Review of Content, expression and structure: studies in Danish functional grammar

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## 1. Introduction

In this review I will, rather than discuss the individual contributions to the book under review, address two central issues that recur in several of the papers. In addressing the first issue, i.e. the question whether linguistic phenomena should be approached from a universal or a language-specific perspective, I will look at the book from the perspective of a language typologist. In addressing the second issue, i.e. the differences between Danish and Dutch functional grammar, I will take the perspective of a Dutch functional grammarian.

# 2. Universal versus language-specific

# 2.1. The book

Some citations from the book show that several of the contributors are rather sceptical about the possibility of describing language in terms of universal features and hierarchies:

p. ix (editors): 'The commitment to taking both language-specific content and expression structures seriously entails a certain scepticism towards postulates of universal semantic-pragmatic content and universal grammatical theories. We see it as a major task for linguists to describe with all possible precision the individual content and expression structures of as many genetically unrelated and typologically divergent languages as possible, and only then, based on such analyses, to engage in the setting up and testing of universal categories.'

p. 13 (Canger): 'Discussions of "near universals" are dangerous; we find what we look for, or, in other words, our expectations influence our analysis, we distort data to make them fit the model; and with every exemplification of a "near universal" it is confirmed and fuel is added to the vicious circle.'

p. 201 (Heltoft & Jakobsen): 'It cannot, however, be reduced to any purportedly universal content features, but remains an instance of specifically Danish content structure (or 'content form', the term preferred in our tradition). Our point is precisely that this distinction is highly language-specific and that it could not have been uncovered without careful scrutiny of the Danish language system by means of the 'commutation test' (Hjelmslev 1943; Harder, this volume).'

On the other hand, several authors (e.g. Engberg-Pedersen, 'Iconic motivations in conflict', p. 58-60, and Durst-Andersen & Herslund, 'The syntax of Danish verbs', p. 78-84) are succesfull in

formulating hypotheses and providing first evidence concerning universal properties of language on the basis of their initially language-specific analysis.

#### 2.2. Typology and diachrony

The distance between language-specific and universal analyses of languages is far smaller than the views expressed in the first set of citations seem to suggest. Current research into the relation between variation between languages and the historical development of a single language shows that what may seem highly language-specific features are in fact the outcome of a well-defined diachronic process that runs parallel to typological variation within the same domain.

The general idea behind the hypothesis on the relation between typology and diachrony originally presented in Greenberg (1978) is that an implicational hierarchy in language typology exhaustively defines the configurations that are crosslinguistically permitted within a certain domain of grammar and that, consequently, within the history of a language, no configurations should arise that do not conform to this hierarchy. Since an implicational hierarchy defines contiguous sets of features, the stages through which a language may pass during its history may be expected to follow the direction defined by the hierarchy.

By way of example I will look here at a highly specific feature of the Ibero-Romance languages, the use of two different copular verbs, and show that the distribution of these copular verbs across different contexts can be predicted on the basis of an independently attested typological hierarchy. For a more extensive discussion see Hengeveld (1991).

The basic facts for Spanish are given in (1)-(4). In these and following examples forms of the copula *estar* are indicated by 'E', forms of the copula *ser* by 'S'. Later on I will generalize across Spanish *ser* and *estar* and their cognate forms in other Ibero-Romance languages by writing 'SER' and 'ESTAR' in capitals.

#### Spanish

(1)	El coche	está (E) <u>e</u>	<u>en el</u>	<u>aparcamiento</u>
	the car	is ir	n the	parking_lot
(2)	Pilar está (	′E)/es (S) <u>q</u>	<u>luapa</u>	
	Pilar is	р	oretty	
(3)	Pilar es (S)	) <u>enferm</u>	<u>era</u>	
	Pilar is	nurse		
(4)	El coche	es (S) <u>de P</u>	<u>Pilar</u>	
	the car	is of	Pilar	

In constructions with a locative predicate, as illustrated in (1), the copula *estar* is used. In constructions with a bare nominal predicate (3) and a possessive predicate (4) the copula *ser* is used. In constructions with an adjectival predicate (2) both copulas are possible, but with a meaning difference: the property expressed by the adjectival predicate is presented as a permanent one when *ser* is used, and as a temporary one when *estar* is used.

What the (underlined) non-verbal predicates in (1)-(4) have in common is that they can all be used in the construction of noun phrases, as illustrated in (5)-(8):

(5)	el	coche	<u>en</u>	<u>el</u>	<u>aparcamiento</u>
	the	car	in	the	parking_lot
(6)	una	chica	<u>quapa</u>		
	а	girl	pretty		
(7)	una	<u>enfer</u> i	mera		
	а	nurse	ł		
(8)	el	coche	<u>de</u>	<u>Pilar</u>	
	the	car	of	Pilar	

In (5), (6) and (8) the non-verbal predicate is used attributively, in (7) it is used as the head of a noun phrase. This bare nominal use of a noun should be distinguished from the use of a noun phrase as a non-verbal predicate, as illustrated in (10). In the latter case the constituent acting as a non-verbal predicate cannot be used in the construction of a noun phrase, as illustrated in (11), the reason being that it is itself a noun phrase.

(9)	Pilar	es (S)	enfer	mera
	Pilar	is	nurse	
(10)	Pilar	es (S)	una	enfermera
	Pilar	is	а	nurse
(11)	*una	una	enfer	mera
	а	а	nurse	

The group of non-verbal predicates that may be used in the construction of noun-phrases may be called 'ascriptive predicates' (Hengeveld 1992), since they ascribe a property to the subject term. Non-verbal predicates that are noun-phrases themselves may be called 'equative predicates'.

Not all languages allow the predicative use of the ascriptive units under consideration. An extreme case is Yagaria, in which none of these elements may be used predicatively. Consider the examples (12)-(15):

Yagaria (Indo-Pacific, Renck 1975)

- (12) Ovu-da malo' bei-d-u-e
  Ovu-1SG here sit/live-PAST-1SG-IND
  'I, Ovu, am here'
  "I, Ovu, sit/live here"
- (13) dote'na-vi' hano-d-i-e food-LOC exist-PAST-3SG-IND
   'There is something in the food' "(Something) exists in the food"
- (14) ma-gaveda okavu'-na
   DEM-ribbon blue-NR
   'This ribbon is blue'
   "This ribbon is a blue thing"
- (15) *m-igopa gagae' igopa-vie*DEM-land your land-INT
  'Is this land yours?'
  "Is this land your land?"

(12) and (13) show that locative phrases may not be used as a predicate. They have to be combined with positional verbs, the lexical nature of which is evident from the fact that their selection is sensitive to the nature of the subject term. Thus, the verb *bei* 'sit' is used with animate subjects, the verb *hano* 'exists' is used with inanimate subjects. Adjectives have to be nominalized in Yagaria in order to allow their predicative use, as illustrated in (14). The adjective is thus turned into a noun-phrase and the resulting predicate is an equative, not an ascriptive one. Similarly, possessive phrases have to be made part of a noun phrase in order to allow their occurrence in predicative position, as in (15), in which the head noun of the subject noun phrase is repeated within the (equative) non-verbal predicate. The last two examples show that Yagaria has equative predicates. Bare nouns do not occur in predicative position.

Spanish and Yagaria are representatives of two extremes as regards the predicability of ascriptive units. Other languages occupy intermediate positions. These positions can be defined in terms of the implicational hierarchy in (16):

(16) Predicate Hierarchy LOC < A < N < POSS

This hierarchy says that if a language allows the predicative use of a category in this hierarchy, it will also allow the predicative use of the categories to the left in the hierarchy. And if a languages does not allow the predicative use of one of the categories in this hierarchy, neither will it allow the predicative use of the categories to the right in the hierarchy. Some instantiations of the hierarchy are given in Table 1.

Language	LOC	А	Ν	POSS
Yagaria Tamil	- +	-	-	-
Hungarian	+	+	-	-
Yessan-Mayo	+	+	+	-
Spanish	+	+	+	+

Table 1. Instantiations of the Predicate Hierarchy

It seems that the explanation for the position of the various categories in the hierarchy may be found in the revised version of Givón's (1984) Time Stability Scale presented in Stassen (1992). Consider (17):

(17) Relation between the Predicate Hierarchy and the Time Stability Hierarchy

Revised Time Stability Hierarchy (Stassen 1992) V ADV A N LOC < A < N < POSS Predicate Hierarchy (Hengeveld 1992) The more to the left a category is on the hierarchy, the less time-stable the property it expresses generally is. Within each of the categories various degrees of time-stability may be encountered, and this will turn out to be relevant with respect to the facts presented below, but the general characterization given in Stassen's hierarchy appears to be basically correct.

If we now turn to the extent to which the copula ESTAR is used in various Ibero-Romance languages, the picture presented in Table 2 emerges.

Language	LOC	А	Ν	POSS
Judeo-Spanish	+	-	-	-
Catalan	+	+	-	-
Spanish	+	+	-	-
Galician	+	+	-	-
Portuguese	+	+	+	-
Cabrales	+	+	+	-

Table 2. The use of ESTAR in the Ibero-Romance languages

What this table shows is that the differences between the Ibero-Romance languages can be described using the Predicate Hierarchy given in (16), i.e. the general typological observation applies at the level of the genetic group as well.

The explanation for these facts may be found in the diachronic processes that have led to the different structures of the Ibero-Romance languages (see e.g. Bouzet 1953 and Pountain 1982 on the development in Spanish). These diachronic processes seem to have been guided by the same hierarchy that allows the description of the typological differences between these languages. This diachronic development is projected vertically in Figure 1. Due to differences in the speed with which this development has been implemented in the various languages, the synchronic situation projected horizontally on the last line has arisen.

	Judeo-Spanisł	n Catalan	Spanish	Galician	Portuguese	Cabrales
dia-	LOC	LOC	LOC	LOC	LOC	LOC
chrony	LOC	LOC	LOC	LOC	loc/a	loc/a
	Judeo-Spanisł LOC LOC LOC	LOC	LOC/A	loc/a	loc/a	LOC/A
v	LOC	LOC/A	LOC/A	loc/a	LOC/A/S	LOC/A/S
					~	

synchrony

Figure 1. Synchrony and diachrony of ESTAR

What is particularly relevant in the present context is that within several of the categories that allow the use of ESTAR in the various languages there are contrasting examples in which ESTAR competes with SER. This was already evident in example (2) from Spanish, where the adjectival predicate combines with both copulas, giving rise to a meaning difference. This meaning difference can be interpreted in terms of time-stability: a more time-stable interpretation results when SER is used, a less time-stable interpretation arises when ESTAR is used. Similar meaning oppositions can be found in constructions with bare nominal and locative predicates in Portuguese (Mira Mateus et al. 1983). Consider examples (23)-(26):

(18)	0	Luís	é (S)	prof	fessor	en	n B	Beja		
	the	Luis	is	tead	cher	in	В	Beja		
(19)	0	Luís	está	(E) p	orofess	or	ет	Be	eja	
	the	Luis	is	t	eacher	•	in	Be	eja	
(20)	Α	Biblio	teca_	Nacio	onal é	(S)	no		Сатро	Grande
	the	Natio	nal_Li	brary	y is		in_t	he	Campo	Grande
(21)	Os	docui	mento	s e	estão (E	=) no		со	fre	
	the	docu	ments	a	are	in	the	su	itcase	

In (18) and (19) the same bare nominal predicate *professor* 'teacher' is used with SER (18) and ESTAR, respectively. In (18) the interpretation is that Luís has a permanent, in (19) that he has a temporary position. (20) and (21) both have a locative predicate. In (20) SER is used since the Biblioteca Nacional has a permanent location, whereas in (21) ESTAR is used since the documents have a temporary location.

Thus, the explanatory principle behind the hierarchy describing the distribution of ESTAR in the Ibero-Romance languages at the same time allows one to decribe the ideosyncratic uses of the two copulas in individual languages. In this way, language-specific content structure can be systematically related to universal statements about language.

# 3. Content, Expression, and (underlying) Structure: Danish and Dutch functional grammar

# 3.1. The book

Several contributions to the book under review reveal a crucial difference between Danish and Dutch functional grammar. Whereas in Dutch functional grammar (Dik 1997) the ambition is to create a model in which a semantically and pragmatically based underlying structure is mapped onto surface structure, in Danish functional grammar the separation of semantics/pragmatics and their expression, i.e. of underlying and surface structure is rejected. This point is evidently related to the previous one, in the sense that in Danish functional grammar meaning is seen as organized on a language-specific basis in Danish functional grammar, whereas it is seen as organized on a universal basis in Dutch functional grammar. Here are some citations:

p. viii (editors): 'The view that languages fundamentally consist in the mapping of semantic-pragmatic content onto expression has, however, led us to emphasise the notion *content structure*. The term - borrowed from the Danish version of structuralism associated with the name of Louis Hjelmslev - can be roughly characterized as the way individual languages carve out and organize meaning, meaning being associated with every level of expression structure from the morpheme to the utterance. Content structure is opposed to *content substance*, the non-linguistic ("notional") world as given to us pre-linguistically and in which we act and try to realize our goals and purposes.'

p. 443 (Harder): '[Syntax, too, involves a mapping between content and means of expression.]

The reason for adopting this perspective in syntax can best be seen by contrasting it with the dominant pattern of thinking, where syntax is a structure that 'underlies' the 'surface morphosyntactic form' of a clause. This pattern of thinking, which was introduced by Chomsky, has gained widespread currency in the linguistic community generally. In particular, it has been adopted in Dikian Functional Grammar. ..... The linguist is free to suggest what he wants at the underlying level, provided he can show that it makes the right predictions at the expression end of the procedure.'

p. 446 (Harder): '... we are rejecting the overall directionality that is built into the underlying-to-surface description: content and expression are necessarily present at the same time and should be described together. This does not preclude 'local' directionality for descriptive convenience. .... But all these forms of directionality are compatible with a descriptive procedure that never loses sight of one side while describing the other.'

Some of the contributors to the volume do, however, try to relate their language-specific observations to explicit underlying formal representations:

p. 26-29 (Fortescue, 'Grammaticalized focus in Yukaghir'): 'Fitting Yukaghir into the FG framework'

p. 379-381 (Spang-Hanssen & Rue, 'The functions of locative prepositions'): 'A simple formalization'

# 3.2. Translatability

The distinction between (linguistic) *content structure* and (non-linguistic) *content substance* as cited from the editors introduction above is a very useful one. In cognitive linguistics content substance is generally the point of departure. Linguistic analyses made within this framework are oriented towards explaining linguistic facts rather than describing them. As a result, one hardly finds formalized models of language developed within this research tradition. A drawback of much of the work in cognitive linguistics is that content substance is deducted from linguistic phenomena, and very often not supported by independent psycholinguistic evidence. Dutch functional grammar does not aim at representing content substance in underlying representations, but rather content structure, and it is assumed that there are universal patterns in encoding content structure.

A potential problem for this approach is that in some cases languages have various options as regards content structure for the representation of the same content substance. Two examples may illustrate this.

The first case concerns the domain of tense. Some languages use a separate past tense form to indicate that the event described in a sentence took place the day before the moment of speaking. Dahl (1985) coined the term 'hesternal' for this type of past tense. Example (22) from ChiBemba illustrates the phenomenon. In other languages, such as English, reference to the day before the moment of speaking has to be achieved by lexical means, in combination with a general past tense, as illustrated in (23):

ChiBemba (Givón 1972) (22) ba-àlíí-bomba 3.PL-HESTERNAL.PAST-work 'They worked yesterday'

English

(23) They worked yesterday

The underlying Dutch FG representations of these two sentences would be as in (24) and (25), respectively:

(24) (HestPast  $e_i$ : [( $f_i$ : *bomba*<sub>V</sub> ( $f_i$ )) (mx<sub>i</sub>: [-S,-A] ( $x_i$ ))<sub>AgSubj</sub>] ( $e_i$ ))

(25) (Past e<sub>i</sub>: [( $f_i$ : work<sub>V</sub> ( $f_i$ )) (mx<sub>i</sub>: [-S,-A] ( $x_i$ ))<sub>AgSubj</sub>] (e<sub>i</sub>): yesterday<sub>Adv</sub> (e<sub>i</sub>))

It is evident from these representations that underlying structures in Dutch functional grammar are not based on content substance: in that case the underlying representations of the Chibemba and English examples would probably be identical. Languages use different strategies in order to arrive at representing the same content substance. The underlying structures offer the instruments necessary to describe these strategies systematically and universally, but their point of departure is content structure. Where underlying structures are defined as semantically based in Dutch functional grammar, semantics should be interpreted in this restricted sense.

The Dutch functional grammar approach offers obvious problems for the implementation of the model in a translation environment. The only way out of this problem seems to be to define equivalences<sup>1</sup> between (pairs of) languages of the following form:

(26)	ChiBemba (hesternal past)		English (past + adverb)
	$\pi_2$ = HestPast	<>	$\pi_2$ = Past, $\sigma_2$ = yesterday <sub>Adv</sub>

Equivalences of this type may seem to be highly language-specific, but can be generalized to a higher level. One of the aims of the typological research conducted within the Dutch functional grammar approach should be to uncover to what extent these types of equivalences can be systematically accounted for across languages. In the long run, this should lead to a situation in which a limited number of parameters accounts for the cross-linguistic variation in this and other domains.

A second example of the use of two different strategies to encode content substance concerns the use of attributive versus appositional stategies in the assignment of properties to a referent. Consider the following examples from Warrgamay (27) and English (28):

<sup>1.</sup> Note that this type of equivalence is similar to the one defined between lexical items of (pairs of) languages:

<sup>(1)</sup> ChiBemba English bomba<sub>v</sub> <---> work<sub>v</sub>

Warrgamay (Dixon 1980)

(27)	a	yibi-yibi-Ø nulmburu-ngu wurrbi-du
		child-REDUP-ABS woman-ERG big-ERG
		buudi-Igani-y malan-gu
		take-CONT-UNM river-ALL
		'The big woman/women is/are taking the children to the creek'
	b	nulmburu-ngu buudi-Igani-y malan-gu yibi-yibi-Ø
		woman-ERG take-CONT-UNM river-ALL child-REDUP-ABS
		wurrbi-du
		big-ERG
		'The big woman/women is/are taking the children to the creek'

English

(28) The big woman is taking the children to the creek

In Warrgamay noun phrases contain just a head noun. Further properties assigned to the referent of the head noun are expressed in appositional noun phrases, again just containing a head noun. Note that *wurrbi* 'big' is best analyzed as a noun. Appositional noun phrases referring to the same referent carry the same casemarker, and can in this way be interpreted as belonging together. Thus, in (27) *nulmburu* 'woman' and *wurrbi* 'big' both carry the ergative marker. The appositional nature of the construction is evident from the fact that each of the appositional noun phrases may occur on its own and may occupy a different position in the sentence, as illustrated in (27b). This phenomenon, known as 'scrambling', occurs in many Australian languages.

In English, noun phrases may be highly complex units containing various restrictors. In (28) the property expressed by the adjective *big* is attributed directly to the head noun as a restrictor within the noun phrase.

Apposition (',') and restriction (':') are represented in different ways within the Dutch functional grammar formalism, as reflected in the underlying representations of (27) and (28) in (29) and (30):<sup>2</sup>

- (29) (Pres e<sub>i</sub>: [(Cont f<sub>i</sub>: *buudi*<sub>V</sub> (f<sub>i</sub>)) ((x<sub>i</sub>: *nulmburu*<sub>N</sub> (x<sub>i</sub>)), (x<sub>i</sub>: *wurrbi*<sub>N</sub> (x<sub>i</sub>)))<sub>AgSubj</sub> (mx<sub>j</sub>: *yibi*<sub>N</sub> (x<sub>j</sub>))<sub>Pat</sub> (x<sub>k</sub>: *malan*<sub>N</sub> (x<sub>k</sub>))<sub>Dir</sub>] (e<sub>i</sub>))
- $(30) \qquad (\text{Pres } e_i: [(\text{Cont } f_i: take_V(f_i)) (x_i: woman_N(x_i): big_A(x_i))_{AgSubj} \\ (mx_j: child_N(x_j))_{Pat} (x_k: creek_N(x_k))_{Dir}] (e_i))$

Again, the differences between the representations show that the same content substance may be encoded in different underlying structures, thus accounting for the different strategies that languages use to representing content substance in content structure. The formalism offers the instruments to represent these strategies crosslinguistically, and typological research should reveal to what extent the existence of these crosslinguistic differences can be predicated from other features of the languages involved.

<sup>2.</sup> I ignore here the fact that in Warrgamay the non-reduplicated noun may get a singular and a plural interpretation, another difference between Warrgamay and English that would be reflected in underlying structure.

In a translation environment, equivalences of the following type should account for these differences:

(31)	Warrgamay (apposition)		English (restriction)
	(x <sub>i</sub> : (f <sub>i</sub> ) (x <sub>i</sub> )), (x <sub>i</sub> : (f <sub>j</sub> ) (x <sub>i</sub> ))	<>	$(x_i: (f_i) (x_i): (f_j) (x_i))$

On the basis of the foregoing one may conclude that typological research within the Dutch functional grammar tradition should concentrate on two types of variation across languages:

- variation as regards the ways underlying structures are built up, i.e. semantic structure is organized;

- variation as regards the ways underlying structure is mapped onto surface structure.

It is evident that virtually all typological research conducted within the Dutch functional grammar tradition has concentrated on the second type of variation. The Danish approach clearly brings the relevance of the first type of variation to the foreground.

### 4. Conclusion

The two main points that I have tried to make in this review are:

- The Danish functional grammar approach, or at least many of its proponents, in my view clearly underestimate the extent to which language-specific features of languages can be related to universal properties of Language.

- The Danish functional grammar approach rightly stresses the relevance of studying the different ways in which languages organize content structure. Typological research within the Dutch functional grammar paradigm should address this type of variation between languages explicitly.

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