Theoretical and comparative linguistics

Inaugural Lecture, February 15, 2006

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1.   Why comparative?

Comparative linguistics should strive to find out both which kinds of variation exist between languages, and which kinds do not exist. In this way, it may contribute to our knowledge about the powers and limitations of the human brain. An explicitly comparative angle also brings out more sharply the specific characteristics of each language than when each language is treated in isolation.

2.   Why also theoretical?

(1)   *About thirty years ago there was much talk that geologists ought only to observe and not theorise; [...] at this rate a man might as well go into a gravel-pit and count the pebbles and describe the colours. How odd it is that anyone should not see that all observation must be for or against some view if it is to be of any service.*

(Charles Darwin on Sept. 18, 1861, in a letter to Henry Fawcett, quoted e.g. in Gould 1992 and in Shermer 2001)

Comparative linguistics should seek to account theoretically for as many actual differences as possible, by deriving them from as few general differences as possible.

The position of a particle: (Vikner 1987:262)

(2)				**object**	**particle**
a.	Danish	Peter	smed	tæppet	ud
b.	Swedish	*Peter	kastade	mattan	bort

Peter   threw   the carpet   away

(3)				**particle**	**object**
a.	Danish	*Peter	smed	ud	tæppet
b.	Swedish	Peter	kastade	bort	mattan

Peter   threw   away   the carpet

Constructions with *let*:   (Vikner 1987:262)

(4)				**object**	**verb**
a.	Danish	Peter	lod	tæppet	støvsuge
b.	Swedish	*Peter	lät	mattan	dammsuga

Peter   let   the carpet   vacuum-clean

(5)				**verb**	**object**
a.	Danish	*Peter	lod	støvsuge	tæppet
b.	Swedish	Peter	lät	dammsuga	mattan

Peter   let   vacuum-clean   the carpet

These are two separate actual differences between Danish and Swedish, but they should be considered as two instances of a single more general difference.

By comparing different languages, we can begin to map the ways in which languages differ and the ways in which they don't.

In linguistics today, two theoretical paradigms dominate, the formal paradigm and the functional paradigm. The functional approach, which is very competently represented in the University of Aarhus, needs a formal opponent which is both qualified and constructive. The formal approach needs to take the challenge posed by functional linguistics seriously.

3. Theoretical linguistics needs comparative linguistics: The finite verb in *yes/no*-questions

Theoretical linguistics and comparative linguistics need each other. First an example of the relevance of comparative evidence for theoretical linguistics.

Consider the position of the finite verb in Danish *yes/no*-questions. *Yes/no*-questions are questions that may typically be answered by a *yes* or a *no*, and in Danish they begin with the finite verb:

(6) <u>Havde</u> han kun drukket hvidvin i går? *Had he only drunk white wine yesterday?*

Main clauses in Danish have two positions to the left of the subject. In the second position, we find the finite verb in (7a,b). In the first, we find a time adverbial in (7a) and the object in (7b):

(7)	①	②				
a.	I går	havde	han	kun	drukket	hvidvin
b.	Hvidvin	havde	han	kun	drukket	i går

Yesterday *had* *he* *only* *drunk* *white wine*
White wine *had* *he* *only* *drunk* *yesterday*

The theoretical question now is whether to analyse *yes/no*-questions like (6) in such a way that the finite verb is seen as being in the first, (8a), or as being in the second of these two positions, (8b):

(8)	①	②						
a.	Havde		han	kun	drukket	hvidvin	i går?
b.		Havde	han	kun	drukket	hvidvin	i går?

Most treatments recommend the analysis in (8b), e.g. Diderichsen (1962:193), Allan et al. (1995:494), Vikner (1995:49), and Jørgensen (2000:73). Hansen (1980:46) directly says "we could also say that the finite verb is in [the first position], but it is preferable to agree once and for all that the finite verb is always in [the second position]".

At least two linguists (both from this university) would seem to be of a different opinion. Arndt (2003:244) says about Danish clause structure that "we can put almost anything into the first position (... though finite verbs can be there only in questions, and these could also be seen as sentences which lack the first position)". In other words, he advocates (8a), but he does mention (8b) as an alternative.

Togeby (2003:56, 58) also prefers (8a), although he says that (8b) would make the analysis "easier". As a reason for preferring (8a), he says (2003:58, fn 1) that only with (8a) can a difference be made between a *yes/no*-question like (6) on one hand and a subjectless clause of the type that may be found in diary contexts on the other:

(9) Har aldrig skrevet dagbog før *Have never written (a) diary before*

Togeby here says that if we take the verb in a *yes/no*-question to be in the first position, (8a), we can make a distinction between the *yes/no*-question and the diary example. Given that the diary example, (9), has to be analysed as having an **empty** first position (the place where the subject ought to have been), Togeby argues that it can only be different from a *yes/no*-question if the latter has **the finite verb** in the first position.

I would like to suggest, however, that a *yes/no*-question like (6) and a diary example like (9) are **alike** in that **they both** have an empty first position. Whereas I agree with Togeby (2003:58) that the first position in the diary example contains a silent subject, I also think that the first position in a *yes/no*-question contains a silent element, namely an empty question element, indicated by *Q* in (10b). (This idea goes back at least to Chomsky 1977).

(10)

	①	②							
a.	[$_{subj}$]	Har		aldrig	skrevet	dagbog	før		= (9)
b.	[$_Q$]	Havde	han	kun	drukket	hvidvin	i går?		= (6)

Analysing the two clause types along parallel lines is supported by the comparative evidence. Only this view of *yes/no*-questions can account for the links noted in Greenberg's (1963:82-83) "Universal 11":

(11) **<u>UNIVERSAL 11</u>**.
Inversion of statement order so that verb precedes subject occurs only in languages where the question word or phrase is normally initial. This same inversion occurs in yes-no questions only if it also occurs in interrogative word questions.

The first clause of (11) says that only those languages where the question element is normally initial, also have subject-verb inversion in the same questions. This is the case e.g. in Danish:

(12)   Hvad købte Harry?   *What bought Harry?*

with both an initial question element *hvad* and subject-verb inversion (the verb *købte* precedes the subject *Harry*). The opposite case is found e.g. in Chinese (example from Cheng & Rooryck 2000:2):

(13)   Hufei mai-le shenme?   *Hufei bought what?*

where the question element *shenme* is not initial and where there is no subject-verb inversion (the verb follows the subject).

The second clause of Greenberg's universal, (11), says that only those languages which have subject-verb inversion in questions with question elements also have subject-verb inversion in *yes/no*-questions.

In other words, Greenberg (1963:82-83) establishes a link between having question elements at the beginning of a question and having subject-verb inversion in *yes/no*-questions.
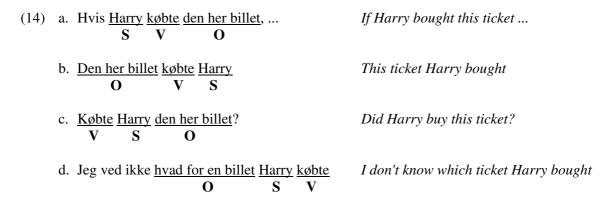
If we follow the analysis of *yes/no*-questions in (10b), the link is that the two cases, verb-initial *yes/no*-questions and questions with initial question elements, would have exactly the same structure: a question element in the first position, a finite verb in the second position, and only then come the subject and the rest of the clause. Then it is not a surprise that *yes/no*-questions with this word order occur only in languages that also have their visible question elements in the first position.

In other words, including the comparative evidence in our considerations puts us in a better qualified position to make the theoretical choice between the two analyses in (8a) and (8b).

4. Comparative linguistics needs theoretical linguistics: Is German an SVO-language?

Greenberg's (1963:109) discussion of "basic word order" will serve here as an example of how comparative linguistics also sometimes needs a helping hand from theoretical linguistics.

By "basic word order", Greenberg means the order of the **subject**, the **verb** and the **object**. Establishing the basic word order of a particular language is not as easy as it may sound. Danish e.g. allows at least four different orders:

(14)   a. Hvis <u>Harry</u> <u>købte</u> <u>den her billet</u>, ...   *If Harry bought this ticket ...*
      S   **V**   **O**

   b. <u>Den her billet</u> <u>købte</u> <u>Harry</u>   *This ticket Harry bought*
      O   **V**   **S**

   c. <u>Købte</u> <u>Harry</u> <u>den her billet</u>?   *Did Harry buy this ticket?*
     V   **S**   **O**

   d. Jeg ved ikke <u>hvad for en billet</u> <u>Harry</u> <u>købte</u>   *I don't know which ticket Harry bought*
        O   **S**   **V**

Now the question is which of these four should be chosen as the basic order of Danish. Here I agree with Greenberg (1963:109) that the basic order of Danish is **S**ubject-**V**erb-**O**bject, as in (14a). Although Greenberg and I agree on what the basic order is, we do not agree on why this should be so.

Greenberg (1963:109) puts **all** the Germanic languages into the same group, i.e. **SVO**. I find it more promising to classify only Scandinavian and English as **SVO**, (15), and to take the basic order of German, Dutch and Frisian to have the object before the verb, i.e. to classify these three languages as **S**ubject-**O**bject-**V**erb, **SOV**, (16):

(15)	**SVO**			**verb**	**object**
a.	Danish	Jeg	har	læst	bogen
b.	Icelandic	Ég	hef	lesið	bókina
c.	English	I	have	read	the book

(16)	**SOV**			**object**	**verb**
a.	Dutch	Ik	heb	het boek	gelezen
b.	Frisian	Ik	ha	it boekje	lêzen
c.	German	Ich	habe	das Buch	gelesen
		I	*have*	*the book*	*read*

(The analysis of Dutch, Frisian and German as SOV-languages goes back to Bach 1962, Bierwisch 1963, and Koster 1975).

Why does Greenberg (1963) categorise German (and Dutch) as SVO? He does not himself go into any great detail, but simply talks about the "dominant word order" (1963:76, 109).

Whaley (1997:106), a textbook in descriptive comparative linguistics, is more explicit about why she follows Greenberg (1963) in taking SVO to be the "basic constituent order" of German. She takes an order to be the basic constituent order if it tends to be "strongly felt to be the basic order by native speakers", if it tends to be "the most frequent order", "the least marked order", or the "pragmatically most neutral order". The reference is thus to tendency rather than to theory.

The classification of German as SOV that I (and many others) prefer has a theoretical basis: If we declare one order to be the basic order, then all other possible orders have to be explained in relation to the basic order. The question then is how easy and simple it is to derive the various other orders from the basic order.

Consider therefore first how complicated it would be to derive the various orders if we follow Greenberg's (1963:109) and Whaley's (1997:103) claim that the basic order is SVO:

Taking the basic order to be SVO

(17) Main clauses (subject-initial)

a.	Sie <u>erzählte</u> gestern eine Geschichte *She told yesterday a story*	no movement required
b.	Sie hat ___ gestern eine Geschichte <u>erzählt</u> *She has yesterday a story told*	past participle moved to the right
c.	Sie wird ___ morgen eine Geschichte <u>erzählen</u> *She will tomorrow yesterday a story tell*	infinitive moved to the right
d.	Sie wird ___ ___morgen eine Geschichte <u>erzählt</u> <u>haben</u> *She will tomorrow a story told have*	past participle + infinitive moved to the right
e.	Sie ___las gestern eine Geschichte <u>vor</u> *She read yesterday a story out*	separable prefix moved to the right
f.	Sie wird ___ morgen eine Geschichte <u>vorlesen</u> *She will tomorrow a story out-read*	separable prefix + infinitive moved to the right

(18) Embedded clauses

a.	... dass sie ___ gestern eine Geschichte <u>erzählte</u> *... that she yesterday a story told*	finite verb moved to the right
b.	... dass sie ___ ___ gestern eine Geschichte <u>erzählt</u> <u>hat</u> *... that she yesterday a story told has*	past participle + finite verb moved to the right
c.	... dass sie ___ ___morgen eine Geschichte <u>erzählen</u> <u>wird</u> *... that she tomorrow a story tell will*	infinitive + finite verb moved to the right
d.	... dass sie ___ ___ ___ morgen eine Geschichte <u>erzählt</u> <u>haben</u> <u>wird</u> *... that she tomorrow a story told have will*	past participle + infinitive + finite verb moved to the right
e.	... dass sie ___ gestern eine Geschichte <u>vorlas</u> *... that she yesterday a story out-read*	separable prefix + finite verb moved to the right
f.	... dass sie ___ ___ morgen eine Geschichte <u>vorlesen</u> <u>wird</u> *... that she tomorrow a story out-read will*	separable prefix + infinitive + finite verb moved to the right

(19) Main clauses (but not subject-initial)

a.	<u>Gestern</u> <u>hat</u> sie ___ ___ ___eine Geschichte <u>erzählt</u> *Yesterday has she a story told*	adverbial moved to the left + finite verb moved to the left + past participle moved to the right
b.	<u>Eine Geschichte</u> <u>hat</u> sie ___ ___ gestern ___ <u>erzählt</u> *A story has she yesterday told*	object moved to the left + finite verb moved to the left + past participle moved to the right

To get from a basic SVO order to the various word orders actually found in German, a considerable number of different movements would have to be assumed. Notice e.g. that although the basic order has the verb before the object, it is necessary to assume not only a movement that moves a finite verb to the right, (18a), but also one that moves a finite verb to the left, (19a,b).

Consider now how much more easily things fall into place if the basic order of German is SOV (adapted from Wöllstein-Leisten 1997:28-32, see also Vikner 2001:87-124 & Vikner 2005):

<u>Taking the basic order to be SOV</u>

(20)   same data as (17)

a.	Sie <u>erzählte</u> gestern eine Geschichte ___ *She told yesterday a story*	finite verb moved to the left
b.	Sie <u>hat</u> gestern eine Geschichte erzählt ___ *She has yesterday a story told*	finite verb moved to the left
c.	Sie <u>wird</u> morgen eine Geschichte erzählen ___ *She will tomorrow yesterday a story tell*	finite verb moved to the left
d.	Sie <u>wird</u> morgen eine Geschichte erzählt haben ___ *She will tomorrow a story told have*	finite verb moved to the left
e.	Sie <u>las</u> gestern eine Geschichte vor___ *She read yesterday a story out*	finite verb moved to the left
f.	Sie <u>wird</u> morgen eine Geschichte vorlesen ___ *She will tomorrow a story out-read*	finite verb moved to the left

(21)   same data as (18)

a.	... dass sie gestern eine Geschichte <u>erzählte</u> *... that she yesterday a story told*	no movement required
b.	... dass sie gestern eine Geschichte erzählt <u>hat</u> *... that she yesterday a story told has*	no movement required
c.	... dass sie morgen eine Geschichte erzählen <u>wird</u> *... that she tomorrow a story tell will*	no movement required
d.	... dass sie morgen eine Geschichte erzählt haben <u>wird</u> *... that she tomorrow a story told have will*	no movement required
e.	... dass sie gestern eine Geschichte vor<u>las</u> *... that she yesterday a story out-read*	no movement required
f.	... dass sie morgen eine Geschichte vorlesen <u>wird</u> *... that she tomorrow a story out-read will*	no movement required

(22)   same data as (19)

a.	<u>Gestern</u> <u>hat</u> sie ___ eine Geschichte erzählt ___ *Yesterday has she a story told*	adverbial moved to the left + finite verb moved to the left
b.	<u>Eine Geschichte</u> <u>hat</u> sie gestern ___ erzählt ___ *A story has she yesterday told*	object moved to the left + finite verb moved to the left

To get from a basic SOV order to the various word orders actually found in German, a relatively small number of different movements will have to be assumed. Notice e.g. that a finite verb is only ever moved to the left, (20) and (22), never to the right.

This concludes my demonstration of the theoretical reasoning that leads me (and many others) to think that German (and Dutch and Frisian) are SOV-languages, not SVO.

The advantage of making a distinction between Scandinavian and English as **SVO** and Dutch, Frisian and German as **SOV** is that it allows further generalisations to be made. One such generalisation is that Germanic SVO languages always put the finite auxiliary verb, *have*, to the left of the verb phrase in embedded clauses, (23), whereas Germanic SOV languages most often put the finite auxiliary verb to the right of the verb phrase in embedded clauses, (24):

(23)	**SVO**			**aux**	**verb phrase**	
a.	Danish	... fordi	jeg	har	læst	bogen
b.	Icelandic	... af því að	ég	hef	lesið	bókina
c	English	... because	I	have	read	the book

(24)	**SOV**			**verb phrase**		**aux**
a.	Dutch	... omdat	ik	het boek	gelezen	heb
b.	Frisian	... om't	ik	it boekje	lêzen	ha
c.	German	... weil	ich	das Buch	gelesen	habe
		... because	*I*	*the book*	*read*	*have*

This can be formulated as follows:

(25)   **SVO** languages only have **aux-VP**, whereas only **SOV** languages can have **VP-aux**.

From this we can e.g. derive the prediction that if a Germanic language has **VO** order as in English (i.e. *read* before *the book*), it will **not** have **VP-aux** order (i.e. *read the book* before *have*). In other words, we predict that no Germanic language can have the order ... *because I read the book have*.

I thus hope to have shown that it is not just theoretical linguistics that may benefit from comparative assistance, comparative linguistics can also benefit very much from theoretical considerations, to the extent of making clear typological predictions possible, like the link between **SVO** and **aux-VP** discussed immediately above.

5.   Perspectives

- externally financed research projects with local researchers as principal investigators and with post doc.s as research assistants.
> E.g. Henrik Jørgensen's and my project on object positions, *www.hum.au.dk/engelsk/engsv/objectpositions/.*

- international cooperations and networks.
> E.g. the network on syntactic variation in Scandinavian dialects, *ScanDiaSyn*, *(http://uit.no/scandiasyn)*. ScanDiaSyn also forms the basis of the *Nordic Center of Excellence in Microcomparative Syntax*, *http://norms.uit.no/*, which among other things will be financing post.doc. exchanges of 2-3 semesters between the Scandinavian countries.

- cooperation between departments and also between faculties.
> E.g. the research focus area *Cognition, Communication and Culture*, *http://www.pet.au.dk/~andreas/ccc/*. The entire focus area is coordinated by Andreas Roepstorff from the local centre for neuroscience, and it involves all five faculties. I am the coordinator for one of the five thematic groups, the one on linguistics.

- cooperation with neighbouring disciplines.
> An example, which was also one of the first results of the focus area on cognition, was the cooperation concerning Ken Ramshøj Christensen's ph.d. on syntax and neuroscience, which Ken sucessfully defended in September 2005.

- projects involving electronic corpora of linguistically analysed texts.
> E.g. *ACOD - University of Aarhus Corpus of Old Danish*, *www.hum.au.dk/nordisk/norhrafn/acod*, which was set up by Gunnar Hrafn Hrafnbjargarson and Henrik Jørgensen in 2004, along the same lines as the *Pennsylvania Corpus of Middle English*, making more direct comparisons possible between Old Danish and Middle English.

- international conferences and Ph.D. courses.
> E.g. the Ph.D. course on Object Positions and Clause Structure, which will take place at Sandbjerg, June 14-17, 2006, and which sponsored by the project on object positions mentioned above, and by the *Sprogvidenskabelig Forskerskole Nord*.

- cooperation concerning supervision of both Ph.D. dissertations and M.A. dissertations.
> I am involved in Johannes Kizach's Ph.D. project which compares Russian, English and Danish, and I am also involved in various M.A. dissertation projects on English, Danish, German, and French.

- cooperation on teaching comparative courses between the neighbouring disciplines and departments.
> This is not always so easy, however. I have more than once taught a course on the comparative syntax of English and Danish. Although I was hoping to attract students of Danish, this hardly ever happened, as the course regulations for Danish did not allow B.A. students any benefits from taking a course in the English Department. It would seem, however, that such institutional obstacles will soon be a thing of the past. A course in comparative Romance linguistics for students of the different Romance languages is taking place this semester, taught and coordinated by Alexandra Kratschmer, and hopefully it will set an example that others will wish to follow.

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