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Traces of discourse configurationality in older Indo-European languages?

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In old Indo-European languages such as Old Indian, Ancient Greek and Hittite, sentences are documented that indicate the discourse-configurational word order topic – focus – verb. There are, however, many deviations. To show to what extent the above mentioned languages are on the continuum between information structure and syntax, the kind of topic and focus, verb placement and the nature of subject, as well as the relation between topic and subject, are here scrutinized.

Keywords: subject; topic; focus; discourse-configurationality; complex left periphery; Centering Theory

o. Preliminaries

It is a matter of debate whether Indo-European is a representative of the subject-object-verb type (SOV) or whether it exposes traces of discourse configurationality. The following paper will show that the investigation of information structure (IS) is helpful to answer this question, and that the kind of topic and focus, as well as verb placement and the nature of the subject, are decisive factors. The relation between topic and subject will be particularly scrutinized. Another question is whether there is a change in positioning information-structural entities from Indo-European to the oldest Indo-European languages. For this, Old Indian, Greek and Hittite will be analyzed.

1. Discourse configurationality

Although it is widely assumed that Indo-European had a basic SOV word order, the question arises as to whether traces of discourse configurationality¹ are also present. According to Kiss (1995: 6), a language is discourse configurational if:

1. SVO prevails in Greek especially and this word order may also be found in Vedic. Cf. Keydana (2008) on the presumption of discourse configurationality here.

- (1) (a) The (discourse-)semantic function ‘topic’, serving to foreground a specific referent about which a predication will be made (not necessarily identical with the grammatical subject), is expressed through a particular structural relation (in other words, it is associated with a particular structural position).
- (1) (b) The (discourse-)semantic function ‘focus’, expressing identification, is encoded through a particular structural relation (that is, by movement into a particular structural position).

In order to identify to what extent discourse configurationality dominates word order in Indo-European languages, two parameters are especially relevant: the kind of topic and the kind of focus, associated with fixed positions of these pragmatic categories. Verb placement is especially important for their localization. Since the subject in Indo-European is a designated topic candidate, the correlation between topic and subject has to be addressed, too.

First of all, the method that is used to analyze information structure in older Indo-European languages will be presented. Subsequently, different kinds of topic and focus, as well as verb placement and subject, will be outlined. The data come from Old Indian, Ancient Greek and Hittite. Finally, we will try to answer the question as to where exactly traces of discourse configurationality may be found in these languages and whether a language change can be detected in this regard.

2. Method

Investigating information structure in older Indo-European languages presents various difficulties. Pragmatic categories in corpus languages cannot be exclusively determined by the question tests that are used in languages such as modern German, English or Hungarian to discover information-structural categories. Nevertheless, we chose German as contrasting language – as we do in our DFG-supported projects “Information Structure in Older Indo-European Languages” and “Information Structure in Complex Sentences – Synchronic and Diachronic” – because we not only have a relatively extensive knowledge of the information structure of this language but also of many methods of analysis. However, the unmarked basic structure cannot be determined “anhand des Fokuspotentials bei Normalbetonung” (Haider 1993: 216), because the central empirical problem of a study of information structure in written corpora is that normally there are no unambiguous phonological, morphological or syntactical information-structural markers. That is, the prosody of a sentence is only, if at all, indirectly accessible. Since the question test – with the exception of real questions within a text – has its boundaries, hypotheses about the information-structural status of linguistic units must be supported by semantic designations and functional tests, especially those

operating on the textual environment. Generally, we assume a topic-comment and a focus-background structure. Contrary to the unitary semantic interpretation of the focus, we assume two kinds of focus, a *new information focus* and a *contrastive focus* (cf. Rooth 1992; Krifka 1993), because these differ in intonation in German and were probably distinct in corpus languages as well (Kiss 1998; Steube 2001; Lühr 2006, 2008; 2008a). The topic is identified according to the theoretical framework of Speyer's (2007) *Centering Theory*. On the one hand, this theory is consistent with generative sentence analysis within the scope of the *Government-and-Binding-Theory*, supplemented by functional projections; on the other, it can be applied to the information structure of sentences. The *Centering Theory* deals with *givenness* and *saliency* and, as an epiphenomenon of them, with the *aboutness*-quality of topics. Thus, a connection with both the topic-term of the topic-comment-structure and above all with the subject is possible. Subsequently, contextual references with the relations *continue*, *retain*, *smooth shift*, and *rough shift* can be identified. A *shifting topic* also belongs to the *aboutness*-concept. In the text, it changes the perspective towards a new referent (cf. Reinhart 1982; Steube, Alter & Späth 2004: 25); as a *new-aboutness* topic, it contrasts with the *non-new-aboutness* topic (Frascarelli & Hinterhölzl 2007). Although every sentence commonly adds information to the previous one, this theory allows to distinguish different types of backgrounded and foregrounded information. Apparently, information structure is not a separate grammatical layer; it is rather a result on the syntactic surface of an interaction of various grammatical factors. The different dimensions of information structure are annotated separately though. By now we have developed a basic concept of analysing elements, which allows language data to be evaluated and merged into a coherent parameter for comparison. All languages are tagged uniformly. Cf. Table 1:

Table 1. Annotated IS parameters

	Tier label	Content
1	[text]	Word token
2	[lem]	Lemma
3	[glos]	Glossing
4	[pos]	Part of speech
5	[saliency]	Animacy: human, animate, concrete, abstract etc.
6	[givenness]	Accessibility: given, new, world-knowledge etc.
7	[definiteness]	Definiteness, indefiniteness
8	[context]	Identity, anaphora, deictic reference etc.
9	[frame]	Scheme according to Frame Setting ²

(Continued)

2. Cf. Krifka 2007.

Table 1. Annotated IS parameters (Continued)

	Tier label	Content
10	[WPosition]	Position for Wackernagel particles, deficient pronouns, auxiliaries
11	[I-particle]	Particle which is relevant for information structure, foregrounding particles, backgrounding particles etc.
12	[shift]	Continue, retain, smooth shift, rough shift
13	[TOP]	Kind of topic: continuing, shifting, contrastive
14	[position-T]	Topic position
15	[F-domain]	Focus domain
16	[NFocus]	New-information focus
17	[CFocus]	Contrastive focus
18	[position-F]	Focus position
19	[discourse]	Narration, explanation, elaboration, direct speech etc.
20	[style]	Stylistic devices, e.g. hyperbaton, tmesis
21	[orig]	Original sentence
22	[transl]	German translation
23	[MC/SCclause-st]	Main clause status, subordinated elements
23	[MC/SCgrfunct]	Subject, object, attribute, predicate, adverbials
25	[MC/SCsyl_no]	Syllable number of phrases
26	[MC/SCword-order]	Verb first, verb second, verb end, enclitics etc.

For an analysis of discourse configurability, parameter 12 (shift, regarding the mentioned relations of *continue*, *retain*, *smooth shift* and *rough shift* of the topic according to the Centering Theory) is especially relevant, together with parameters 13 (topic) and 14 (topic position). Regarding the focus, we analyse parameter 15 (focus domain), 16 (new-information focus), 17 (contrastive focus) and 18 (focus position). For the subject, we tag the grammatical function of each phrase in 23 (MC/SCgrfunct).³ Furthermore, the placement of the verb is tagged, that is SOV, SVO, OVS or VSO. Do all those variants exist? We will illustrate that for an adequate interpretation of the data, further parameters of Table 1 will have to be taken into account.

3. MC: main-clause level; SC: sub-clause level/sub-clause-like structure. We use this term because not only true subordinated sentences are analyzed.

3. Examples for a discourse-configurational word order

If the older Indo-European languages were discourse configurational, one could expect two preverbal positions for the topic and for the focus with a verb final placement. A language with these positions is Hungarian (cf. Kiss 1995, 1997; 2001), as can be seen in (2):

- (2) (a) János [ÉVÁT]_{Foc} hívta meg.
 János Éva invited preverb
 'János [invited [Éva]_{Foc}]_{Foc}' (cf. Matić 2003: 123)

A similar example from Old Indian is the following:⁴

- (2) (b) Chandogya Upanishad 1.10.02
 sa hebhyam kulmāṣān khādantaṃ bibhikṣe
 'He begged from the rich one, who was eating cereals.'

The *aboutness topic sa* appears sentence-initial as a *continuing* topic. It is followed by a particle relevant for information structure, the foregrounding particle *ha*.⁵ At last there is the focus domain, which contains the finite verb in the final position; cf. (2)(c):

- (2) (c) Chandogya Upanishad 1.10.02

[text]	sa	ha	ibhyam	kulmāṣān	khādantaṃ	bibhikṣe
[lem]	tad	ha	ibhya-	kulmāṣa-	khād	bhikṣ
[glos]	this: NOM. M.SG	#	rich(M): ACC.SG	cereal(M): ACC.PL	eating: ACC.M.SG	beg:PF. IND.MED3SG
[pos]	prdem	part	noun	noun	prt.prs.act	vfin
[saliency]	pr3.dem/ human		human	concrete		
[givenness]	giv		giv	new		
[definiteness]	def		def	indef		
[context]	ana.ref		identity.ana			
[WPosition]		part.XP				
[I-particle]		foreground.p				
[shift]	continue					
[TOP]	Con-T					
[position-T]	initial/ pre-part					
[F-domain]			fd			

4. For editions and commentaries selected, cf. Lühr's DFG-project Information structure in Old IE languages.

5. This particle is also used in the case of a changing theme (Susanne Schnaus, p.c.).

[NFocus]			nf			nf
[position-F]			post-2P/pre-sub/focus-split			final/post-sub/focus-split
[discourse]	narrator/narrative					
[orig]	sa hebhyam kulmāṣān khādantaṃ bibhikṣe					
[transl]	He begged from the rich one, who was eating cereals. Dt. Er bettelte den Reichen, der Körnerfrüchte aß, an.					
[MCclause-st]	main:decl					
[MCgrfunct]	subj	#	acc-o	pred/acc-o		prsimpl
[MCsyl_no]	1	1	2	6		3
[MCword_order]	#	enclitic	#	#	#	Vend/ post-sub
[SC1text]				kulmāṣān	khādantaṃ	
[SC1clause-st]				sub:prt.conj		
[SC1grfunct]				acc-o	v.nominal	
[SC1syl_no]				3		
[SC1word_order]				#	Vend	
[SC1transl]				Eating cereals		

Dik (1995) tried to prove a discourse-configurational word order for Ancient Greek as well. She assumes the following positions for this language (whereas sentence elements without discourse-pragmatic value would follow unsorted in the postverbal position):

- (3) Dik's discourse-configurational word order for Ancient Greek:
 P1 - P0 - V - X
 Topic Focus Verb pragmatically unmarked
- (4) Xen. An. 1.5.3 [In Arabia many wild animals exist: donkeys, ostriches, antelopes, deer. Donkeys were hard to catch, sometimes it succeeded.]
- | | | | | |
|------------------|------|-----------------|--|-------------------------|
| TOP | | FOC | | V |
| (P1 | | P0 | | v) |
| OBJ-ACC | PART | SUBJ | | V |
| strouthòn | dé | oudeis | | élaben |
| ostrich-ACC.SG.M | PART | nobody-NOM.SG.M | | caught-3.SG.IND.AOR.ACT |
- 'Nobody caught an ostrich' (literally: 'An ostrich caught nobody')

Matić (2003, 2003a: 573, 578ff.) objected against this description of Ancient Greek word order. Accordingly, more than two elements can be situated before the verb, which results in a complex left periphery. Additionally, it is possible to place a verb, if pragmatically marked, both in the focus and in the topic position.

Let us now reassess these theses on the basis of our data. The data stems from the two mentioned projects and is searchable via the ANNIS database (Potsdam).

4. Topic

4.1 Old Indian

Let us start with topic. As in Table 1, a distinction is made between a *continuing*, *shifting* and *contrastive* topic also in Table 2 below. If the topic is a pronominal subject, it can be covertly enclosed in the verb. Only main clauses are taken into consideration.

Table 2. Topic position in Old Indian

Language	Vedic		Sanskrit		OI total	
Topics total	1040		288		1328	
Topics in 1. position of MC	309	30%	69	24%	378	28%
thereof continuing topic	123		28		151	
thereof shifting topic	155		32		187	
thereof contrastive topic	31		9		40	
Topics in non-1. position of MC	332	32%	136	47%	468	35%
Topics in 2. position of MC	160		52		212	
thereof continuing topic	86		24		110	
thereof shifting topic	64		27		91	
thereof contrastive topic	10		1		11	
Topics post-2P	57		17		74	
thereof continuing topic	20		2		22	
thereof shifting topic	32		11		43	
thereof contrastive topic	5		4		9	
Topics middle	80		48		128	
thereof continuing topic	39		19		58	
thereof shifting topic	28		26		54	
thereof contrastive topic	13		3		16	
Topics final	35		19		54	
Topics covert	399		83		482	

As can be seen, there is no fixed position for the topic. In Vedic, as well as in Sanskrit, the high percentage of topics in non-initial position is striking: 378

sentence-initial topics against 468 non-sentence-initial topics. The number of non-initial topics further increases in Sanskrit: 47% against 32% in Vedic. Let us take a look at a sentence with this kind of topic:

- (5) (a) BrUpIII.1.20
 gokāmāḥ eva vayam smaḥ
 ‘We desire cattle.’ (literally: ‘Desirous for cattle we are.’)

- (5) (b)

[text]	gokāmāḥ	eva	vayam	smaḥ	iti
[lem]	go- + kāma-	eva	vayam	as	iti
[glos]	desiderous.of.cattle: NOM.M.PL		we: NOM	be: PRS.IND.ACT1PL	#
[pos]	comp/adj	part	prpers	vfin	QUOT
[saliency]			pr1		
[givenness]			access-sit		
[definiteness]			def		
[context]			personal.deict		
[WPosition]		part.xp			
[I-particle]		foc.p			
[shift]			continue		
[TOP]			Con-T		
[position-T]			post-2P/preverbal		
[F-domain]	fd				
[NFocus]	nf				
[position-F]	initial/pre-part				
[discourse]	direct speech/continue speaker1/explanation				
[orig]	gokāmā eva vayan̄sma iti				
[transl]	We desire cattle. Dt. Rinderbegierig eben sind wir.				
[MCclause-st]	main:decl				
[MCgrfunct]	pred	#	subj	v.copul	#
[MCsyl_no]	3	2	2	1	2
[MCword_order]	#	#	#	Vend	#

The topic *vayam* ‘we’ (according to the context a continuing one, thus a *non-new-aboutness* topic) appears behind the *new-information* focus *gokāmāḥ* ‘desirous

for cattle,' which is emphasized by the focus particle *eva*. This word order may have syntactic reasons, because the predicate noun often appears before the subject in Old Indian.⁶

Another example with a topic in post-position is:

- (6) (a) Pancatantra 15.10a
 naṣtam mṛtam atikrāntam nānuśocanti paṇḍitāḥ
 'Wise men do not lament vanished, dead, decayed things.'
 (more literally: 'Vanished, dead, decayed things do wise men not lament.')

Here the focus domain consists of the verbal phrase *naṣtam mṛtam atikrāntam nānuśocanti*. However, with *naṣtam mṛtam atikrāntam* 'vanished, dead, decayed things' we have a stylistic device, an accumulation in form of an asyndetic tricolon. The focus is determined as *contrastive-additive*. As a *contrastive* focus, it takes the initial position of the sentence. The topic *paṇḍitāḥ* 'wise men', a *shifting* and thus *new-aboutness* topic, follows in postverbal position. The parameters *givenness* and *definiteness* are tagged with *general accessible* and *indefinite*. As with the focus, we have a specific kind of topic. Both information-structural entities have a special position, that is, at the beginning and at the end of the sentence. They are therefore reversed to the discourse-configurational order of topic – focus – verb presented in (3).

- (6) (b)

[text]	naṣtam	mṛtam	atikrāntam	na	anu	śocanti	paṇḍitāḥ
[lem]	naś	mṛ	ati + kram	na	anu	śuc	paṇḍita-
[glos]	vanished: ACC.N.SG	dead: ACC.N.SG	decayed: ACC.N.SG	not	#	lament: PRS.IND. ACT3PL	wise(M): NOM.PL
[pos]	vadj	vadj	vadj	part	pfx	vfin	noun
[saliency]	abstract	abstract	abstract				human
[givenness]	set-relation	set-relation	set-relation				access-gen
[definiteness]	indef	indef	indef				indef
[frame]		#	#			scheme: pain	
[shift]		#	#				
[TOP]		#	#				S-T

6. Delbrück 1888. But cf. our statistics: Predicate noun in front of the subject: Sanskrit: 54, Vedic: 87. Subject in front of the predicate noun: Sanskrit: 80, Vedic: 173.

[position-T]	#	#				final/ postverbal
[F-domain]	fd					
[NFocus]	#	#		nf		
[CFocus]	contr-additive					
[position-F]	initial					
[discourse]	direct speech/quotation					
[style]	accumulatio/tricolon/asyndeton					
[orig]	naṣṭaṃ mṛtaṃ atikrāntaṃ nānuśocanti paṇḍitāḥ					
[transl]	Wise men do not lament vanished, dead, decayed things. Dt. Verschwundenes, Totes, Vergangenes betrauern die Weisen nicht.					
[MCclause-st]	main:decl					
[MCgrfunct]	acc-o	acc-o	acc-o	neg	prsimpl	subj
[MCsyl_no]	2	2	4	1	5	3
[MCword_order]	#	#	#	#	Vmiddle/ penultimate	right periphery

Both examples show that focus and topic have to be analyzed properly, before making generalizations about their position. In (5) word order can be syntactically determined: the predicate noun is before the verb, followed by the topic, a continuing one. In (6) a *shifting* and thus *new-aboutness* topic is at the end of the sentence, and an accumulation as a *contrastive* focus is sentence-initial before the finite verb.

4.2 Ancient Greek

Let us turn towards Ancient Greek. For statistical purposes, let us consider Table 3:

Table 3. Topic position in Ancient Greek

Author ⁷	Homer	Thucydides	Isocrates	Plutarch	Longus	Gr total
Topics total	129	124	58	66	22	399
Topics in 1. position of MC	38 29%	26 21%	12 21%	19 29%	5 20%	100 25%
thereof continuing topic	7	2	3	2	0	14

7. In the two IS-projects, passages from the following texts were annotated: Homer (ca. 800 BC) – Iliad, Odyssey; Thucydides (ca. 410 BC) – *History of the Peloponnesian War*; Isocrates (ca. 300 BC) – *Speeches (Euagoras)*; Plutarch (ca. AD 100) – *Parallel Lives (Titus Flaminus)*; Longos (ca. AD 150) – *Daphnis and Chloe*.

Table 3. (Continued)

Author	Homer	Thucydides	Isocrates	Plutarch	Longus	Gr total
thereof shifting topic	23	18	4	8	1	54
thereof contrastive topic	8	6	5	9	4	32
Topics in non-1. position of MC	56 43%	60 48%	36 62%	28 42%	17 77%	197 49%
Topics in 2. position of MC	23	11	7	2	3	46
thereof continuing topic	5	1	1	0	0	7
thereof shifting topic	13	4	5	1	0	23
thereof contrastive topic	5	6	1	1	3	16
Topics post-2P	20	10	15	11	3	59
thereof continuing topic	5	2	0	2	0	9
thereof shifting topic	13	4	5	6	3	31
thereof contrastive topic	2	4	10	3	0	19
Topics middle	12	35	14	13	3	77
thereof continuing topic	3	12	3	2	0	20
thereof shifting topic	6	13	5	5	2	31
thereof contrastive topic	3	10	6	6	1	26
Topics final	1	4	0	2	8	15
Topics covert	35	38	10	19	0	102

In the Greek language, the high percentage of non-initial topics is also noticeable. The sources, dating from Homer to the late antiquity, seem to point towards an increase of such non-initial topics. A sentence from Plutarch's *Titus Flamininus* serves as an example with final topic. The preceding text is:

- (7) (a) Titus Flamininus 5
 After this Titus had a meeting with Philip, who seemed disposed to make terms, and proffered him peace and friendship on the condition that he allowed the Greeks to be independent and withdraw his garrisons from their cities; but Philip would not accept this proposal. Then at last it became quite clear even to the partisans of Philip that the Romans had come to wage war, not upon the Greeks, but upon the Macedonians on behalf of the Greeks.
- (7) (b) Titus Flamininus 6
tà mèn ou̐n álla prosekhórei kath' hēsukhían autô̐i ...
 'The other parts [of Greece] came over to the side of Titus peacefully ...'

The pronoun *autô̐i* 'him' refers to the previously mentioned Titus. It is a *continuing* topic in a *retain* relation, situated at the end of the clause, and is within the

focus-background-classification assigned to the background, cf. (7)(c). The focus domain consists of *tà mèn oūn álla prosekhórei kath' hēsukhían* 'the other parts (of Greece) came over to (his) side peacefully'. In this, *tà álla* 'the others' has the tag *set-relation* under the parameter *givenness*. This means that the whole phrase *the others* refers to an aforementioned evoked alternative quantity 'the first', while with *the others* a part of the set is meant (Speyer 2007; Umbach 2001:177; 2003). Strictly speaking, this is a matter of a partly ordered set-relation, a special case of contrast, also signaled by the particle *mén*. Hence, *tà álla* 'the others' is a contrastive topic. In the German language we would speak of an intonational topic (I-topic),⁸ which usually appears in the sentence-initial position as in the Greek example. Since both the discussed part and the statement about it are stressed (cf. Buring 1999), they can be combined with the *aboutness*-concept (Frey 2007).

(7) (c)

[text]	tà	mèn	oūn	állá	prosekhórei	katà	hēsuchían	autōi
[lem]	ho	mén	oūn	állos	prós+chōréō	katá	hēsuchía	autós
[glos]	the:		thus	other:	came.over:	to.the.	peace(F):	he: DAT.
	NOM.N.PL			NOM.N.PL	IPF.IND.	side	ACC.SG	M.SG
					ACT3SG			
[pos]	art.def	part	part	adj	vfin	prep	noun	prpers
[saliency]				human/ collective			abstract	pr3.pers/ human
[givenness]				set-relation			bridging	giv
[definiteness]				spec.indef			indef	def
[context]		contrast						ana.ref
[frame]				scheme: the Greeks			scheme: war	
[WPosition]		part.x	part.x					
[shift]								retain
[TOP]	contrastive _i			contrastive _i				Con-T
[position-T]								final
[F-domain]	fd							
[NFocus]	nf							
[position-F]	initial							
[discourse]	narrative							

8. Cf. the following German example ($\sqrt{\quad}$ marks fall-rise): $\sqrt{\text{Peter forderte eine Dame zum \textbackslash TANzen auf (aber \sqrt{OT}to blieb einfach \textbackslash SITzen)}}$ 'P. asked a lady to dance (but O. remained simply seated)'. In a construction with I-topicalization, a contrastive reading is induced for both stressed constituents (Frey 2004; Jacobs 2001).

[orig]	τὰ μὲν οὖν ἄλλα προσεχώρει καθ' ἡσυχίαν αὐτῷ, ...						
[transl]	The other parts (of Greece) came over to the side of Titus peacefully Dt. Die anderen Gebiete schlossen sich ihm nun friedlich an						
[MCclause-st]	main:decl						
[MCgrfunct]	det/subj	#	#	subj	prsimpl	adv:mod	dat-o
[MCSyl_no]	li	1	1	2i	4	5	2
[MCword_order]	li	#	#	2i	Vmiddle	#	#

This example illustrates once again the importance of an accurate distinction of topic types for an analysis of information structure. The continuing topic usually appears at the end of the sentence, the contrastive topic at the beginning. It belongs to the focus domain but contains an *aboutness*-characteristic.⁹

4.3 Hittite

For statistical purposes, let us consider Table 4:

Table 4. Topic position in Hittite

Texts	Muwatalli	Ritual	Telipinus	Hitt total
Topics total	87	132	49	268
Topics in 1. position of MC	6 7%	13 10%	4 8%	23 9%
thereof continuing topic	2	5	0	7
thereof shifting topic	1	6	4	11
thereof contrastive topic	3	2	0	5
Topics in non-1. position of MC	60 69%	56 42%	25 51%	141 53%
Topics in 2. position of MC	36	41	18	95
thereof continuing topic	20	14	10	44
thereof shifting topic	16	27	8	51
thereof contrastive topic	0	0	0	0
Topics post-2P	13	6	3	22
thereof continuing topic	2	1	1	4

(Continued)

9. Cf. Portner & Yabushita (1998:151) and Krifka (2007:44) on their approach, a *contrastive* topic is an *aboutness* topic that contains a focus which 'is doing what focus always does, namely indicating an alternative'. In this case, it indicates alternative *aboutness* topics. However, *aboutness* topics and *contrastive* topics have completely different properties and can co-occur (cf. Bianchi & Frascarelli 2010).

Table 4. Topic position in Hittite (Continued)

Texts	Muwatalli	Ritual	Telipinus	Hitt total
thereof shifting topic	11	5	2	18
Topics middle	11	7	4	22
thereof continuing topic	6	1	2	9
thereof shifting topic	3	5	2	10
thereof contrastive topic	2	1	0	3
Topics final	0	2	0	2
Topics covert	21	63	20	104

What holds true for Old Indian and Ancient Greek applies even more to Hittite. Topic is at a sentence-initial position in a small amount of cases only: we have 23 (9%) compared to 141 (53%) non-sentence-initial topics. An interesting account of a contrastive topic, similar to the last Greek example, is to be found in the Anitta text. The sentence contains a negation:

- (8) (a) CTH 1: Proclamation d'Anitta, roi de Kussara
 Ū DUMU^{MES} URU^{URU}Ne-e-š[a-aš] [i-d]a-a-lu na-at-ta ku-e-da-ni-ik-ki ták-ki-iš-ta
 'of the inhabitants of Neša he inflicted harm to nobody'

Here, the German translation sounds as if it contains an intonational topic, too: 'von den Einwohnern Nešas aber fügte er keinem Böses zu', cf. (8)(b):

- (8) (b)

	Ū	DUMU ^{MES}	URU ^{URU} Ne-e-š[a-aš]	[i-d]a-a-lu	na-at-ta	ku-e-da-ni-ik-ki ¹⁰	ták-ki-iš-ta
transl	and	inhabitant: PL	of.Neša: GEN	bad: ACC.SG.N	not	anybody: DAT.SG.C	inflict: he 3SG. PRET
saliency		human/relat	proper/place	abstract		pr3.indef/human	
givenness		bridging	giv	new		new	giv
definiteness		indef	def	indef		indef	def
context	connect						ana.ref
I-particle shift					neg		
TOP		contrastive					continue C-T

10. Single stressed words can attract negation (Friedrich 1960: 146).

position-T			cov
F-domain	[]	#
Nfocus			
Cfocus	-		contrastive ¹¹
position F			post-neg/ preverbal
word order	incomplete DP- fronting		Vend

The contrastive topic is placed at the beginning of the sentence right after the conjunction. As in the Greek example, it has an *aboutness*-quality, while the continuing topic 'he' is enclosed in the verb.

Thus, we may argue that the information-structural entity connected to the *aboutness*-concept of the topic does not have a fixed position in older Indo-European languages. We have presented, however, two examples with a contrastive topic at the beginning of a sentence. These topics are compatible with the *aboutness*-concept. Still, these occurrences do not suffice to postulate a discourse-configurational position of the topic in the oldest Indo-European languages. Though it is a common phenomenon that *contrastive* topics appear sentence-initial (Umbach 2004), it is not the rule.

So what is placed at the beginning of a sentence, if it is not the topic? It is often a subordinate clause as in (9):

- (9) (a) Muwatalli006_x
 nu GIM-an ki-i S[IXSÁ?-z]i nu-kán LUGAL-uš šu-uh_h-hi ša-ra-a pa-iz-zi
 'While he [a man] prepares those things, the king goes to the top of the roof.'

- (9) (b)

[text]	nu	GIM- an	ki-i	S[IXSÁ ?-z]i	#	nu-	-kán	LUGAL- uš	šu-uh _h - hi	ša-ra-a	pa-iz- zi
[lem]	nu	GIM- an	ka-	SIXSÁ	#	nu	-kan	LUGAL	šuh _h -	šara	pai-
[glos]	and	while	this: ACC. N.PL	prepare: PRS.IND. ACT3SG	he	and	#	king(C): NOM.SG	roof(N): LOC.SG	on	go: PRS. IND. ACT3SG
[pos]	conj	conj	prdem	vfin	pro	conj	part	noun	noun	postp	vfin
[saliency]			concrete		human			human	concrete		

11. Jacobs (1991:576) sees such a focus as a negation focus, since the sentence may be continued with 'but'.

[givenness]		giv		giv		access-	giv
						gen	
[definiteness]		def		def		def	def
[context]	junc-	ana.ref		ana.ref	junc-		
	tive				tive		
[WPosition]						part.	
						final	
[shift]		rough					
		shift					
[TOP]		S-T					
[position-T]		post-2P					
[F-domain]						fd	
[NFocus]						nf	
[position-F]						preverbal	
[discourse]	direct speech/description						
[orig]	nu GIM-an ki-i S[IXSÁ?-z]i nu-kán LUGAL-uš šu-uḫ-ḫi ša-ra-a pa-iz-zi						
[transl]	When he prepares those things, the king goes to the top of the roof. Dt. Wenn er dies vorbereitet, geht der König aufs Dach.						
[MCcl.-st]	main:decl						
[MCgrfunct]	adv:temp			#	#	subj	dir-o
							prsimpl
[MCword_	#			#	en-	#	#
order]					clitic		Vend
[SC1cl.-st]	sub:temp						
[SC1grfunct]	#	#	acc-o	prsimpl	subj		
[SC1w_ord]	#	#	#	Vend	cov		
[SC1transl]	When he prepares those things Dt. Wenn er dies vorbereitet						

5. Position of the verb

Before looking into the position of the focus, the position of the verb needs to be examined:

Table 5. Verb position in Old Indian main clauses

Language	Vedic	Sanskrit	OI total
Verbs total	1022	292	1314
V1	88	15	103
V2	50	12	62
Vend	662	239	901
Vmiddle total	222	26	248

As can be seen, the verb final position prevails in Old Indian.

Table 6. Verb position in Ancient Greek main clauses

Author	Homer	Thucydides	Isocrates	Plutarch	Longus	Gr total
Verbs total	196	163	87	110	22	578
V1	22	18	9	13	5	67
V2	30	13	2	12	7	64
Vend	41 21%	59 36%	32	19	5	156 27%
Vmiddle total	103 53%	73 45%	44	66 60%	5	291 50%

Only 27% of the cases from Ancient Greek show verb final placement, while 50% have verb middle placement. The verb middle position increases over time; Plutarch has the highest rate with 60% of the cases.

Table 7. Verb position in Hittite main clauses

Text	Muwatalli	Ritual	Telepinus	Hitt total
Verbs total	117	168	54	339
V1	1	3	0	4
V2	2	2	0	4
Vend	104	162	54	320
Vmiddle total	10	1	0	11

In Hittite a verb final placement is clearly the norm.

6. Focus

Let us now discuss the focus. Our data show that a final focus position dominates in all three languages, cf. Tables 8–10.

Table 8. Focus position in Hittite

Text	Muwatalli	Ritual	Telepinus	Hitt total
initial new information F	2	1	4	7
initial contrastive F	3	6	1	10
final new information F	36	70	42	148
final contrastive F	16	12	0	28

Table 9. Focus position in Old Indian

Language	Vedic	Sanskrit	OI total
initial new information F	239	84	323
initial contrastive F	142	37	179
final new information F	659	207	866
final contrastive F	33	6	39

Table 10. Focus position in Ancient Greek

Author	Homer	Thucydides	Isocrates	Plutarch	Longus	Gr total
initial new information F	12	18	3	8	4	45
initial contrastive F	18	9	2	12	8	49
final new information F	23	56	18	30	3	130
final contrastive F	33	27	32	23	12	127

The focus domain can consist of a *narrow* focus or of *wide* focus. The *narrow* focus is usually a *contrastive* focus. As we have seen above, it is to be assumed that in the old Indo-European languages, as in modern languages, *contrastive* focus and *neutral* focus had different kinds of intonation (cf. Lühr 2008b). In contrast, the *wide* focus normally comprises the whole verbal phrase and correlates with the neutral, unmarked focus. Generally, this is the *new-information* focus. Abraham (1992) and Haider (1993), following Cinque (1993), categorize *structural* focus as the deepest embedded lexical constituent. In a verbal phrase containing an accusative object, the accusative object hence represents the *structural* focus.

While in Old Indian and in Hittite the preverbal position is standard for the *structural* focus, even in all-focused clauses, the *structural* focus appears in Greek both preverbal and postverbal. See for Old Indian:

- (10) (a) Cyavana66
té vāṃ yajñād antáryanti
‘They exclude you from the sacrifice.’

- (10) (b)

[text]	té	vāṃ	yajñād	antáryanti
[lem]	tád	yuvám	yajñá-	antár + i
[glos]	he: NOM.M.PL	you.both: ACC.DU	sacrifice(M): ABL.SG	exclude: PRS.IND. ACT3PL
[pos]	prdem	prpers	noun	vfin
[saliency]	pr3.dem/human	pr2	inanimate	

[givenness]	giv	access-sit	giv	
[definiteness]	def	def	def	
[context]	ana.ref	personal.deict	identity.ana	
[shift]		retain		
[TOP]		Con-T		
[position-T]		2P		
[F-domain]			fd	
[NFocus]			nf	
[position-F]			preverbal	
[discourse]	narrative			
[orig]	té vāṃ yajñád antáryanti			
[transl]	They exclude you from the sacrifice. Dt. Sie schließen euch beide von dem Opfer aus.			
[MCclause-st]	main:decl			
[MCgrfunct]	subj	acc-o	abl-o	prsimpl
[MCsyl_no]	1	1	2	4
[MCword_order]	#	enclitic	#	Vend

An example from Hittite for an all-focused clause is (11). The *structural focus* appears here in the immediately preverbal position.

- (11) (a) Muwatalli097
 MUŠEN-iš^{GIŠ}tap-tap-pa-an EGIR-pa e-ep-zi
 ‘The bird retires into his nest.’

- (11) (b)

[text]	MUŠEN-iš	GIŠtap-tap-pa-an	EGIR-pa	e-ep-zi
[lem]	MUŠEN	taptappa-	EGIR-pa	ep(p)-
[glos]	bird(C): NOM.SG	nest(C): ACC.SG	back	take: PRS.IND.ACT3SG
[pos]	noun	noun	px	vfn
[saliency]	animate	concrete		
[givenness]	new	bridging		
[definiteness]	indef	indef		
[frame]		scheme: bird		
[F-domain]	fd			
[NFocus]	nf			
[position-F]	all-focused clause			
[discourse]	direct speech/quotation			

[orig]	MUŠEN-iš ^{GIŠ} tap-tap-pa-an EGIR-pa e-ep-zi		
[transl]	The bird retires into his nest. Dt. Der Vogel zieht sich ins Nest zurück.		
[MCclause-st]	main:decl		
[MCgrfunct]	subj	dir-o	prsimpl
[MCword_order]	#	#	Vend

A preverbal *structural* focus also exists in Greek:

- (12) (a) Plutarch012
 taūta mèn oūn epì tòn práxeōn autoū dēloūtai.
 ‘This will certainly become clear during his deeds.’

- (12) (b)

[text]	taūta	mèn	oūn	epì	tòn	práxeōn	autoū	dēloūtai
[lem]	hoūtos	mén	oūn	epí	ho	práksis	autós	dēlóō
[glos]	this: NOM.N.PL		thus	during	the: GEN.F.PL	deed(F): GEN.PL	he: GEN. M.SG	become. clear: PRS. IND.MED3SG
[pos]	prdem	part	adv	prep	art.def	noun	prpers	vfin
[saliency]	pr3.dem/ abstract					abstract	pr3.pers/ human	
[givenness]	giv					anchoring	giv	
[definiteness]	def					spec.indef	def	
[context]	ana.ref						ana.ref	
[WPosition]		part. XP						
[shift]	smooth shift							
[TOP]	S-T							
[position-T]	initial							
[F-domain]					fd			
[NFocus]					nf			
[position-F]					preverbal			
[discourse]	commentary							
[style]								
[orig]	ταῦτα μὲν οὖν ἐπὶ τῶν πράξεων αὐτοῦ δηλοῦται.							
[transl]	This will be certainly become clear during his deeds. Dt. Dies wird allerdings im Verlaufe seiner Taten ersichtlich werden.							
[MCclause-st]	main:decl							

[MCgrfunct]	subj	#	#	prep-o			attr/ prep-o	prsimpl
[MCsyl_no]	2	1	1	8				3
[MCword_order]	#	#	#	#	#	#	#	Vend

More commonly, however, the *structural* focus is placed in postverbal position in Ancient Greek:

- (13) (a) Homer Odyssey 004
autàr ho toîsin apheîleto nóstimon êmar
‘But he took back the day of return from them.’

- (13) (b)

[text]	autàr	ho	toîsin	apheîleto	nóstimon	êmar
[lem]	autár	ho	hó	apó+hairéō	nóstimos	êmar
[glos]	but	the: NOM. M.SG	this: DAT.M.PL	take.back: AOR.IND. MED3SG	decided.for. return: ACC.N.SG	day(N): ACC.SG
[pos]	conj	prdem	prdem	comp/vfin	adj	noun
[saliency]		pr3.dem/ human	pr3.dem/ human			abstract
[givenness]		giv	giv			anchoring
[definiteness]		def	def			spec.indef
[context]	contrast	ana.ref	ana.ref			
[WPosition]		pr.x				
[shift]		retain				
[TOP]		C-T				
[position-T]		2P				
[F-domain]				fd		
[NFocus]				nf		
[position-F]				postverbal		
[discourse]	narrative					
[orig]	αὐτὰρ ὁ τοῖσιν ἀφείλετο νόστιμον ἡμᾶρ. /					
[transl]	But he took back the day of return from them. Dt. Dieser hingegen nahm jenen den Tag der Rückkehr.					
[MCclause-st]	main:decl					
[MCgrfunct]	adv:contr	subj	dat-o	prsimpl	acc-o	
[MCsyl_no]	2	1	2	4	5	
[MCword_order]	#	proclitic	#	Vmiddle/ penultimate	#	#

Sentences with OVS structure appear in Vedic. According to Viti (2009, 2010) and Lühr (2010), this word order follows the animacy hierarchy:

Animacy hierarchy

First/second person pronouns > third person pronouns > proper nouns > common nouns of human beings > common nouns of animate, non-human beings > common nouns of inanimate beings > mass nouns

- (14) RV 1,164,5
 dīvaṃ jinvanty agnāyaḥ
 sky: ACC.SG.M revive: 3PL.IND.PRES.ACT fire: NOM.PL.M
 ‘The fires revive the sky.’ (literally: ‘The sky revive the fires.’)

This word order is relatively frequent in Vedic, with 222 examples, in contrast to 662 passages with verb final position (cf. Table 5). In Sanskrit, on the contrary, the OSV-order is very rare.

The verb initial position, which also appears in Greek, is documented only sporadically in Vedic, and even fewer examples of it exist in Sanskrit. Cf. (15), a Vedic example, with the verb *mināti* in the first position.

- (15) (a) ‘Many years have I struggled from morning to night, while the mornings bring [me] closer to the old age.’
 (15) (b) RV 1,179,1 Lopamudra02
 mināti śríyaṃ jarimá tanúnām
 ‘Old age decreases the beauty of the bodies.’

Here we have a hyperbaton: ‘beauty of the bodies’ is separated, while the whole focus domain consists of the verbal phrase ‘decreases the beauty of the bodies’.

- (15) (c)

[text]	mināti	śríyam	jarimá	tanúnām
[lem]	mī	śrī-	jarimán-	tanú-
[glos]	decrease: PRS.IND. ACT3SG	beauty(F): ACC.SG	old.age(M): NOM.SG	body(F): GEN.PL
[pos]	vfin	noun	noun	noun
[saliency]		abstract	abstract	concrete
[givenness]		new	bridging	new
[definiteness]		indef	indef	indef
[context]			ana.ref	
[frame]			scheme: time	
[shift]			smooth shift	

[TOP]			S-T	
[position-T]			middle/XP-middle	
[F-domain]	fd			
[NFocus]	nf			
[CFocus]				contrastive
[position-F]	final			
[discourse]	direct speech/elaboration			
[style]		hyperbaton		hyperbaton
[orig]	mināti śríyaṃ jarimá tanúnām			
[transl]	Old age decrease the beauty of the bodies. Das Alter mindert die Schönheit der Körper.			
[MCclause-st]	main:decl			
[MCgrfunct]	prsimpl	acc-o	subj	attr/acc-o
[MCsyl_no]	3	2 _{-i}	3	3 _{-i}
[MCword_order]	V1	#	#	#

Hyperbata occurred in old Indo-European languages both at the end and at the beginning of a sentence. They are special means of the contrastive focus (cf. Lühr 2008b).

If verb positions diverging from the norm are not taken into consideration, the *structural-focus* position of the *new-information* focus is preverbal in Old Indian and Hittite, while in Greek it is not only preverbal, but more commonly postverbal. There are no fixed positions, however, for the *contrastive* focus. Hittite and Greek prefer the final order, Old Indian the initial position; cf. Tables 8–10 above.

7. Subject and topic

Finally, when examining the connection between subject and topic and looking for an overlapping function, Sornicola's *accessibility hierarchy* for topicalization (1996:334) may be applied:

- (16) Accessibility hierarchy
Subject > Indirect Object > Locative complement > Manner complement

The subject is the 'prime candidate' for the topic function. Furthermore, Li & Thompson (1976) distinguish the subject-NP from the topic-NP by the following characteristics:

- (17)
- (i) *Determination*: The subject is not determined by localizability and identifiability vs. the topic, while the referent of the topic is always locatable or identifiable.¹²
 - (ii) *Relation of Selection*: Unlike the topic, a subject is an argument of a verb and is selected by it.
 - (iii) *Case and Valiency*: The subject is selected by verbal valency, and it shows a correlation with the semantic role agent. The speaker has considerably more freedom in the choice of the discourse topic.
 - (iv) *Function*: The subject can bear a mere grammatical function (e.g. as a dummy subject) and is only definable at the sentence level, whereas the topic has a close relation to the 'theme' of the discourse.
 - (v) *Agreement*: The agreement between subject and verbal predicate is virtually constitutive for subject prominent languages. Agreement between topic and verbal predicate is not obligatory.
 - (vi) *Position*: A sentence-initial position is not obligatory for the subject, while this holds true for the topic.

At this point, let us take a look at the statistics:

Table 11. Subjects in Old Indian

Language	Vedic	Sanskrit	OI total
Subjects in MC total	1028	304	1332
thereof covert subjects in MC total	451	93	544
Subject in 1. position of MC	279	75	354
Subject in 2. position of MC	114	60	174
Subject final in MC	51	28	79
Subject second-to-final in MC	133	48	181
<u>Subjects as Topics in MC</u>			
Topics as Subject in MC	318	98	416
thereof continuing topic	97	29	126
thereof shifting topic	188	59	247
thereof contrastive topic	33	10	43
covert Topic-Subjects in MC	347	73	420
thereof continuing topic	178	34	212
thereof shifting topic	165	39	204
thereof contrastive topic	4	0	4

12. However, in our corpus a topic is not as easily recoverable as a subject.

Table 12. Subjects in Ancient Greek

Author	Homer	Thucydides	Isocrates	Plutarch	Longus	Gr total
Subjects in MC total	117	80	44	52	24	317
thereof covert subjects in MC total	63	42	29	25	0	159
Subject in 1. position of MC	27	26	9	17	11	90
Subject in 2. position of MC	17	5	3	6	1	32
Subject final in MC	3	0	1	1	7	12
Subject second-to-final in MC	7	7	2	3	5	24
<u>Subjects as Topics in MC</u>						
Topics as Subject in MC	37	29	12	24	7	109
thereof continuing topic	7	4	0	2	0	13
thereof shifting topic	21	15	2	7	3	48
thereof contrastive topic	9	10	10	15	4	48
covert Topic-Subjects in MC	29	17	9	15	0	70
thereof continuing topic	21	14	4	11	0	50
thereof shifting topic	8	3	5	4	0	20
thereof contrastive topic	0	0	0	0	0	0

Table 13. Subjects in Hittite

Text	Muwatalli	Ritual	Telepinus	Hitt total
Subjects in MC total	100	170	46	316
thereof covert subjects in MC total	89	150	27	266
Subject in 1. position of MC	4	7	6	17
Subject in 2. position of MC	4	7	8	19
Subject final in MC	0	2	0	2
Subject second-to-final in MC	3	4	5	12
<u>Subjects as Topics in MC</u>				
Topics as Subject in MC	11	10	9	30
thereof continuing topic	4	3	5	12
thereof shifting topic	6	6	4	16
thereof contrastive topic	1	1	0	2
covert Topic-Subjects in MC	21	56	18	95
thereof continuing topic	13	44	15	72
thereof shifting topic	7	12	3	22
thereof contrastive topic	1	0	0	1

Our data clearly show that in Old Indian and in Ancient Greek a subject phrase is mostly found in the initial position of the main clause. In Hittite, the distribution of subjects in first and second position is almost even. When functioning as a topic, the subject is usually a *shifting* topic in Old Indian and in Hittite, while in Greek it is either a *shifting* or a *contrastive* topic. However, a topic-subject, which is covert as a result of pro-drop, is in all three languages mainly a *continuing* topic. The zero-subject stands here for topic-anaphoricity and is iconic, because the reduction from a pronominal form to zero is of economic nature: it takes less effort of articulation to express frequent and familiar referents (Haiman 1985: 150, 167, 194, 232; Bresnan 1998). Since it is morphologically determined, one can speak of a ‘grammaticalized topic’ in Li & Thompson’s terms (1976).

8. Conclusion

Information structure and syntax stand at two poles of a scale that determines word order (cf. Fanselow 2006, 2008). As all languages are somewhere on the continuum between these factors, word order is thus never free, but is always to some extent determined by syntax and/or discourse (Stucky 1985: 192; Wal 2009: 139). Therefore, it is important to scrutinize, sentence by sentence, which of the two structures prevails at times and why it does so. Although there are sentences in the old Indo-European languages examined that indicate a discourse-configurational word order topic – focus – verb, there are many deviations. As in the case of a preceding predicate noun in Old Indian, the sequence topic – focus can be inverted. Similarly, a *shifting* topic may appear at the end of a clause if the first position is taken by a *contrastive* focus. *Contrastive* topics – which have *aboutness*-character but belong to the focus domain – can also be found sentence-initial, as shown in examples from Ancient Greek and Hittite. A subordinated clause often occupies the first position too. The question of the position of the *new-information* focus was investigated in combination with verb placement. In Old Indian a verb-final placement prevails, and in Hittite this position is almost exclusive. Accordingly, the domain of *new-information* focus is positioned preverbal in those languages. But there is also a OVS word order in Vedic, which can be explained with the *animacy hierarchy*. Verb-first placement also exists, though in Ancient Greek a verb-middle position is more common. *New-information* focus appears postverbal in those cases. It is usually a wide focus with *structural* focus as the deepest embedded lexical element. Finally, the comparison of subject and topic showed that a subject expression in Old Indian and Hittite is mostly a *shifting* topic, while in Ancient Greek it is either a *shifting* or *contrastive* topic. However, the covert topic-subject in all three languages is to be assigned to the *continuing* topic and thus a

‘grammaticalized topic.’ There is interdependency between morphology and information structure here.

Discourse configurationality is a result of fixed positions for topic and focus. Starting with topic, a sentence may have no overt topic position if, as mentioned, a subject pronoun is inherent in the verb and is used to express a *continuing* topic. However, since these topics function not only as *aboutness* topics on the topic-comment-level, but also as background-material of the focus-background-structure,¹³ they allow shifts to *new-aboutness* topics or *discourse* topics. These topics can be placed in information-structural accented positions by the speaker, either at the end of a sentence or as *contrastive* topics at the beginning. Especially in the case of a *new-aboutness* topic, the speaker had free choice to localize this entity. Though apparently pragmatic factors dominate the positioning of such topics, they do not display a structural position for the topic and hence discourse configurationality.

As for the focus, the position of the *new-information* focus depends on the placement of the verb. Therefore, in this case, a discourse-configurational position of the focus can be assumed. In Hittite and in Old Indian the position of the structural focus is very often preverbal, while in Ancient Greek it is increasingly postverbal. Thus, topic and focus, more precisely *new-information* focus, behave differently with respect to discourse configurationality.

Corpus linguistics helps us recognize whether there are tendencies in language change. An analysis of the investigated material from the old Indo-European languages reveals that the positioning of information-structural entities is inherited from Indo-European. All conditions mentioned above must have existed in the linguistic ancestors of Hittite, Old Indian and Ancient Greek. The scenario given above, however, is no longer valid in Greek documentary sources, where the postverbal *new-information* focus position is an innovation triggered by the movement of the verb into the middle position.

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13. According to Lambrecht (1994:136) there is a correlation between subject and topic regardless of the language: a subject is interpreted as topic and a predicate as comment, ‘unless the sentence contains morphosyntactic, prosodic, or semantic clues to the contrary’.

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