
SAfrL	Studies in African Linguistics
SBL	Salzburger Beiträge zur Linguistik
TPS	Transactions of the Philological Society
Vir	Virittäjä
WPLU	Working Papers on Language Universals, Stanford University

WZUB Wissenschaftliche Zeitschrift der Humboldt-Universität, Berlin. Gesellschafts- und sprachwissenschaftliche Reihe

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