Comparative and Contrastive Studies of Information Structure

edited by

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Contents

Preface

The present book contains a selection of articles based on papers presented at the conference on "Contrastive Information Structure Analysis" organised by Carsten Breul at the University of Wuppertal in March 2008. Two of the articles do not originate in conference papers. The one by Luis López has been kindly contributed upon invitation. The one by Carsten Breul reflects ideas that motivated the organisation of the conference and relates them to some of the results obtained in other contributions to this book.

We are grateful to colleagues and friends, without whom the conference and this book would not have come into existence. As far as the book is concerned, our thanks go to the contributors, our assistant editor Alex Thiel, our student assistants Benjamin Köhnen and Ina Schlafke, and to the reviewers of the individual articles: Each of the reviewers has accomplished their difficult and incongruously time-consuming task in a very thorough and circumspect manner. Their comments and suggestions have led to significant improvements – and to none of the shortcomings of the present book. We have been very pleased to benefit from the expertise of these colleagues.

Wuppertal, February 2010,   Carsten Breul and Edward Göbbel

Formal and functional constraints
on constituent order and their universality

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This paper addresses the competition between syntactic relations and the
structural encoding of discourse semantic functions, and, more specifically,
the question of how much the distributional restriction of syntactic linearisation
can be constrained by the inventory of functional features of Generative Syntax.
The variation between typologically distinct languages is explained by the
potential of a generative syntactic system to fix constituent order by means
of functional phrases, something not implemented to the same degree in all
languages. Moreover, the various information structural properties a sentence
topic can have imply that notions like topic and comment are not primitives as
such, but that it is more primitive features of perspectivation which determine
the choice of constituents to act as sentence topics.

1. Introduction

The competition between *syntactic relations* and the structural encoding of *discourse
semantic functions*, which, according to a commonly held view, yields two different
syntactic systems of natural language, has often been discussed in the literature:
Languages have been said to be either *subject-prominent* or *topic-prominent*, or,
following a more concise division, some languages are *discourse configurational*,
whereas for other languages, the *canonical order*[1] is primarily constrained by
syntactic relations and/or argument structure.

　　The more recent the research on this topic (cf. Kiss 2001), the more common
the opinion that there is no real sharp division between these two classes. Almost
every language can be said to have either property to at least some degree. The
only statement that remains unarguably true is that languages may differ in their
options for marking discourse functions structurally, as they may differ in their
formal restrictions on linearising the sentence constituents. Whether there is a

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1.　By *canonical* we understand the *normal case*, which is the most unmarked one according
to structural regularities.

correlation between these two domains of syntactic organisation is not yet clear. Thus, our challenge is to identify two different classes of universal principles of ordering and their parameterisation and to elaborate on the features relevant for ordering. Therefore, we discuss data from and different accounts of languages where the order of constituents seems to be fixed through various criteria (English, Hungarian, Italian) and compare them to languages where the order is freer (German, Japanese, Korean).

The paper is structured as follows: after introducing our basic assumptions in Sect. 2, we discuss earlier approaches to discourse configurationality and constituent order (Sect. 3.1), the identification of subject and topic positions (3.2), and the classification of languages according to parameters in systems with (3.3) and without (3.4) functional phrases (henceforth FPs). In Sect. 4, we develop a model of interacting constraints on constituent order. We take a closer look at the notion of topicality and discuss further options of information structuring and the evidence this gives for and against FPs. Finally, we propose a model of features constraining the linearisation in different kinds of syntactic systems.

2.   Basic assumptions

As our framework we have chosen a moderate version of Generative Syntax, seeking to avoid mere technical discussions by not presupposing too many architectural peculiarities such as antisymmetry in the Kaynean (1994) sense, derivations vs. representations in syntax (cf. Lasnik 2001), purely formal triggers for movement (Chomsky 1995) or probing and edge features (Chomsky 2000, 2008; for approaches to information structure within the phase model see Drubig 2007; McNay 2009). What we adopt from Generative theory are two main assumptions: autonomy of the interacting modules *syntax*, *semantics* and *pragmatics*, and three universal bases of structural order which they provide.

The first such base is the conceptual hierarchy of *argument structure*, which is part of the *lexical conceptual structure* (LCS) of predicates in Generative terms (cf. Jackendoff 1990). Expressed in a simplified way, it provides the basic linearisation of arguments according to a conceptual hierarchy of thematic roles like AGENT and PATIENT in (1a), which is mostly taken to be universal. This will be returned to in more detail below.[2]

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[2]   Of course we do not claim that this is the only semantic aspect of linearisation, it is just the most basic one. Scope relations in quantification, the definiteness or specificity of referents, and other similar properties are all semantic factors applying in addition to (though not necessarily after) the conceptual order. More on this follows in Section 4.

Secondly, there are formal constraints on encoding *syntactic relations*. By *syntactic relation* we understand the purely formal relationships between elements such as sentence predicates and their subjects and objects. In most Generative accounts, this relationship is associated with *abstract case*, morphological case marking being a secondary option. Taking the *nominative-accusative-system* as one representative of a relational system,[3] the so-called *grammatical subject* is associated with the nominative. Moreover, it is in an *agreement relation* with the predicate of its clause. That languages like English display *canonical orders* like SVO or have a *canonical subject position* is a basic empirical observation. The reason why a syntactic relation should be relevant for ordering is not obvious. Correlating the order to phrase structural positions like SPEC/IP on the grounds of coinciding formal properties like case or agreement is an abstraction from this coincidence, but not an explanation. Thus, for the moment, we just state that syntactic relations can constrain constituent order in addition to the thematic hierarchy (see 1b).

(1)   a.   [$_{IP}$ The police (AGENT; NOM PL) have (3PL) [$_{VP}$ put a linguist (PATIENT; ACC SG) into jail].

   b.   [$_{IP}$ No linguist (PATIENT; NOM SG) has (3SG) [$_{VP}$ been put into jail [$_{PP}$ by the police (AGENT)]].

Thirdly, there appears to be a cognitive need for fitting *information* into the hearer's *knowledge store*. There are *pragmatic rules* concerning the systematic selection and structuring of information and its integration in a (linguistic) context, determined by the need to make the hearer comprehend the message communicated. Thus the constituents may be ordered by being packed in a *syntactic information structure*. Vallduví (1992: 15; 53ff.) defines *information packaging* in terms of instructions to the hearer:

(2)   *Information Packaging*   (Vallduví 1992: 15)

   A small set of instructions with which the hearer is instructed by the speaker to retrieve the information carried by the sentence and enter it into his/her knowledge store.

An appropriate *syntactic information structure* may be created by dividing the sentence into entities such as an '(*aboutness*)-topic' (a *link* in the terms of

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[3]   We ignore here other relational systems, such as the *ergative-absolutive* one, which we regard as variants of the universal formal condition of linking conceptually hierarchical semantic roles to arguments ordered according to a language specific case system.

Vallduví 1992: 43ff.) and a *comment*-like part.[4] We also adopt the well-founded view that constituents in their basic order and with normal accentuation are unmarked with respect to information structure, which means that they potentially represent *maximal focus* (i.e. *sentence focus* in the terms of Lambrecht 1994: 223).[5] Discourse semantic features such as *familiarity*, *salience*, *point of view* etc. apply in addition to the basic syntactic rules and may change both the order and the accentuation of *defocused* elements (cf. Cinque 1993; Höhle 1982; Abraham 2007 and Molnárfi 2007 for German). We suggest subsuming them under the term *perspectivation*, which we borrow from functionalist work such as Graumann & Kallmeyer (2002; see Sect. 4.2). How they apply will be as much a point of our discussion as the question of how many of them are *necessary* or *sufficient features* of topicality.

We want to emphasise that we consider syntactic relations primarily a *formal aspect* of sentence structure, as we do argument structure and other semantic factors of linearisation. The discourse configuration is primarily a *functional aspect* of structure building. Taking the proper distinction of form and function seriously, we strongly reject any account attempting to explain the notion of *grammatical subject* functionally, as *proto-topic* (Lambrecht 1994: 131) or *mediator of topicality* (Sasse 1995: 1065):

> Subjects are essentially topics that have become integrated into the case frame of a verb. (Sasse 1995: 1067)

> In a relational system (…), the primary grammatical relation (PGR) indicating the topic has obvious implications of semantic roles and can therefore be used to denote them.[6] (Sasse 1982: 276)

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4. Vallduví (1992: 53ff.) argues that the term 'comment' can be abandoned, if the packages of information are divided into focus and (back)ground. We agree that the term as used in the literature is imprecise and misleading if it i[-s not made clear whether defocused elements belong to the comment or not. In Vallduví's (1992: 53ff.) system, they form the *ground* together with the *link*, i.e. an aboutness topic. We will continue to use the term *comment* in a rather more traditional and theory-neutral sense, as something that is said about one (or more) topic(s), ignoring the differentiation of focused and defocused constituents it may contain.

5. Lambrecht (1994) distinguishes the *sentence focus* of thetic sentences from the *predicate focus* of categorical sentences and from *argument focus*, i.e. focus on just one constituent.

6. *Original:* "In einem relational gerichteten System, gleichgültig ob es ergativisch oder akkusativisch funktioniert, enthält die TOPIC-anzeigende primäre grammatische Relation (PGR) eindeutige Implikationen semantischer Rollen und kann daher als Mittel zu ihrer Bezeichnung eingesetzt werden."

We provide some evidence showing that neither topicality nor a semantic role can define a 'grammatical subject'. Data from languages like English or German clearly show that the presence of a subject is independent from any discourse function.

(3) a. [IP *The police* (NOM PL) are (3PL) [VP coming]].   (thetic sentence)
     b. *Die Polizei* (NOM SG) kommt (3SG).

(4) a. [IP There has (3SG) [VP happened *an accident* (NOM SG)]].
                                                    (presentational sentence)
     b. Es geschah (3SG) *ein Unfall* (NOM SG).[7]

Both thetic (Jacobs 2001: 674; Frey 2004a: 11) and presentational sentences (Kuno 1972: 299; Frey 2004a: 11) belong to the so-called 'anti-topic constructions' (Jacobs 2001: 674). This does not at all touch the subject condition, however. Moreover, subjects can even be fully unsuitable as topics, as shown by the following examples from German, where the prepositional object in (5a) and the temporal adverbial in (5b), respectively, are the sentence topics.

(5) a. Damit   hatte   *niemand* gerechnet.   (negative quantifier)
         that-with had   nobody   calculatetd
         'Nobody expected that.'
     b. Damals   wurde   *ein Knabe* geboren.
         then   was   a   boy   born
                           (unspecific indefinite subject; Kiss 1996: 120ff.)

Both temporal and locative adverbials are generally quite suitable as topics:

(6) a. *In Wuppertal* leben etwa 360.000 Menschen.
         in W.   live   about 360,000 people
     b. *Im   Jahr 2007* lebten *in Wuppertal* etwa   360.000 Menschen.
         in-the year 2007 lived   in W.   about 360,000 people

The sentence initial referents in (6) are as topical as they are in (7).

(7) a. *Wuppertal* hat etwa 360.000 Einwohner.
         W.   has about 360,000 inhabitants
     b. *Das Jahr 2007* hatte 365 Tage.
         the year 2007 had   365 days

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7. Here and below we use italics to highlight constituents referred to in the text, in this case the subjects. In order to indicate pitch accented syllables, we follow the convention of using small capitals. Occasionally, in later examples, rising and falling tones are indicated by '/' and '\', respectively.

The functional overlap of *subject* and *topic* is empirically much smaller than is often assumed. In our view, there is no direct relation between topicality and any one syntactic function. Therefore, subjects cannot be something like a 'grammaticalised topic'. Moreover, they cannot be identified with a salient semantic role (like AGENT) either. It is well known that subjects can even be *patients* or carry no semantic role at all:

(8) a. Offensichtlich ist einem Linguisten   *ein*
         obviously   is a-DAT linguist-DAT a-NOM
         Fehler   unterlaufen.   (patient-subject of an ergative verb)
         mistake-NOM   happen-PAST-PTCP

         'Obviously, a mistake was made by a linguist.'

     b. Der   Mannschaft wurde *ein Preis* verliehen.
         the-DAT   team-DAT   was   a   prize awarded
                                         (patient-subject of a passivised verb)

     c. Vorhin   klopfte   *es*   an der Tür.   (formal subject)
         a-while-ago knocked   it-NOM on the door

The so called *grammatical subject* is very clearly defined through a number of formal properties (i.e. case and agreement) that cannot be explained by pragmatic or semantic features. It may be true that in NOM-ACC languages like German or English the occurrence of an AGENT has very high frequency. The simple reason is that the majority of verbs are either transitive or unergative. That this role is regularly assigned to the subject follows from the Θ-hierarchy. It may also be true that topical subjects occur more frequently than non-topical ones (Sasse 1995: 1065). The simple reason could be that the topic-comment relation is the *unmarked pragmatic sentence articulation* (Lambrecht 1994: 131) and therefore the most frequent one. If the unmarked constituent order in such a language is the subject-initial one and the unmarked pragmatic articulation is the topic-comment structure, everything else but high frequency of topical subjects would be statistically improbable and unexpected. Thus, there is no reason to induce a formal correlation – in fact this would be an inverted conclusion.

Thus, the constraints on linearisation given by the autonomous modules *semantics*, *syntax* and *pragmatics* are essentially independent from one another. If all these constraints yielded absolute restrictions, linearisation conflicts would be unavoidable in the syntax of every language. Since they are not, the constraints must be weighted, which is cross-linguistically observable and obviously variable. Some restrictions may be universally absolute, but many of them are significantly weaker, and structural systems differ in the strength of the

different classes of restrictions on the order of elements. The relevant questions to discuss are:

1. Is there a universal gradation between formal or functional constraints, or do they only depend on the options chosen by a grammatical system?
2. Can languages be divided according to prototypes in a classification along the axes of *discourse configurationality* vs. (sit mihi venia verbi) *relation configurationality*?
3. Another point, though very closely related, is this. It has often been proposed by Generative grammarians (e.g. Cinque 1998; Roberts & Roussou 2003; several articles in Rizzi 2004) that cross-linguistic variation can be explained by a universal hierarchy of FPs in which only the distribution of elements (like subject vs. topic) parametrically varies. Can this in fact be explanatorily adequate?

We will defend the view that the problem can be solved by a small number of assumptions: firstly, there is no universal hierarchy of FPs. Instead, languages differ parametrically by the number of phrases hosting specific kinds (or classes) of constituents. The fewer FPs there are in the syntax of a language, the more options it has for the linearisation of constituents. Secondly, instead of a universal hierarchy of phrases, there is a global hierarchy of structural, conceptual and discourse-functional features determining the parameterisation of FPs on the one hand, and the linearisation of constituents in the so-called 'free word order languages' that are characterised by only few FPs, on the other hand. The hierarchy of these features is not absolute but relative and rankable, the options depending on the class a specific feature belongs to. The reason why word order is more or less fixed in different kinds of languages is that different kinds of FPs are fixed by language acquisition, blocking the structural variation in performance.

3. Earlier approaches to discourse configurationality and word order

3.1 Subject-prominence vs. topic-prominence

In the functionalist typological work on comparative syntax of the early 1970s, it was quite common to divide languages into the types 'topic-prominent' and 'subject-prominent' (Li & Thompson 1976: 459). It had been noted that, in many languages, sentences were constructed in relation to topical elements, rather than in relation to a subject. These were called the *topic-prominent languages*.

Some characteristics of topic-prominence that are relevant for our discussion are listed below (taken from Li & Thompson 1976: 466f; Gundel 1988: 222).

(9) a. Topic-prominent languages have (mostly sentence initial) *canonical topic positions*.
     b. Topic-prominent languages may have *morphological topic marking*.
     c. Topic-prominent languages predominantly have *SOV order*.
     d. In topic-prominent languages, there are so called 'double subject constructions', where an aboutness topic not selected by the predicate occurs in addition to a subject argument.
     e. If a constituent can be identified as subject (e.g. by morphology), this never correlates with a specific position.

All of these properties except (e), which can be attributed to properties such as the high productivity of scrambling in SOV languages (cf. Sect. 4.2 below), can be exemplified by the sentences in (10).

(10) a. sakana *wa* tai *ga* oisii
          fish   TOP Tai NOM delicious
          'Speaking of fish, Tai is delicious.'   (Japanese; Li & Thompson 1976: 468)
      b. pihengki *nun* 747 *ka* khu-ta.
          airplane TOP 747 NOM big-stative
          'Speaking of airplanes, the 747 is big.'   (Korean; ibid.)

Subject-prominent languages, on the other hand, are said to have the following characteristics (among others; abstracted from Li & Thompson 1976: 466f):

(11) a. Subject-prominent languages have a *canonical* subject position.
      b. Subject-prominent languages have a regular active/passive diathesis.
      c. Subject-prominent languages have *formal subjects* without any semantic role.

Whereas English was regarded as a typical subject-prominent language displaying all of the relevant properties, not all languages could be clearly classified. Besides the prototypical languages, there were mixed languages and languages that seemingly had neither property of Li & Thompson's (1976: 460; 483) classification. Japanese and Korean were taken as mixed languages because they have subject and topic morphology. On the other hand, Tagalog, which seems to have neither a canonical topic nor a canonical subject position (Schachter 1976: 494f), was taken as neither subject- nor topic-prominent, even though it has topic morphology.

(12) a. *subject-prominent*: Indo-European, Semitic, …
      b. *topic-prominent*: Mandarin, Burmese, …
      c. *subject- and topic-prominent*: Japanese, Korean, …
      d. *neither subject- nor topic-prominent*: Tagalog, …

More recent Generative accounts (e.g. Kiss 1995, 2001) broaden this spectrum to a more general division into discourse configurationality and the prominence of grammatical relations, both of them assumed to be bound to specific positions.

We call a language discourse configurational if it links either or both of the discourse-semantic functions topic and focus to particular structural positions. (…) Most of the (… [discourse configurational]) languages are both topic- and focus-prominent.   (Kiss 2001: 1442)

This means that the syntactic configuration is criterial for typological classification rather than morphological marking. Languages like Japanese, which have a canonical position for topics but not for subjects, are then to be regarded as typical discourse configurational languages.[8]

Kiss (1994, 2002) compares mainly English and Hungarian as prototypes of their classes. She makes generalisations about the treatment of subjects and topics on the basis of data as follows (Kiss 1995: 7f):

(13) a. Fido is [$_{VP}$ chewing a bone].   (categorical sentence)
      b. A dog [$_{VP}$ came into the room].   (thetic sentence)

The English examples in (13) display the canonical order subject-predicate-(object) independently of whether they are *categorical* or *thetic* judgements, i.e. whether the subject is simultaneously the topic of the sentence or not (cf. Sasse 1987). In the parallel Hungarian examples, however, only the subject of categorical sentences is fronted. If the subject is not the topic, it follows the verb:

(14) a. Fido [$_{VP}$ rág egy csontot]   (categorical sentence)
          F.   chews a   bone
      b. [$_{VP}$ Van egy kutya a szobában]   (thetic sentence)
              came a dog the room-into

Kiss (1995: 7f) assumes that the two languages basically differ by one property: the constraint forcing a constituent to leave the VP. In English, the grammatical subject is always fronted. In Hungarian, it has to be topical. Moreover, the following data show that non-subjects are also fronted if they are topics:

(15) a. *Egy kutya [$_{VP}$ van a szobában]
      b. A szobában [$_{VP}$ van egy kutya]
          the room-into   came a dog

According to Kiss, this suggests that English and Hungarian differ by the inventory of *canonical positions* in at least one respect: Whereas English has one for the subject, Hungarian has one for the topic. Since, unfortunately, Example (15b) from

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8. Note that Kiss (1995: 6) calls Japanese one of the best known examples of discourse configurational languages.

Kiss (1995) resembles cases of locative inversion in English where the corresponding order is also grammatical, some brief discussion is needed.

(16)   [[_{PP} into the room] [_{VP} came a dog]]

Firstly, true locative inversion is restricted to locative arguments (mostly directionals; Bresnan 1994: 80). Locative inversion with adjuncts is suspected of being *heavy-NP-shift* of the subject to the right (Culicover & Levine 2001: 291f). Secondly, Bresnan (1994: 103f) and Culicover & Levine (2001: 284) show that, in the argument cases, locatives have a number of subject properties they do not have if they are in situ. Therefore, true locative inversion can be treated as inversion of the argument structure (Bresnan 1994: 92). Whereas Culicover & Levine (2001: 284) try to show that the locative is, in fact, in SPEC/IP, Bresnan discusses reasons to assume that it is adjoined to IP, the SPEC position staying empty for unknown reasons.[9]

If the inversion was triggered by information structure, it should also be a puzzle why it is restricted to locatives:

(17)   a.   He [_{VP} mistrusts the police].
        b.   *The police [_{VP} mistrusts he].

(18)   a.   The students [_{VP} know syntax well].
        b.   *Syntax [_{VP} know the students well].

Locative inversion thus cannot be a process driven by discourse semantics. Generally, the structural encoding of discourse functions is rather marked in English:

(19)   a.   ?The police, he mistrusts.
        b.   ?Syntax, the students know well.

Thus, there is no canonical topic position in English but there is a canonical subject position. In Hungarian, however, background subjects always stay in situ, whereas topical elements are fronted independently of their grammatical function:

(20)   A   szintaxist   jól   [_{VP} tudják   a   diákok]
        the   syntax-ACC   well   know   the   students-NOM

How, then, can canonical positions be derived? As a standard assumption in Generative Grammar, not only the subject position but also the existence of non-referential subjects results from the *Extended Projection Principle*. In the GB version of the framework of *Principles and Parameters*, the EPP roughly stated

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9.   Since locative inversion is not possible with transitive verbs, Alexiadou & Agnastopoulou (2001) argue that the 'subject' in situ does not have to move on grounds of the option to leave one case feature in the V P unchecked.

that there is a position SPEC/IP for an argument agreeing with the finite verb to be assigned nominative case.

> The EPP is another principle regulating syntactic structure […]: sentences must have subject positions, [Spec/IP] positions, at all syntactic levels. It is important to point out here that the EPP imposes that the [Spec/IP] position be generated.
> (Haegeman 1994: 339f)

Expletives and non-referential subjects are inserted in the subject positions of languages like English and German because of the obligatoriness of SPEC/IP:

(21)   a.   [_{IP} *It* [seems that [_{IP} *there* [_{I'} are [three students in this room]]]]]
        b.   …dass [_{IP} *es* [sich darüber trefflich   streiten] lässt]
              that   it   itself over-that excellently   argue   lets
              '…that this matter is very suitable to argue about.'

In the feature based phrase structure model of the *Minimalist Program*, the concept of the EPP was saved but implemented by a *formal feature* that is checked irrespectively of case and agreement,[10] which allows accounting for *subjects in situ* agreeing with the verb (see 16 and 21a above):

> I suggest that the strong feature in this instance is an "EPP feature" residing in Agr, hence the same feature that drives overt subject raising, the modern technical implementation of the EPP.   (Lasnik 2001: 81)

Note that this formal way of deriving obligatory SPEC positions is not bound to a specific phrase like IP. Thus, it can also be applied to other functional projections and it can be considered a matter of parameterisation whether a SPEC position has to be filled or not (the *generalised EPP* from Chomsky 2000: 109). Language specific properties like V2 in German can be explained in an elegant way by the application of the EPP to a higher FP (e.g. CP) plus an independent condition making the finite verb move to C^0 (see also Roberts & Roussou 2002):

(22)   [_{CP} Linguisten   [_{C'} sind [_{IP} immer wieder Fehler   unterlaufen]]]
        linguists-DAT   are   always again   errors-NOM happen-PAST-PTCP
        'Errors were made by linguists again and again.'

Very much in this sense, Kiss (1995: 6f, 14) distinguishes between the canonical position of *grammatical subjects* and *notional subjects* (i.e. the subjects of predication). In subsequent work (Kiss 2002), she suggests that a subject-prominent language like English is characterised by the EPP parametrically yielding the obligatory

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10.   It is not clear to us why only some arguments but no adjuncts can check this feature. This is another technical problem that cannot be discussed here.

filling of SPEC/IP. Languages like Hungarian, on the other hand, do not have to fill SPEC/IP. A non-notional subject stays inside the VP:

(23) a. $[_{IP}$ a guest $[_{VP}$ has telephoned]

    b. $[_{IP}[_{VP}$ telefonált $[_{DP}$ egy vendég]]]
             telefoned a guest   (Kiss 2002: 109)

According to her analysis, it is the subject of predication which moves to a higher position c-commanding the VP in topic-prominent languages. It moves to the SPEC position of a topic phrase (TopP) in order to satisfy the EPP.[11]

(24) a. $[_{TopP}$ a diákok szerintem [jól $[_{VP}$ tudják a szintaxist]]]
         the students-NOM in-my-opinion well know the syntax-ACC

    b. $[_{TopP}$ a szintaxist szerintem [jól $[_{VP}$ tudják a diákok]]]
         the syntax-ACC in-my-opinion well know the students-NOM
                        (Kiss 2002: 109)

In the following subsection, we take a closer look at the two kinds of canonical positions and how they are identified in the Generative model of phrase structure.

3.2 Subject and topic positions in hierarchical phrase structure

We start this section with a discussion of Italian which apparently challenges the hypotheses of canonical subject or topic positions. Note firstly that both agent and non-agent subjects can occur on the left or on the right of the predicate.

(25) a. Gianni ha telefonato.
      G. AUX telephoned
      'John has telephoned.'   (Giusti 1995: 1349)

    b. La brocca è stato rotta (da Maria).
      the pitcher AUX been broken by M.
      'The pitcher has been broken (by Mary).' (ibid.)

(26) a. È intervenuto uno studente (a risolvere il problema).
      AUX intervened a student to solve the problem
                  (Giusti 1995: 1349)

    b. Ha telefonato Maria.
      AUX telephoned M.   (Giusti 1995: 1353)

Assuming the orders in (25) to be canonical, authors have made several proposals to derive the data in (26). Firstly, Italian being a pro-drop-language, data like (26a)

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11. Note that earlier GB accounts like Rothstein (1985; also quoted by Chomsky 1986: 4, fn. 5) derived the EPP from a condition of predicate linking.

can be explained as presentative sentences with a null-expletive (Giusti 1995: 1352). Secondly, sentences like (26b) are explained as rightward movement of the subject for information structural reasons (Frascarelli 2000: 50f.). This leads us directly to the question of the canonical positions of topic and focus. According to Frascarelli (2000: 50ff.; 103ff.), both topic and focus can be left or right peripheral. She analyses right focus as *focus in situ* (i.e. subject in SPEC/Agr), with movement of AUX+V^{inf} to a position higher than IP (Frascarelli 2000: 115), which she supports by prosodic reasoning.[12] Left focus, on the other hand, she treats as movement to a FocP in a split-CP model (cf. Rizzi 1997; s. Sect. 3.3). Taking *focus in situ* to be the normal case for the underived VP order in many languages (see above), there is only one position on the left where focused constituents go.

What is of more interest with respect to our discussion is the distribution of topics. In recent accounts, topicalisation in Italian is more or less identified with clitic left dislocation;[13] clitics seem to be obligatory with topics bearing the accusative, whereas they are optional with other arguments and adjuncts (Frascarelli 2000: 145). Thus, clitics are a reliable indicator of topicality, which is crucial for the analysis of right hand topics. In the corpus used by Frascarelli (2000: 144), 64% of the topics are on the left-hand side, whereas 36% are right peripheral. Compare:

(27) a. $[_{TopP}$ gli amici di Sara [Gianni è partito senza
          the friends of S. G. AUX left without
      neanche salutar-*li*]]
      even greet-them

    b. $[_{TopP}$ nel-la sua casa di Roma $[_{IP}$ Paolo *ci* va poco spesso]]
         in-the his house of Rome P. CL goes little often

(28) a. hanno deciso di girare l'Europa in macchina $[_{DP}$ Cesare
      AUX-3PL decided to travel the-Europe in car C.
      e sua moglie]
      and his wife
      'Cesar and his wife decided to travel through Europe by car.'

    b. non voglio più uscir-*ci* $[_{PP}$ con gli amici di mio fratello]
      NEG want-1SG anymore go-out-CL with the friends of my brother
      'With the friends of my brother, I do not want to go out anymore.'

---

12. Note that there is also independent distributional evidence for the movement of non-finite verb forms to a rather high position in Italian (Giusti 1995: 1352).

13. Note that left dislocation also indicates topicality in languages like German (Jacobs 2001: 659).

The right peripheral topic in (28b) is doubled by a clitic, exactly like the left peripheral ones in (27). Subjects are never doubled by a clitic in pro-drop Italian. Thus, defocused postverbal subjects can be treated on a par with topics.

Moreover, the options of ordering multiple topical elements are equivalent on both sides of the sentence (Frascarelli 2000: 139). Furthermore, Frascarelli (139; 161ff.) provides several arguments for the position of both kinds of topics being identical and proposes that the whole FocP moves to the left in cases of right topicalisation. We do not want to go into the details of this analysis but would also like to refer the reader to Vallduví's (1992: 85; 101) analysis of right peripheral topics in Catalan. He proposes a model of mirrored adjunct positions for topics in the same c-command position, which could also be translated into left and right specification of a TopP. The difference is not really crucial from our point of view. The advantage of such a model would be the replacement of the notion of precedence by a notion of c-command. Either option, both movement of the FocP and mirroring, provides the possibility of a *canonical topic position* in phrase structural terms also for languages like Italian. Assuming a canonical subject position on the grounds of these observations the following hierarchy is derived:

(29)   TopP > FocP > IP > VP

Kiss (2002) proposes a different hierarchy of FPs for Hungarian. Firstly, she assumes no IP. Secondly, there is evidence for a position specific to strong quantifiers.

(30)   TopP > QP > FocP > VP

Kiss (2002) states that *quantified* and *focalised* expressions precede the verb but follow sentence adverbials which express the speaker's attitude (31a). Adverbials are often taken as indicating the borders between specific positions for different classes of constituents (cf. Cinque 1998). She generalises elements preceding them as topics and, thus, as identifying a topic phrase (31b).

(31)   a.   *Szerintem*   [$_{QP}$ minden diák   [$_{FocP}$ a   szintaxist
              in-my-opinion   every   student   the   syntax

              [$_{VP}$ szereti legjobban]]]
                  likes   best

       b.   [$_{TopP}$ A   diádok   [*szerintem*   [$_{VP}$ jól   [$_{VP}$ tudják   a   szintaxist]]]]
                  the students in-my-opinion   well   know   the   syntax

There is considerable work on German topicalisation by Frey (2000, 2004a+b; 2007), suggesting that German also has a canonical topic position. Like Kiss (2002), he takes sentence adverbials to indicate the boundary between topics and non-topics. Taking cataphoric discourse anaphora as reliable indicators of

topicality (cf. also Reinhart 2004: 296), Frey (2007) concludes that the subject preceding the sentence adverbial in sentences like those below is a topic:

(32)   a.   Weil   er   müde war, hat *ein Student leider*   während
              because he   tired was has a   student unfortunately during

              der Vorlesung geschlafen.
              the lecture   slept   (Frey 2007: 333)

       b.   *Weil er müde war, hat *leider ein Student* während der Vorlesung geschlafen.

Subjects of thetic sentences cannot bind discourse anaphora:

(33)   After they.$_{*i}$ had turned up the music, the políce$_i$ came.

On the basis of data like the above, (Frey 2004a+b; 2007) makes a strong assumption about a canonical (or designated) topic position in German:

(34)   *Designated Topic Position*
       In the middle field of the German clause, directly above the base position of sentential adverbials (…), there is a designated position for topics (in the aboutness sense): all topics occuring in the middle field, and only them, occur in this position.   (Frey 2007: 232)

Frey does not use a model with a fixed hierarchy of FPs. Instead, he assumes that FPs vary according to the class of elements they can host. His topic position is below the FinP hosting the finite verb. Contrasted elements are located in a ContrP dominating FinP (35a). Non-contrastive topical elements move to the C-domain only in the absence of contrastive ones, and in one of two scenarios: firstly, when there is *formal movement* of the highest element from the so-called *middle field* to SPEC/FinP (35b) due to an EPP-like condition that one specifier in the C-domain has to be occupied; secondly, left dislocation, which he also regards as a case of topicalisation, bringing topics to SPEC/CP. This is possible both in root clauses where SPEC/FinP is occupied by a co-indexed pronoun (35c) and in subordinate clauses with a complementiser (35d), where the co-indexed pronoun is in the actual topic position.

(35)   a.   [$_{ContrP}$ Mit dem Hammer [$_{FinP}$[$_{Fin'}$ hat [$_{TopP}$ *Otto* [das
                   with the hammer   has   Otto   the

              Fenster eingeschlagen]]]]]
              window   smashed

       b.   [$_{FinP}$ *Otto*$_1$ [$_{Fin'}$ hat [$_{TopP}$ t$_1$ [das Fenster eingeschlagen]]]]
                  Otto   has   the   window   smashed

       c.   [$_{CP}$ *Den Otto*$_1$ [$_{FinP}$ den$_1$ [$_{Fin'}$ mag [$_{TopP}$ t'$_1$ [jeder t$_1$]]]]]
                 the   Otto   him   likes   everyone

d. Jeder   glaubt, [$_{CP}$ *den Hans*$_1$ [$_{C'}$ dass [$_{FinP}$ [$_{TopP}$ *den*$_1$ [jeder t_1 mag]]]]]^{14}
    everybody thinks   the John   that   him everyone likes

He concludes that the canonical topic position is not in the so called *prefield* but topmost in the *middle field*, which yields the following hierarchy for German:

(36) CP > ContrP > FinP > TopP   (Frey 2004b: 29)

Consideration of features of subject-prominence, such as regular passivisation and the existence of formal subjects (see above, @p. 12, 18@), might lead one to suggest that the hierarchy should be amended with the insertion of an IP below TopP. However, in the following subsection 3.3 we are going to discuss reasons to assume that, like Hungarian, German can dispense with an IP, and that the assumption of a canonical topic position is equally not really forced by the data.

3.3 Does the EPP approach yield a proper classification of languages?

If it is true that the application of the EPP applied to different levels of projection results in one (or more) canonical position(s), we end up with a system of four classes of languages, much like the earlier typological approach. In languages like English, a parametric condition of occupying SPEC/IP is criterial for grammaticality. In contrast, topic movement is far from being obligatory. Thus, English rather clearly belongs to the class with a canonical position for subjects but without one for topics. Similarly, Hungarian may be classified as 'topic-prominent'. Whereas Italian seems to have canonical positions for both classes of constituents, languages like Tagalog may have neither. It would be possible to state these properties in a table like the following one:

Table 1. Canonical structural positions

	Subject	Topic
yes	e.g. English, Italian, German (?)	e.g. Hungarian, Italian, German (?)
no	e.g. Tagalog, Hungarian, German (?)	e.g. Tagalog, English, German (?)

However, a binary system like this cannot, in our view, be considered a sufficiently explanatory adequate solution. In fact, it suggests that the options of encoding topicality and subjecthood can be reduced to positions. We, however, assume that the options in systems with fewer FPs are just different because

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14. Note that this example taken from Frey (2004b) is considered ungrammatical by speakers of northern German varieties. Sentences like these are quite common in the south of Germany, though, especially in Bavaria.

the relevant features apply more freely, and that languages like German (and also Japanese and Korean) differ from most languages in this table with regard to this property.

There has been much discussion of the status of German as being either topic- or subject-prominent from the typological point of view (e.g. Lötscher 1992). Even though German has some of the features typical for 'subject-prominence' in Li & Thompson's (1976) classification, it also has properties of topic-prominence. So called '*double subject constructions*' and free nominatives ('*nominativus pendens*') as hanging topics occur with high frequency at least in the spoken language:

(37) a. %*Bäume* stehen dort nur (noch) *Tannen*.   (double subjects)
         trees   stand there only yet   firs
         'As far as trees are concerned, there are only firs left there.'

      b. %*Rotwein* schmeckt mir   (eigentlich) nur *Bordeaux*.
         red-wine tastes   to-me actually   only B.
         'As far as red wine is concerned, I actually like nothing but Bordeaux.'

(38) a. *Fritz, ich* war gestern   bei ihm.
         F.   I   was yesterday with him
                                    (*nominativus pendens*; Sasse 1982: 282)

      b. *Langer Samstag*, da   sind *die Leute* wie verrückt.
         long   Saturday then are the people like crazy
         'On a 'long Saturday' [i.e. a Saturday on which shops are open all day],
         people work themselves into a frenzy.'

It is also significant that there are verbs which can fully dispense with an overt subject:

(39) a. Mir   graut   vor aller Theorie.
         PRON-(DAT) cause-shudder by all   theory
         'I shudder to think of any theory.'

      b. Mich   dürstet   nach Wissen.
         PRON-(ACC) thirst(verb)-3SG after knowledge
         'I am thirsty for knowledge.'

These sentences belong to a group of constructions also found in topic-prominent languages such as Jp: the so-called 'dative-subject-phenomenon'. Non-nominative subjects of predication that are topmost in the thematic hierarchy of the predicate can be base-generated above all other arguments, one of which may even bear nominative case:

(40) watasitati *ni* *wa* [Yumi ga ut-teiru no] *ga* kikoeru (Japanese)
      we   DAT TOP Yumi NOM sing-PRG SUB NOM can-hear
      'We can hear that Yumi is singing.'

They occur regularly in German as well:

(41) a. Schon immer schmeckten *Kindern* *süße Soßen.*
already always tasted-good children-DAT sweet sauces-NOM
'Children have always liked sweet sauces.'

b. Immer wieder unterlaufen *Syntaktikern* *Fehler.*
always again happen syntacticians-DAT mistakes-NOM

Formal movement of the German subject to SPEC/IP cannot be empirically motivated. If an argument, and thus also a subject, is outside of the VP, this must be triggered by discourse semantic markedness:

(42) a. dass unglücklicherweise immer wieder [$_{VP}$ Syntaktikern *solche*
that unfortunately always again to-syntacticans such
Fehler unterlaufen]
mistakes happen
'… that unfortunately such mistakes happen to syntacticians again and again.'

b. *dass unglücklicherweise immer wieder [$_{IP}$ *Fehler*$_i$ [$_{VP}$ Syntáktikern t_i unterlaufen]]

c. dass unglücklicherweise [*solche Fehler*]$_i$ immer wieder [$_{VP}$ Syntáktikern t_i unterlaufen]

d. dass [*solche Fehler*]$_i$ unglücklicherweise immer wieder [$_{VP}$ Syntáktikern t_i unterlaufen]

Haider (1997a+b; 2000) correlates the absence of canonical positions to the basic VP of a language. Note that dative subjects were also there in English before it changed to a SVO language with positional licensing (cf. Kiparsky 1997). It could be argued that, in languages allowing such order, the arguments are linearised according to the conceptual hierarchy of thematic roles rather than according to positions that are related to syntactic functions; this means that the syntactic order corresponds to the *LCS* (*lexical conceptual structure;* cf. Jackendoff 1990). Since this option seems to be restricted to SOV languages, Haider (1997b) assumes that in a right-headed VP where V^0 licenses its arguments to the left, V′ can inherit the selectional properties of V^0 and argument insertion is just the successive saturation of the predicate's Θ-grid. Secondly, constituent order is determined by information structure. Remember that SOV was said to be the predominant order in so-called 'topic-prominent languages' (see above, p. @11ff.@). The OV-property of languages such as German, Japanese and Korean implies relatively free word order compared to languages such as English, where the VP is left-headed (cf. also Fukui 1995; Abraham 2007: 186f., 191). In a left-headed VP, the head can license only one complement to its right. Therefore, VP-shells are necessary, providing SPEC-positions to positionally license the arguments of V (for a detailed presentation of this *branching-and-discharge-model* cf. Haider 2000).

That the order DAT-NOM is not derived by scrambling but is actually the basic one is also shown by the fact that it is the only grammatical order found in a fronted VP (Haider 1993: 132ff):

(43) a. [Syntaktikern *Fehler* unterlaufen]$_i$ sind immer wieder t_i
syntacticians-DAT mistakes-NOM happen-PAST-PTCP are always again

b. *[Fehler Syntaktikern unterlaufen]$_i$ sind immer wieder t_i

Examples like these serve Haider (1993, 1997b; 2000) with a major empirical argument against a canonical subject position in German that the fronted VP can contain the subject with ergative and passivised transitive verbs shows that there is no English-like syntactic requirement of '*externalisation*':

(44) a. [$_{VP}$ *Bäume* ausgerissen] wurden hier heute noch nicht.
trees pulled-out were here today still not
(passivised transitive verb)

b. [$_{VP}$ *Zuhörer* eingeschlafen] sind uns aber, Gott sei Dank,
listeners slept-in are us-DAT but god-DAT be thank
auch nicht. (unaccusative verb)
also not
'But we didn't have any listeners falling asleep either, thank God.'

That it is the VP and not the IP which is fronted is indicated by the fact that the phrase preceding V^{fin} in C^0 may not contain its trace (Haider 1993: 151):

(45) a. [$_{VP}$ ein Zug angekommen (*t_k)]$_i$ ist$_k$ hier noch nie t_i
a train arrived is here still never

b. *[$_{IP}$ ein Zug an t_k]$_i$ kam$_k$ hier noch nie t_i

Obviously, German subjects do not move to SPEC/IP, but stay in situ in the unmarked case (whereas cases of *subject in situ*, as in locative inversion, are clearly the marked case in languages such as English). The two potential explanations in the Generative model are that either the EPP does not hold for the IP in German, or that German does not have an IP at all – and thus no canonical subject position (Haider 1993: 142ff.; 1997a+b; 2000, 2010: 45–85; detailed discussion of arguments against an IP in German can also be found in Sternefeld 2006: 507ff. and in Öhl 2003: 104–134). Haider (2010: 271) puts it like this: "the word order is not determined by case licensing requirements but by the ranked lexical argument structure that determines the order of projection/merger".

There are also reasons to doubt whether the criteria presented in Sect. 3.2 for the identification of a TopP in German are sufficient. Firstly, it is obvious that more than one sentence adverbial can occur in a sentence. If the positions of these adverbials were fixed, one would expect that nothing could intervene between them.

Moreover, all topics, but nothing else, should precede them. Neither prediction seems to hold, however. In the following examples, there are no topics given by the context. That each of the three answers to the question in (46) is thetic is also indicated by the initial expletive that cannot occur in sentences with topical subjects (Frey 2004a: 11).

(46)   You are looking so glad – what do you expect?

(47)   a.   Es   wird   erfreulicherweise wahrscheinlich *ein Student* die ganze
             today   will   fortunately   probably   a   student the whole
             Vorlesung aufzeichnen.
             lecture   record

       b.   Es wird erfreulicherweise *ein Student* wahrscheinlich die ganze Vorlesung
            aufzeichnen.

       c.   Es wird *ein Student* erfreulicherweise wahrscheinlich die ganze Vorlesung
            aufzeichnen.

According to our native intuition, the main difference between the sentences in (47a) vs. (b) and (c) is that the subject in (47a) is non-specific. This can be easily confirmed by a discourse continuation like "I am going to introduce him to you soon.", which would be possible only in (47b+c). Thus, the specific subject can occur in two positions. It seems that in Gm, these adverbials may precede, follow, or frame other constituents. Whether all elements preceding sentence adverbials in languages like Hungarian are in fact topical is difficult for us to test. Assuming them to be universal indicators of topicality, Kiss (1996: 128ff.) proposes two different 'subject positions' in Eng, one being associated with topic features.

(48)   a.   In most cases, boys will be born.
       b.   *Boys will in most cases be born.
       c.   Boys will in most cases know the novels of Karl May.

However, if the subject in (c) above is in a higher position than in (a), why should the modal *will* also be forced to move there? It is not in other cases of topicalisation:

(49)   *The novels of Karl May will in most cases boys know.

In our view, data like these only show that an adverbial taking scope over the proposition cannot be adjoined below a subject within sentence focus. Sentence adverbials precede the discourse semantically unmarked constituents, but they can follow defocused constituents on the grounds of factors which will be discussed more deeply in Sect. 4. For the time being, we just state that the data in (47) do not support the assumption of a fixed position for sentence adverbials in German.

Moreover, constituent order also varies when there are several elements that are topical according to the assumption that cataphors are a reliable indicator of topicality (cf. Frey 2007; Reinhart 2004).

(50)   a.   Weil   sie ihn interessierte, hat *ein Student diese Vorlesung*
             because   it him interested   has a   student this lecture
             erfreulicherweise ganz   aufgezeichnet.
             to-my-pleasure   totally recorded

       b.   Weil sie ihn interessierte, hat *ein Student* erfreulicherweise *diese Vorlesung*
            ganz aufgezeichnet.

       c.   Weil sie ihn interessierte, hat *diese Vorlesung* erfreulicherweise *ein Student*
            ganz aufgezeichnet.

       d.   ?Weil sie ihn interessierte, hat erfreulicherweise *ein Student diese Vorlesung*
            ganz aufgezeichnet.

       e.   ??Weil sie ihn interessierte, hat erfreulicherweise *diese Vorlesung ein Student*
            ganz aufgezeichnet.

       f.   Weil sie ihn interessierte, hat *diese Vorlesung ein Student* erfreulicherweise
            ganz aufgezeichnet.

The orders in (50b) and (c) are as natural as those in (50a), and not even the order in (50d) is fully bad. The order in (50e) is rather marked because of scrambling in the basic focal domain, whereas (50f) shows that different orders above these adverbials are possible. This also indicates that the order may be determined by various factors. We shall return to this point in Sect. 4 as well, where we investigate the distributional options of non-focal elements in more detail. Again, we just state that the existence of a canonical topic position for German is debatable.[15]

There is also Italian evidence for several potential topic positions. It is for this reason that the cartographic split-CP-approach of Rizzi (1997) has to build on the assumption of at least two TopPs, one between the positions of complementisers and focused elements, and one between focused elements and Rizzi's FinP.

(51)   Credo   [$_{ForceP}$ che [$_{TopP}$ a   Gianni [$_{FocP}$ QUESTO [$_{TopP}$ domani
       think-1SG   that   to G.   THIS   tomorrow
       [$_{FinP}$ [$_{IP}$ gli   dovremmo   dire]…]
              OBJCL must-FUT-1PL say
       'THIS, I think we have to tell to John tomorrow.'   (Rizzi 1997: 295)

---

15. Among others, Abraham (1997) also argues for such a canonical topic position on the grounds of functional projection. In order to avoid misunderstanding, it might be necessary to draw the attention to some of our assumptions defended in the course of this paper. We would like to emphasise that we are not arguing against discourse configurational properties of German in general. However, we assume two factors supporting discourse configurationality: first, the existence of specific functional phrases like TopP; second, the absence of functional phrases restricting word order, which facilitates free serialisation according to information structural features by means of adjunction. See also the arguments against functional phrases between the German VP and CP in Haider (2010: 45–85).

Rizzi (1997) obviously takes different kinds of thematic elements to be of the same class. Since more than one of them can occur in both partitions of the split CP, he simply states that the TopPs in his system are iterable.

(52) $[_{ForceP} [_{TopP} Il$ $libro$ $[_{TopP} a$ $Gianni$ $[_{TopP} domani$
          the book   to Gianni   tomorrow

$[_{FinP} [_{IP} glielo$ darò   senz'altro]…]
          indirObjCl.dirObjCl give-FUT.1SG surely   (Rizzi 1997: 290)

Rizzi (2001) found evidence for even another potential Italian topic position. The sentences in (53) show that the Italian subordination marker *che* cannot follow a topic (53a), whereas the interrogative complementiser *se* can (53b). He concludes that there is an Interrogative Phrase (IntP) below ForceP, with another potential topic position above it:

(53) a. *Credo,   *a*   *Gianni*, *che* avrebbero   dovuto
             think-1SG DAT G.   that AUX-PASTPERF-SUBJ-3PL must-PASTPART

             dirgli   la   verità.
             say-INF DET truth

             'I think that they should have told the truth to John.'

                                                         (Italian; Rizzi 2001: 289)

      b. Non so, $[_{ForceP} [_{TopP} a$ *Gianni* $[_{IntP} se$ $[[_{IP} avrebbero$
             NEG know-1SG   DAT G.   if AUX-PASTPERF-SUBJ-3PL

             potuto   dirgli   la   verità]…]
             can-PASTPART say-INF DET truth

             'I do not know if they could have told the truth to John.' (Rizzi 2001: 289)

Similar accounts have been proposed by Roussou (2000: 79ff.) for Greek and by Öhl (2004: 165) for Persian and Bengali. The options of positioning topics are very clearly not bound to a single canonical position in these languages. Moreover, Benincà & Poletto (2004) observe that the distribution of different kinds of topics in Italian is, in fact, restricted to different layers of the C-domain. Instead of iterable topic phrases, they propose a more differentiated hierarchical order of FPs which they relate to specific discourse semantic functions:

(54) *Sublayers of the C-Domain*   (Benincà & Poletto 2004: 73)

$[_{ForceP}$ [hanging topic [scene setter [left dislocation [list interpr.

$|_____$ *frame* $_____| | |$ *theme* $_____| |$

[contr.foc1 [contr.foc2 [inform. foc $[_{FinP}$] · · ·]

$|_____$ *focus* $_____| |$

However, if the constraints on linearisation in the C-domain are conceptual rather than syntactic, would it not then be more plausible to assume that different kinds of topics are adjoined at different levels according to a conceptual hierarchy?

3.4   Linearisation without functional phrases

If Haider (1993, 2000) is right in assuming no IP in German syntax, the lack of this FP should be the reason for the absence of a canonical subject position. Now the question is whether we need FPs to derive the discourse semantically marked positions outside of the VP. In order to answer this question, we want to discuss VP-fronting again. First note that fronted VPs must not contain any traces which would not be c-commanded by their antecedents. As soon as an argument has been moved out of the VP, the latter is blocked for fronting.

(55) a. $[_{VP}$ gerne Kindern   Märchen   erzählt]$_i$ haben Großeltern
             gladly to-children fairy-tales told   have grandparents

             schon immer t_i
             yet   always

      b. *$[_{VP}$ gerne $[_{VP}$ Kindern t_k erzählt]$_i$ haben Großeltern Märchen$_k$ schon immer t_i

(56) *$[_{VP}$ Syntaktikern t_k unterlaufen]$_i$ sind solche Fehler$_k$ immer wieder t_i

Thus, the following structure should be ungrammatical, too. The given example, however, is not.

(57) $[_{VP}$ (*t_k) Fehler unterlaufen]$_i$ sind $[_{TopP}$ Syntaktikern$_k$ [immer wieder t_i]]

Thus it is improbable that topics and comparable elements are moved from the VP to structurally higher positions in FPs. Since it is implausible to assume that V' can be fronted to SPEC/CP, the fronted phrase must be a complete VP. This is possible if we assume that the fronted phrase is a *segment* of VP, i.e. if the whole VP is analysed as an adjunction structure. We follow Haider (1997a+b; 2000) in assuming that head final VPs are not constituted by shells that are projected by separate heads like v^0, but rather are iterated or extended by adjuncts licensed to the left by V^0.

(58) a. $[_{VP}$ Kindern   Märchen   erzählt] haben $[_{VP}$ Großeltern $[_{VP}$ schon
             to-children fairy-tales told   have   grandparents   yet

             immer $[_{VP}$ gerne $[_{VP} t_i]]]]$
             always   gladly

      b. $[_{VP}$ Märchen erzählt] haben $[_{VP}$ Großeltern $[_{VP}$ Kindern $[_{VP}$ schon immer
             $[_{VP}$ gerne $[_{VP} t_i]]]]]$

    c.   [$_{VP}$ Fehler   unterlaufen]$_i$ sind   [$_{VP}$ Syntaktikern$_k$
              mistakes happen-PAST-PTCP are   to-syntacticans

            [$_{VP}$ immer wieder [$_{VP}$ t_i]]]
            again-and-again

In a representational model of Generative Syntax in the style of Haider (1993: 101ff.), Öhl (2003: 79; 126ff.) suggests replacing movement by a concept of procrastinated saturation of a predicate Θ-grid. Consistent with standard assumptions, the projection of V is complete in this model if the arguments are inserted according to the Θ-hierarchy. However, arguments that are discourse semantically marked may be inserted later in the upper partition of the *middle field*. This kind of procrastination leaves an empty position only if it takes place before other arguments are inserted. In this case, the VP is blocked for fronting.

(59)   a.   Solche Fehler$_i$ sind t_i wahrscheinlich schon   oft
           such   mistakes are   probably   already often

           [$_{VP}$ Syntaktikern t_i unterlaufen].
             to-syntacticans undergo-PAST-PTCP

           'Such mistakes probably happen rather often to syntacticians.'

    b.   *[$_{VP}$ Syntaktikern t_i unterlaufen]$_k$ sind solche Fehler$_i$ wahrscheinlich
        schon oft t_k.

Thus, only arguments which do not have arguments above them in the Θ-hierarchy are found outside of a fronted VP.

(60)   a.   Syntaktikern$_i$ sind t_i wahrscheinlich schon oft [$_{VP}$ solche Fehler unterlaufen].
        b.   [$_{VP}$ Solche Fehler unterlaufen]$_k$ sind Syntaktikern$_i$ wahrscheinlich schon oft t_k.

If there is no further argument to be inserted in the lower partition, its projection can be completed without an empty position, even if all arguments are inserted into syntax later on (for a similar account cf. Haider 1993: 152ff.; 1997b; 2000).

(61)   a.   Syntaktikern$_i$ sind t_i solche Fehler wahrscheinlich schon oft
        [$_{VP}$ unterlaufen].
        b.   [$_{VP}$ Unterlaufen]$_k$ sind solche Fehler Syntaktikern$_i$ wahrscheinlich
        schon oft t_k. (Nur zugegeben haben sie diese nie).
        'Such mistakes probably HAPPENED to syntacticians rather often.
        (It is just that they never admitted them.)'

Abraham (2007: 194ff.) also argues against movement of elements out of VP: 'Themata are "born" outside, i.e. to the left of VP, whereas rhemata are "born" inside VP' (Abraham 2007: 197). We agree with Abraham (2007: 197) that what he calls *thematic* elements (we subsume under them topics, discourse old information, etc.) are base generated in layers above VP interacting with discourse semantics.

Furthermore, as will be shown in the next section, the order of the elements in this partition is not as strict as a cartographic approach would predict. Thus we also agree with accounts like Abraham (2007) and Molnárfi (2007) which state that linearisation in languages like German is not triggered by '*formalised pragmatic features*' (Molnárfi 2007: 176).

4.   Topicality, perspectivation, and linearisation

Two needs are made obvious by the observations presented in the previous section. Firstly, if there are, in fact, numerous potential positions for topical elements and if we still want to assume canonical positions for them as we do for subjects, we have to find a proper means of identifying these positions. Secondly, it does not really seem clear how topical elements should be classified. What we need first of all is a more differentiated model of the semantic and pragmatic criteria for linearisation. In past research, discourse configurational properties of many languages have been stated on the basis of empirical observations. Besides those mentioned above, there are data from Catalan, Romanian, Bulgarian, Russian, Greek, Nepali, Hindi, Finnish, Arabic and many more (cf. Kiss 2001). Besides diverging accounts of *focus-prominence*, we find different uses of the term *topic* (as well as of terms such as *thematicy* and *familiarity*) that are even more problematic. Quite often, they are confused with other discourse functional features and abused to subsume them (Vallduví 1992: 28ff.). Therefore, we would like to continue by discussing the notion of topicality.

4.1   On the notion of topicality

Earlier accounts of sentence topics can be divided into two basic types: authors from different approaches, like Vallduví (1992), Lambrecht (1994), Rizzi (1997) and Jacobs (2001) rely on the option of having multiple topics in a sentence, some of them suggesting different kinds (Choi 1997; Benincà & Poletto 2004; Frascarelli & Hinterhölzl 2007). Frascarelli (2000: 157) states that, in her corpus, the number of topical elements is restricted to three, which, in our opinion, is no more than an empirical generalisation that speakers normally avoid having too many of them.

    Other authors argue against multiple topic constructions either from the semantic (e.g. Reinhart 1981: 56ff.; 2004: 284ff.) or the syntactic point of view (e.g. Breul 2007: 258ff.; Vermeulen 2007: 194ff.). In order to exclude too many indicators of topicality, Reinhart (1981) defines *topics* in a strict *aboutness* sense and argues explicitly against a *familiarity account* (Reinhart 1981: 60ff.; 2004: 297ff.). We follow this view as far as the status of *givenness* as a *necessary* or *sufficient feature* is

concerned. Just as there can be non-topical old information included in the focus, there are newly introduced 'shifted' topics (as discussed by Frascarelli & Hinterhölzl 2007: 88, 109), probably restricted by an *accessibility condition* for their being used as a link for information storage (Vallduví & Engdahl 1996: 498). The following sentence shows that a topic can be formally licensed although not given contextually nor by inference:

(62) When she was five years old, a child of my acquaintance announced a theory
that she was inhabited by rabbits.   (Reinhart 2004: 296)

Why should a propositional utterance not be 'about' more than one discourse referent, however? Lambrecht (1994: 150) suspects that Reinhart's (1981) observations concern the "pragmatic *salience* of the various topic referents at given points of the discourse [rather than] the difference between topics and non-topics". We also think that Reinhart's (1981, 2004) restrictions limit the range of the term topic too much. Firstly, she analyses only NP topics. Reinhart (1981: 56) states that her analysis could be extended to other topic expressions, but she does not show this. Secondly, as far as we can see, all of her examples concern the *subject of predication*. Reinhart (1981: 54) explicitly identifies *aboutness* with *predication*; even though Reinhart (1981: 58) calls for a pragmatic definition of aboutness instead of a semantic one, we miss the discussion of non-arguments as topics in both Reinhart (1981) and (2004).

If the sentence topic were identified with the subject of predication only, there could be only one. Semantic predication can, however, be only one of the factors determining topicality. Therefore, it is just one of the *dimensions of topic/comment* in work like Jacobs (2001), where it is defined as follows:

(63) *Semantic Predication*   (Jacobs 2001: 647)
In P = (X … Y), X is the *semantic subject* and Y the *semantic predicate* iff
a. X specifies a variable in the semantic valency of Y
b. there is no Z such that (i) Z specifies a variable in the semantic valency of
an element in Y and (ii) Z is hierarchically higher in semantic form than X

He gives an example from German where the indirect object is the fronted topic and subject of predication. This is formalised in the semantic form given in (b) below.

(64) a. Der Polizei   misstraut er.   (Jacobs 2001: 648)
the police-(DAT) mistrusts he
b. [THE-POLICE(y) & [HE(x) & MISTRUST(x,y)]

Jacobs (2001: 657) extends the semantic subject analysis to adverbials as well by assuming that they can specify a situation variable, thus belonging to the extended

valency of the predicate. Breul (2004, 2007) develops an account whereby exactly one topic can move to a canonical SPEC position, which is triggered by a specific formal feature [−foc]. If we are interpreting his analysis correctly, this movement applies either to the subjects of categorical sentences, or to elements that are fronted due to the assignment of a feature turning them into subjects of predication in the sense of Jacobs (2001: 657). Thus, the singular topic in accounts like these seems to be restricted to the dimension of semantic subjecthood, which does not, in our view, exclude further topical elements from being licensed by discourse semantic functions.

As indicated in Sect. 1 (and also in the view defended by Reinhart 1981, 2004), a topic should be defined in terms of pragmatic aboutness, or sentence topics that are used as *links* (Vallduví 1992: 43) respectively *cataloguing addresses* (Reinhart 1981: 24), i.e. as instructions to the hearer as to where to store the information. A definition of *addressation* can also be found in Jacobs (2001: 650).

(65) *Addressation*
In (X Y), X is the *address* for Y iff X marks the point in the speaker-hearer knowledge where the information carried by Y has to be stored at the moment of the utterance of (X Y).

Since *addressation* is a dimension of topicality brought into play by Reinhart herself, it might be daring to contradict her view that there can be only one such item per sentence. However, the view that more than one *addressation topic* can occur per sentence is supported by cross-linguistic evidence. Vallduví (1992: 48) puts it like this: "Sentences may have more than one link […]. In these cases the speaker directs the hearer to go to two addresses and enter the information under both." He gives an example from Catalan:

(66) El   bròquil a l'amo   l'hi   van   regalar.
The broccoli to the.boss it.him AUX-3PL-PAST give
'As far as the broccoli and the boss are concerned: they gave it to him for free.'[16]

Similar sentences can be found in Hungarian, which can also be paralleled to German examples. Both of the following sentences roughly mean: 'Speaking of John and Mary, he took her to Paris, last year'.

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16. Original interlinear translation: "The broccoli the boss (they) gave it to him (for free)." Like Vallduví (1992) and Frascarelli (2000) we take clitic doubling as indicating topicality. Left dislocation can be considered a strong indicator of topicality in languages like German as well (Jacobs 2001: 658).

(67) a. János Marit [tavaly [VP vitte el Páris-ba]
          John Mary last-year took away Paris-to (Kiss 1994: 14)

      b. Hans, der hat Maria letztes Jahr nach Paris mitgenommen.
          John PRON-3SG has Mary last year to Paris with-taken

The elements Reinhart considers topics have to fulfil several formal properties, including having the *highest accessibility among potential antecedents* for discourse anaphora (Reinhart 2004: 299).

(68) Max was walking down from school, pondering about the meaning of life. Soon he ran into Felix and then *he* suggested that they stop at the bar.

However, if the subject is intended as the sole element with topic potential, this example seems questionable to us. If it is true that topics are the most accessible antecedent, this test should also be valid for the exclusion of multiple topics. This does not seem to be the case, as shown by the following example:

(69) Soon he ran into Felix. Max did not actually want to meet Felix, but then *he* suggested stopping at the bar.

In the second sentence above, there is no absolute preference for how to interpret the discourse anaphor, which should mean that both referents, Max and Felix, have the potential of being the addressation topic.

Focusing on the function of topics as an instruction for information storage brings us instantly to another '*dimension of topic-comment*' from Jacobs (2001), which is frame setting.

(70) *Frame Setting*
      In (X Y), X is the *frame* for Y iff X specifies a domain of (possible) reality to which the proposition expressed by Y is restricted. (Jacobs 2001: 656)

Frame setting expressions are *the part of the sentence that specifies the spatial or temporal framework for the event reported in the sentence, or a particular state of affairs in which the sentence asserts something* (Reinhart 1980: 173). It has often been noted that languages with topic morphology like Japanese and Korean use the same markers with frame setters and sentence topics. [17]

(71) a. Kinoo wa Hurankuhuruto wa tenki ga yokat ta. (Japanese)
          yesterday TOP Frankfurt TOP weather NOM good PAST
          'The weather was fine in Frankfurt, yesterday.'

[17.] For data and discussion we are indebted to Yuko-Shige Tamura and Jiro Inaba (Japanese), Ki-Hyun Yoon (Korean).

      b. óje nún nalssi ga jón dokil
          yesterday TOP weather NOM whole Germany
          esó joh-ass-ta (Korean)
          LOC beautiful-PAST-DECL
          'The weather was fine all over Germany, yesterday.'

In the sentences below (cf. Jacobs 2001: 655), the first marker is stressed, which yields a contrastive reading (more on this follows in Sect. 4.2).

(72) a. Kat ta baai ni WA, chiimu wa soori-daijin kara
          win PAST case DAT TOP team TOP prime-minister by
          hyooshoo sareru. (Japanese)
          commendation do-passive

      b. sùnglihal kyòngu e NÙN tim-ùn taetonglyòng ekesò
          win-REL case LOC TOP team TOP president from
          pyochang ùl pan ùl kòsita. (Korean)
          commendation ACC receive ACC will
          'If the team win, they will receive a commendation from the president.'

Note that Krifka (2007: 49f.) analyses frame setters on a par with *contrastive topics*: both of them are *delimitations* used in the management of information processing. Thus, their cross-linguistically parallel representation in the information structure of sentences may follow from their being an instruction for processing information, much like addresses or links. In the following sentences, both the frame adverbials and the subjects therefore can be regarded as topical under a suitable intonation:

(73) a. *In meinem /TRAUM*, da war /PEter ein Kroko\DIL.
          In my dream there was P. a crocodile
          'In my dream, Peter was a crocodile.' (adapted from Jacobs 2001: 662)

      b. *In der /KÜche*, da hat /PEter das Ge\SCHIRR gespült.
          In the kitchen there has P. the dishes washed
          'In the kitchen, Peter did the dishes.' (adapted from Jacobs 2001: 660)

We do not think that, in cases like these, there are two subjects of predication (as the assumptions made by Jacobs 2001: 15; 660f. would imply). It is rather that the frame setter restricts the domain for which the predication is valid. This assumption is supported by an interesting argument by Strawson (1964; Reinhart 2004: 279; we also refer to earlier discussions in Strawson 1950: 327ff.). He assumes that sentences like *the king of France is bald* provoke a conflict in assigning a truth value because, in an extensional context, the subject of predication lacks an extension. If an element lacking an extension is part of an extensional predication, however, the proposition must be false.

(74) The exhibition was visited yesterday by the king of France. (→ f!)

We found that this is also true if the subject of predication follows a frame setter or a contrastive topic:

(75) a. On Friday morning, the king of France was sad. (→ f!)
b. In London, the king of France is adored. (→ f!)
c. For Mary, the king of France would do everything. (→ f!)

In a hierarchy of elements restricting the interpretation of truth conditions, frame setters and contrastive topics seem to be rather high, and the highest one seems to be most crucial for judging the truth. This leads us directly to the question of whether *contrastiveness* is another dimension of topicality. Choi (1997: 550 for Korean) and Frascarelli & Hinterhölzl (2007: 88 for Italian, 109 for German) argue that both *continuing* (i.e. familiar) and *contrastive* topics can turn into an aboutness topic through movement.[18] Consider the following example from Italian:

(76) *Questo, io ai ragazzi* non l'ho detto direttamente.
This   I   to-the boys   not CL-ACC.have.1SG told directly
(Frascarelli & Hinterhölzl 2007: 88)

There are three topical elements present in the left periphery. That the object demonstrative is a topic is indicated by clitic doubling; the subject pronoun has a contrastive value, since the speaker "wants to stress that, as for him, he is not going to tell anything to his students" (Frascarelli & Hinterhölzl 2007: 88). They label the constituent *ai ragazzi* as *familiar* or *background topic* (ibid.), since it is contextually given and moved to the left. *Questo* is a topic in the aboutness sense, signalling a shift in the conversation to the addressee. Interestingly, framing can be analysed in a parallel way (ibid.: 89):

(77) *Gestern* hat der/*Hans* die Maria ge\troffen. (ibid.)

Similar observations have been made by Choi (1997: 550ff.) for Korean (see also Hetland 2007). She states that Korean *nún* is not a topic marker but a marker of *contrastiveness*. Contrastive elements can occur in several positions:

(78) a. Mary-ka   ecey   *Boston-ey-nun*   ka-ss-ta.
Mary-NOM   yesterday Boston-to-CONTR   went
b. Mary-ka *Boston-ey-nun* ecey ka-ss-ta.
c. *Boston-ey-nun* Mary-ka ecey ka-ss-ta.   (Choi 1997: 550)

According to Choi (1997: 550), the *nún*-phrase gains topichood "gradually as it moves along to the initial position of the sentence". Put in a slightly different way, the

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18. Cf. also McNay (2009: 199), who, looking at a range of different languages, uses a recursive phase edge feature, [+Link], which carries different semantic import at each phase level, namely *contrastivity* at the *v*P level and *aboutness* at the TP.

continuing topic *Mary* in (78a+b) can also be the aboutness topic, used as an address for information storage. *Boston* in (78a) has contrastive focus simply because it is marked by *nún* and has focus *in situ*, whereas it is a contrastive topic in Frascarelli & Hinterhölzl's (2007: 88, 109) sense in (78b). In (78c) it is an aboutness topic, giving an addressing instruction to the hearer. Similar observations are described by Vermeulen (2007: 187ff.; cf. also Kuno 1972; Deguchi 2008) for Japanese.

(79) a. *sono inu-wa*   kinoo   kooen-de John-o   kande-simatta.
That dog-CONTR yesterday park-at   John-ACC bite-closed
b. John-o   *sono inu-wa*   kinoo   kooen-de kande-simatta.
John-ACC that dog-CONTR   yesterday park-at   bite-closed
'The dog bit John in the park yesterday.' (adapted from Vermeulen 2007: 184)

Vermeulen analyses *wa* as a marker of discourse anaphoricity rather than contrastivity; however, given the contrastive reading of the elements marked by *wa* in the sentences above, the Japanese sentences may also be analysed on a par with Choi's (1997) analysis of Korean. Note that if the Japanese marker *wa* (resp. Korean *nún*) occurs twice in a sentence, one instance of it is stressed (as a rule the one that is not fronted, there is an option of also fronting the focus, however; cf. Hetland 2007: 119). It then has contrastive focus properties.

(80) a. John *wa* sono neko *WA* pettosyopu de kat ta.   (Japanese)
John wa this cat WA petshop   LOC buy PAST
'It was this cat what John bought in the petshop.'
b. John *wa* sono neko *o*   pettosyopu de *WA* kat ta.
John wa this cat ACC petshop   LOC WA buy PAST
'It was in a petshop where John bought the cat.'

(81) Chelswu-*nún* ejey   ku chayk-*ÚN* se-ss-ta.
C.-nún   yesterday   the book-NÚN bought (Korean; Hetland 2007: 119)

In both Japanese (83) and Korean (84), non-focused contrastive elements can occur in a lower position and more than one contrastively focused element can occur per sentence.

(82) A: Of course, mistakes can occur to everyone.
B: Yes, but such a mistake should not happen to such a man.

(83) a. tasikani dare-ni-mo   matigai-*WA*   okoriuru.
surely   everyone-DAT   mistake-CONTR   happen-can
b. sikasi sonoyouna hito-ni-*WA*   sonoyouna matigai-*WA*
But   such   person-DAT-CONTR such   mistake-CONTR
okora-nai   daroo.
happen-NEG guess

(84)   a.   Sesang-e   ŏnjena nukunga-eke silsu-ga   saengki-nŭn
            world-LOC   always someone-DAT mistake-NOM   occur-ADNM

            kŏs-I   maj-da
            FN-NOM   true-DECL

       b.   kŭrae hajiman kŭlŭn silsu-*NŬN*   kŭlŭn saram-eke-*NŬN*
            yes   but   such   mistake-CONTR   such   man-DAT-CONTR

            ilŏna-sŏ-*nŭn*   andoi-n-da
            happen-PTC-TOP   neg-pres-decl

All these examples suggest that contrastivity is a property both topical and focal constituents can have as an additional discourse semantic function. We propose that contrastivity raises a topical element in the hierarchy by making it a delimiter in Krifka's (2007: 49f.) sense, which would mean shifting it to the 'aboutness'-position in Frascarelli & Hinterhölzl's (2007: 95ff., 109ff.) model.

    Given the notion of a *familiar* or *continuing* topic in the accounts just discussed, we would like to return to the notion of *givenness*. Whereas Reinhart (1981) strictly rejects the familiarity account, many authors rely on its constituting effect on topicality (Vallduví 1992: 20ff.). However, note that the condition of familiarity can be decisively weakened by replacing *contextual givenness* with *accessibility* (cf. Vallduví & Engdahl 1996: 498, who borrow the term from Ariel 1988; cf. also Reinhart 2004: 298ff.). It is well known that topics can also be inferred from the background.

(85)   a.   Gustav hat die ganze Nacht nicht geschlafen. *Studenten* sind
            G.   has the whole night not   slept   students   are

            ja   ununterbrochen am ARbeiten.
            PTC   uninterruptedly at work-INF

            'Gustav hasn't slept all night. Students are uninterruptedly at work,
            as you know.'

       b.   Gustav geht gleich an die Uni.   *In der Mensa*   gibt es
            G.   goes shortly to the university in the refectory gives it

            heute GLÜHwein.
            today mulled-wine

            'Gustav is going to the university, soon. In the refectory, they serve mulled
            wine today.'

The second sentence in (a) uses a generic expression which can be the topic if it is part of the *common ground* that the pre-mentioned referent belongs to this class of individuals. Similarly, the scene setter in (b) is a suitable topic because speaker and hearer share the knowledge that universities have refectories. But the conditions on accessibility are even weaker. It may even be sufficient to know of the existence or the properties of a referent. Thus, frame setters are always highly accessible

as they are presupposed, like the existence of a *yesterday* or the expectation of a *tomorrow*.

(86)   *Yesterday* it was raining. *Tomorrow* it hopefully won't.

Topics such as those in Reinhart's Example (62) (*When she was five years old, a child of my acquaintance announced a theory that she was inhabited by rabbits*) are accessible since it is presupposed that people can have acquaintances and that they can have children. Note that the sentence becomes significantly worse if the subject is replaced by a bare indefinite that cannot be presupposed, e.g. *a person*. However, as also argued by Reinhart (2004: 275ff.), this does not mean that presupposition implies topichood. Note that the subjects of thetic sentences are also often presupposed:

(87)   The police are coming.

The reason for the often observed interference of topicality with properties such as *givenness*, *specificity*, *definiteness* etc. must be that they imply high accessibility, which is a precondition for *discourse cohesion* (Vallduví 1992: 20), which again is a reason for choosing constituents as topics. This is why we would like to suggest regarding these properties as *prototypical* rather than *necessary and sufficient features* of topics.

4.2   'Perspectivation'

"The speaker may choose very different 'perspectives' under which the entire information to be verbalised is put into sequential order" (Stutterheim & Klein 2002: 66). Since several of the features influencing constituent order seem to exist independently of topicality, the discussion may be reduced to two major questions. Firstly, what are the primitives of what we call perspectivation? Secondly, how do they, in fact, interact with topicality? In the context of the term perspectivation, the notions of salience and of 'point of view' (called empathy by Chafe 1976) frequently occur in the literature besides 'topicality'. The options a speaker has for marking what he finds relevant (or assumes the hearer to), or for illustrating his point of view, are quite different across the languages of the world due to different structural means and different formal restrictions.

    Since English has a syntactic system with very few options for permutation, the role of *passivisation* as a means of changing the word order is important for marking the point of view. At the same time, the speaker can also choose this construction type as an instruction to the hearer regarding what to take as an address for storing the information. e.g.:

(88)   a.   Caesar conquered Gaul in 52 BC.
       b.   Gaul was conquered (by Caesar) in 52 BC.

Even though it changes the point of view along with the subject, passivisation cannot be a means specific to topicalisation. Passivisation does not always result in the creation of an address for information storing. This is shown by thetic passive sentences:

(89)   Numerous peoples were defeated by the Romans.

Elements marking the point of view relative to other elements tend to precede them in the sentence. Being the 'point of view' may be a feature that is typical of topics, but it is neither a necessary nor a sufficient condition. There are several factors causing elements to precede others. It seems obvious that the more discourse-prominent features, such as *point of view* or *familiarity*, an element has, the less acceptable the precedence of other elements in the sentence is. The crucial question to ask now is when do these features determine the choice of a topic?

Firstly, we would like to discuss some more properties of elements which can trigger their fronting. Specificity is another feature that is characteristic of topics but is not a sufficient condition for topicality. Assume the following context:

(90)   A: What did he say?
        B: That there is probably exactly one country in the world where everything is better than here.

The following sentences with quantified expressions show that specific indefinites tend to precede the sentence adverbial in German, whereas non-specific ones follow it. In (91a), the phrase *in genau einem Land* ('in exactly one country') follows the sentence adverbial *wahrscheinlich* ('probably'). In this case, it must have a non-specific reading. If it precedes the adverbial, it has a specific but implicit reference (e.g. Switzerland in 91b).

(91)   a.   dass auf der ganzen Welt wahrscheinlich *in genau einem Land*
             that in the whole world probably   in exactly one land
             alles   besser ist, als   hier.
             everything better is   than here
        b.   dass auf der ganzen Welt *in genau einem Land* wahrscheinlich alles besser ist, als hier.

It has often been observed that non-specific indefinites must not be moved higher than specific expressions. The reason is that they always take narrow scope, whereas specific indefinites may take wide scope (Pafel 1997: 31ff.).

(92)   A: Wem hast du ein Buch geschickt?   (Lenerz 2000: 266)
             'Who did you send a book?'
        B: Ich habe (*ein Buch) dem   Verlag *(ein Buch) geschickt.
             I   have a-ACC book the-DAT publishers   sent

The example in (B) with *… ein Buch dem Verlag geschickt* improves immediately if the indefinite is stressed, or if it occurs with a restrictive attribute (such as 'delayed far too long'), giving a quantified object a topical (Endriss & Hinterwimmer 2007: 85; 88) or a specific reading:

(93)   a.   Ich habe EIN Buch dem Verlag geschickt.
        b.   Ich habe ein schon lange überfälliges Buch dem
             I   have a   already long   overdue   book the
             Verlag   geschickt.
             publishers sent
             'I've sent a book to the publishers that was long overdue.'

It is a commonplace in the research on German information structure since Höhle (1982) that *normal order* and *normal stress*, i.e. base order and sentence stress on the constituent left of the predicate, license '*maximal focus*' (*sentence focus* in Lambrecht's 1994 terms).

(94)   a.   What did he say?
        b.   …dass [VP schon zweimal [VP eine Olympiade   an
             that   already two times   an Olympic-games to
             Wuppertal vergeben worden]] ist]
             W.   given   AUX-PASS AUX-PERF

Accounts like Haider (1993: 212ff.), Abraham (2007: 183ff.) or Molnárfi (2007: 159ff.) propose that the VP with its basic internal order represents the focus of the sentence (see above, Sect. 3.3):

> There is a basic word order in German (and Dutch and West Frisian) with rhematic (informationally new) material in VP. The hermeneutic identification of this word order is '(one single) grammatical clausal accent' (GA), which is placed on the head of the deepest (V^0-adjacent) embedding inside VP.
>
> (Abraham 2007: 184)

This means defocused phrases must be in a position outside of the VP. One often observed result is the *definiteness effect* raising discourse semantically marked definites. Note, however, that definiteness itself does not imply defocusing of a discourse referent (Lambrecht 1994: 108; Molnárfi 2007: 176ff.). Salient or singular referents from the common ground can be inside the focus even if definite (cf. Molnárfi 2007: 178 about referents like *the president* or *the cat*). We consider definiteness to be primarily a quantificational feature restricting a reference set in relation to the discourse domain. That is why definites have neither to leave the 'focus domain' VP nor be *refocused* in situ, as proposed by Abraham (2007: 199f.).

Neither *definiteness* nor *specificity* crucially forces elements out of the VP (96a); there must be additional properties, such as being the point of view (96b) or contrastivity (96c).

(95)   What did he say?

(96)   a.   …dass [$_{VP}$ schon zweimal [$_{VP}$ *die Olympiade* an Wuppertal vergeben worden]] ist
     b.   …dass *die Olympiade* [$_{VP}$ schon zweimal [$_{VP}$ an Wuppertal vergeben worden]] ist
     c.   …dass *die Winterolympiade* [$_{VP}$ schon zweimal [$_{VP}$ an Wuppertal vergeben worden]] ist

What occurs in the fronted VP is also in the focus. Therefore, VP-fronting may be taken as a test for *predicate focus* or *sentence focus*.

(97)   a.   [$_{VP}$ schon zweimal [$_{VP}$ eine Olympiade an Wuppertal vergeben worden]] ist seiner Ansicht nach
     b.   [$_{VP}$ eine Olympiade an Wuppertal vergeben worden]] ist seiner Ansicht nach schon zwei Mal
     c.   [$_{VP}$ schon zwei Mal [$_{VP}$ an Wuppertal vergeben worden] ist die (Winter) olympiade seiner Ansicht nach
     d.   *[$_{VP}$ die Winterolympiade an Wuppertal vergeben worden] ist seiner Ansicht nach schon zwei Mal

Sentence adverbials, frame setters, aboutness topics, specific expressions, contrastive topics and similar discourse semantically marked elements occupy positions outside of the VP in variable and conceptually ranked order.

(98)   A: What do you know about Wuppertal?
     B: I know that …

(99)   a.   (dort)   überraschenderweise   (dort)   [$_{VP}$ schon   zwei Mal
        there   surprisingly   there   already   two times
        eine Olympiade   stattgefunden] hat.
        an   Olympic-games   taken-place   has
     b.   (dort)   anlässlich   der   Schwebebahnerweiterung   (dort)
        there   on-occasion   of-the   suspension-railway-extension   there
        [$_{VP}$ eine Olympiade   stattgefunden] hat.
        an   Olympic-games   taken-place   has
     c.   (dort)   [EIN bedeutendes Sportereignis]   (dort)   [$_{VP}$ schon
        there   one important   sport-event   there   already
        zweimal   stattgefunden] hat. Das ist die Olympiade.
        two-times   taken-place   has. that is   the Olympic-games

     d.   (dort)   eine OlympiADE   (dort)   [$_{VP}$ noch nicht stattgefunden] hat.
        there   an   Olympic-games   there   still not taken-place   has.
        (Sie   haben   aber   schon   mal   ein   SCHWEbebahnrennen   gemacht.)
        they   have   but   already   once   a   suspension-railway-race   made

These examples show that the German *middle field* can roughly be divided into two partitions, the lower one containing the sentence or predicate focus, the higher one containing discourse semantically marked elements, among them also addressation topics. There are options of 'perspectivation' in both partitions. In the 'focus domain' VP, however, scrambling is restricted:

(100)   What did he say?

(101)   a.   …dass [$_{VP}$ bald [$_{VP}$ eine Olympiade in Wuppertal stattfinden]] soll
      b.   ?…dass [$_{VP}$ bald [$_{VP}$ in Wuppertal eine Olympiade stattfinden]] soll

Thus, languages like German are discourse configurational because they lack specific positions for different kinds of constituents. The order is constrained by the features themselves, and this obviously often allows for different options. Similar analyses should be possible for languages like Japanese or Korean. As mentioned above, earlier research on information structure relied on the assumption that, in these languages, topics are marked both by specific particles and by fronting to a specific clause initial position. We have also shown evidence from more recent research, however, that this view needs more differentiation by considering contrastiveness, suggesting that the occurrence of these particles and perspectivation (especially topicalisation) are independent. This view can be supported by further phenomena of perspectivation as shown by contexts like the one below, presupposing nothing but the frame setter *today*.

(102)   A: Do you know what will happen today?
     B: Fortunately, some student will probably record the whole lecture today.

Consequently, no contrastivity marker is used with the subject *some student* in the equivalent Japanese and Korean sentences. Nevertheless, there is a potential permutation of the sentence adverbials *to my pleasure* and *probably*. The subject can be placed after, in between, or before these adverbials.[19]

(103)   kyo   nani-ga   okotta   ka   sitteiru?   (Japanese)
       today   what-NOM   happen   COMP   know?

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(104) a.   kyoo-wa   uresii-koto-ni   osoraku *aru*   *gakusei-ga*
          today-TOP   to-my-pleasure-DAT probably some student-NOM

          zenbu-no jugyoo-no nooto-o totte-kureru daroo.
          all-GEN   class-GEN   note-ACC take   PTC

     b.   kyoo-wa uresii-koto-ni *aru gakusei-ga* osoraku zenbu-no jugyoo-no nooto-o totte-kureru daroo.

     c.   kyoo-wa *aru gakusei-ga* uresii-koto-ni osoraku zenbu-no jugyoo-no nooto-o totte-kureru daroo.

(105) nŏ+nŭn onŭl muŏs–i   ilŏna+l-ji   a-ni   (Korean)
        you-TOP today what-NOM happen-FUT-COMP-PTC know-Q-PTC

(106) a.   onŭl–ŭn   kippŭkedo   ama   *han hansaeng-i*   kangŭI
          today-TOP to-my-pleasure probably a   student-NOM lecture

          jŏnche-lŭl nokŭmha-l kŏs   ida
          whole-ACC record-FUT COMP copula

     b.   onŭl–ŭn kippŭke*do han hansaen*g-i ama kangŭI jŏnche-lŭl nokŭmha-l kŏs ida

     c.   onŭl–ŭ*n han hansaen*g-i kippŭkedo ama kangŭI jŏnche-lŭl nokŭmha-l kŏs ida

These examples, which parallel the orders in the German examples in (50) above, show that there is no clear 'base position' for sentence adverbials in Japanese and Korean either. Besides topicalisation, there are more discourse semantic movements changing the order between more or less prominent elements in the sentence – based on the fact that SOV languages like Japanese, Korean and German have scrambling, offering options of *perspectivation* beyond those of the canonical positions provided by functional projections in languages such as English. We would like to conclude this subsection by referring to an earlier account by Fukui (1995) who proposed that, besides head finalness, the syntax of Japanese differs from the syntax of English mainly by the lack of any functional projection dominating the VP.

5. Conclusion: Towards a model of interacting constraints on linearisation

Our discussion shows that information packaging is subject to interface conditions that are variable with respect to the interaction between *syntax, prosody, semantics* and *pragmatics*. This necessarily allows for a high number of parametrically deducible language types. Therefore, dividing languages into discourse configurational, relation configurational, and mixed types cannot yield a proper classification. The systems of *information structure*, *argument structure* and *positional licensing* are

subject to autonomous principles. Therefore, the parameters of these systems cannot, in fact, be as complementary as suggested by the earlier comparative approaches that were discussed in this article.

    It is obvious that precedence rules (expressed in terms of c-command in hierarchical phrase structure) based on various criteria are needed after all, in order to account for syntactic variation in an explanatorily adequate way. There seem to be four basic classes of restrictions for constituent order. First of all, there are some empirical generalisations we cannot derive from primitives and which we used mainly as diagnostics for the identification of other syntactic properties.

(107) *(Presumably) universal ordering restrictions*
     – Topical material cannot be interpreted in the nuclear scope of a quantifier
                                  (cf. Endriss & Hinterwimmer 2007: 86ff.).
     – Sentence adverbials take scope over sentence focus   (cf. Frey 2004: 188f.).

Secondly, if a language can be identified as having one or the other kind of canonical position relating to functional projections, their hierarchy is fixed not only by the order chosen during language acquisition, but also by universal conceptual factors (cf. Parodi 1998; Rizzi 2000). This does not only apply to functional features: The order of constituents within the domain of V (including the *v*P of more recent Generative accounts) is very clearly constrained by a lexical conceptual hierarchy (e.g. the Θ-hierarchy of the *LCS*).

(108) *Hierarchy of canonical positions*
     – C-domain > I-domain
     – I-domain > V-domain
     – C-domain: TopP > FocP   (languages like Italian; cf. Rizzi 1997)
     – I-domain: Agr > T
     – V-domain: Θ-hierarchy

It seems obvious from the discussions in this paper that languages may lack canonical positions for topics as they may for subjects. The syntax of these languages is more liberal with respect to what we called *perspectivation*. We assume that there is no universal hierarchy of FPs, but that features, especially those interfacing with pragmatics (such as the features of *illocutionary force*, *clause mood* and *perspectivation*), are acquired by the first language learner as he extends his conceptual knowledge (in fact, this is a proposal we made earlier in a model of grammar change; cf. Öhl 2009). It depends on the parameterisation of the inventory of functional features whether the child acquires phrases that then provide more or less fixed positions in the language specific syntax.

    We think that the options for parametrising FPs are subject to more global hierarchies of features that are made evident by several general tendencies which

can be observed cross-linguistically. Unless they are restricted by interactive factors, or by relevant projection hierarchies in a syntactic system, they are open to a certain amount of variation during performance. As far as we can see now, there is no absolute hierarchy to be established between these tendencies.

(109) *Tendencies of syntactic perspectivation*[20]
   – Scope is marked by precedence (cf. Endriss & Hinterwimmer 2007: 86ff.).
   – The point of view is marked by precedence (cf. above, p. @62ff.@).
   – Defocusing is marked by precedence (cf. above, p. @65ff.@).
   – The subject of predication is marked by precedence (cf. above, p. @47ff.@).
   – Specificity is marked by precedence (cf. above, p. @63ff.@).
   – Familiarity/accessibility is marked by precedence (cf. above, p. @46ff.@).
   – Relevance is marked by precedence (cf. above, p. @62@).
   – …

These tendencies do not necessarily conflict with functional projections. The corresponding elements are not bound to syntactic functions or semantic roles in the first place. Whilst scrambling languages allow variation more liberally, there are also other options, such as the choice of arguments, or certain syntactic operations like passivisation, which permit speakers to create different perspectives.

The fact that all languages have at least some options of syntactic variation, and the various information structural properties a sentence topic can have, imply that notions like topic and comment are not primitives as such, but that it is more primitive features of perspectivation, like those listed in (109), which determine the choice of constituents to act as sentence topics. In our view, topicalisation is no more or less than a central means of perspectivation, i.e. the designation of a constituent for a prominent discourse semantic role on the grounds of certain properties. However, just as not all topics have each of these properties (in fact they cannot), nor is any one of the properties a sufficient condition for being a topic. Therefore, they have to be regarded as *prototypical* rather than *necessary and sufficient features*.

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20. We concede that this list is incomplete and neglects some phenomena like floating quantifiers and others. We also concede that we did not consider the whole range of literature that might be relevant to that topic. We did not discuss backgrounding and foregrounding in detail. Much more could be said about it and the topic would deserve a much more elaborate model to account for it. Nevertheless we hope we could outline the main idea that we developed on the basis of the contrastive phenomena we compared and analysed here. This might be the right place and the right time to use the familiar formula promising future research …

(110) *Prototypical features of sentence topics*
   – being an address (cf. above, p. @49ff.@) or delimitation (cf. above, p. @53ff.@) for information storage
   – being the point of view (cf. above, p. @62ff.@)
   – being the subject of predication (cf. above, p. @47ff.@)
   – defocusing (cf. above, p. @65ff.@)
   – specificity (cf. above, p. @63ff.@)
   – accessibility (cf. above, p. @46ff.@)
   – …

However, in our view, it is not at all clear whether all of these properties are primitives. Some may instead be consequences of the interaction of more primitive features. An adverbial scoping over the whole proposition, and thus marking the point of view, serves, at the same time, as *delimitation* for the information processing (Krifka 2007: 49f.; see above, p. @53@). Thus it can serve as a frame setter. A specific and defocused subject of predication marking the point of view can serve as an address in Reinhart's (1981) sense (see above, @p. 49@). These potential functions may also be supported by the degree of cognitive accessibility of an element.

From this point of view, the fact that topics and frame setters tend to precede all other constituents may just follow from the fact that they have several of the properties in (109). Or, put differently, the more of these properties an element has, the more probable it is that it is chosen as a frame setter or as a topic. A closer look at the relevant features and the ways in which they interact should be possible through intensive empirical research, providing more contrastive data from syntactic systems with a greater range of variation.

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