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ON FINITENESS

Abstract. The distinction between finite and non-finite verb forms is well-established but not particularly well-defined. It cannot just be a matter of verb morphology, because it is also made when there is hardly any morphological difference: by far most English verb forms can be finite as well as non-finite. More importantly, many structural phenomena are clearly associated with the presence or absence of finiteness, a fact which is clearly reflected in the early stages of first and second language acquisition. In syntax, these include basic word order rules, gapping, the licensing of a grammatical subject and the licensing of expletives. In semantics, the specific interpretation of indefinite noun phrases is crucially linked to the presence of a finite element. These phenomena are surveyed, and it is argued that finiteness (a) links the descriptive content of the sentence (the 'sentence basis') to its topic component (in particular, to its topic time), and (b) it confines the illocutionary force to that topic component. In a declarative main clause, for example, the assertion is confined to a particular time, the topic time. It is shown that most of the syntactic and semantic effects connected to finiteness naturally follow from this assumption.

1. INTRODUCTION

As so many other concepts from our grammatical tradition, the notion of finiteness is used by everybody and understood by nobody. We were taught that the inflected forms *amo*, *amor*, *amavisses* are finite forms of the verb, whereas the inflected forms *amans*, *amaturus*, *amavisse* are non-finite forms. No definition was given; instead, we were supposed to generalise from these and similar examples. Finiteness appears to be an inflectional category of the verb, along with tense, person, mood and others. This idea is problematic for at least two reasons. First, an inflectional category is not just a set of morphological changes; it is a cluster of formal and functional properties. But there is no apparent functional counterpart to the finite/non-finite distinction, as there is a functional counterpart to the distinction between active and passive or between present tense and past tense. Second, the finite/non-finite distinction between verb forms is also made for many languages in which its morphological marking is the exception rather than the rule. In English, all finite forms with very few exceptions such as *swam* or *are* can also be non-finite forms and in which all non-finite forms, except the *ing*-participle and some irregular forms such as *swum*, can also be finite forms. Nevertheless, we infallibly consider *left* in *He left* as finite, and in *He has left* as non-finite. Why? Some irregular verb forms such as *must* are regularly categorized as finite, although they bear no inflection at all. Hence, finiteness should be

more than just some changes in the form of the verb. But what? This is the question that I will address in this paper. It will be shown that finiteness has a number of syntactical and semantic consequences that cannot be derived from the fact that finite forms are marked for tense, person, mood and other verbal categories. Finiteness should be seen as a grammatical category in its own right.

This fact is clearly manifested in language acquisition. It has often been noted that children as well as adult learners regularly develop forms of linguistic organization which are characterized by the absence of finite verbs; this will be discussed in section 2. There are also many 'fully-fledged' languages without verb inflection, such as Chinese or Vietnamese. What is 'finiteness' in these languages? The same question may be asked for languages with a very rich inflection, such as all polysynthetic languages. The former are usually assumed to have no finiteness at all. This may be a premature conclusion, since the absence of inflection does not exclude the existence of other means to express the same function. As for polysynthetic languages, opinions on what is finite and what is non-finite seem largely determined by the 'missionary's way' of grammatical analysis: a particular construction is labelled after a more or less close translation equivalent in Latin or English. This strategy has guided a great deal of our description of languages other than those for which traditional grammatical categories were originally proposed, that is, for Greek and Latin. It has led us to call a 'perfect' form *veni* as well as *(I) have come* and *(ich) bin gekommen*, although neither their formal composition nor their functions are the same. Familiar categories such as perfect, passive, subject, direct object are but very preliminary attempts to lump together some functional and formal regularities, useful just by the very fact that they are so fuzzy and hence can be applied without any in-depth analysis. They should not be seen as theoretical notions, and any attempt to give them a 'precise definition' appears to be as hopeless and misguided as the attempt to give a precise definition to the Aristotelian classification of animals. They help us to bring together the phenomena to be investigated, no more, no less. This also holds for the notion of finiteness.

The paper has three parts. In section 2, I will review some relevant facts from first and second language acquisition. Sections 3 to 5 are devoted to a number of syntactical and semantical properties which go with finiteness; examples are primarily taken from German, since the distinction between finite and non-finite is relatively clear and undisputed for most forms. In sections 6-9, I will try to bring these observations together; the result is an emergent picture of the role of finiteness in sentence structure. It does provide a formal theory of finiteness. It prepares such a theory. More

problems will be raised than can be answered; but there is not much work on the notion of finiteness upon which one could build.

2. FINITENESS EFFECTS IN LANGUAGE ACQUISITION

In first as well as in second language acquisition, there is a characteristic stage in which speakers organise their utterances without finiteness marking. In what follows, I will briefly sketch the core facts; more detailed accounts are found in Dimroth & Lasser (2002).

2.1. *First Language Acquisition: Root Infinitives*

The first productive utterances of children are dominated by non-finite verb forms. Here are a few examples from German:¹

- | | | |
|--------|--|--------|
| (1) a. | Mein Kakao hinstelln
'my cocoa put-down' | (2;02) |
| b. | Max auch Pudding kochen
'Max also pudding cook' | (2;08) |
| c. | Ich erst ma das Buch angucken
'I first just the book watch' | (2;11) |
| d. | Eva Eis essen
'Eva ice cream eat' | (2;02) |
| e. | Andere Eis essen
'Other ice eat' | (2;03) |
| f. | Eis gesse
'Icecream eaten' | (2;03) |

This fact, well-known since the days of Preyer and Stern, has recently become a matter of vivid discussion under the name of 'root infinitives' (i.e., infinites in root clauses). Over the last ten years, it has been addressed in numerous papers. In the present context, we will not re-examine this work (see Gretsche, this volume for a discussion and a new analysis, which is related in spirit to the present view on finiteness).

The lack of agreement in on-going research is partly due to the very unsatisfactory empirical basis. For German children at around age two, estimates on the share of root infinitive utterances vary between 15% and 100%.¹ This sharp fluctuation may reflect real variation between children; but for the most part, it is due to methodological problems. First, it is very difficult to decide what in a child's utterance is a root form or a productive sentence. Second, there is no clear criterion on when a verb form should be considered to be finite or non-finite. Researchers tend to go the easy way

here: a form is 'finite' in child language, if its (closest) phonetic equivalent in adult language is finite, and it is non-finite, if its (closest) phonetic equivalent in adult language is non-finite. But formal resemblance to adult forms does not guarantee functional equivalence. Third, child production is often phonetically distorted and therefore in many ways ambiguous. Hence, it is anything but easy to draw clear conclusions about the role and development of finiteness in child language. Two points appear beyond doubt, however. First, children are highly sensitive to the distinction between finite and non-finite forms. Second, they are also sensitive to syntactical consequences of this distinction; this is clearly reflected in the positional differences in which these forms appear.

2.2 Second Language Acquisition: From Nominal to Finite Utterance Organization

In second language acquisition, the existence of a non-finite stage is less apparent. This is largely due to the fact that work in this field is still dominated by classroom research, in which the structure of the acquisition process largely reflects the way in which the material is presented to the learner. Thus, even the very first constructions taught are finite, and thus, it is no surprise if learners begin with finite sentences.

Second language acquisition outside the classroom reveals a very different picture. The largest investigation in this domain took place from 1981-1988 in France, Germany, Great Britain, The Netherlands and Sweden (for a comprehensive account, see Perdue 1993a, b). It was longitudinal and cross-linguistic. Its results are based on the productions of 40 adult learners of Dutch, English, French, German and Swedish, with varying native languages. All were recently arrived immigrants with legal status, and in daily contact with the language of their new social environment. All learners were observed and recorded over a period of about 30 months; various techniques of data collection were applied. The results give us at least some idea of what happens in 'natural' second language acquisition.

In general, this process is continuous and gradual, without really sharp boundaries between the various stages. But when looked at from some distance, it appears that there are three major steps in the way in which learners put their words together. We can call these steps 'nominal utterance organization', 'infinite utterance organization' and 'finite utterance organization', respectively. On the level of nominal utterance organization, productive utterances (i.e., except rote forms) are extremely simple and mainly consist of seemingly unconnected nouns, adverbs and particles. There are some verb forms used in a noun-like way, that is without the structuring

power of the lexical content of verbs — such as argument structure, case role assignment, etc.

This is different in the second major stage in which all learners, irrespective of source or target language, develop a particular language form, the ‘Basic Variety’. In the variety, verbs are regularly used, but they show up in only one form, mostly the infinitive or the bare stem. The structure of utterances is determined by a number of elementary organizational principles. In a nutshell, there are three such principles:

- (a) The (infinite) verb is placed after the first noun phrase,
- (b) The agent comes first, if there is more than one noun phrase,
- (c) The focus comes last.

These three principles can be at variance, and then, the learner is faced with a problem; in fact, such conflicts seem to be a germ of further development. In general, however, the Basic Variety is a remarkably efficient communicative system which exploits the lexical content of verbs and adopts a simple constraint of information structure. What is completely absent, however, are ‘finite’ verb forms. These are developed by only two thirds of the forty learners investigated in the project, and this development is very complex and varies from language pair to language pair.² It is not just a matter of inflectional morphology: the acquisition of finiteness also leads to a major restructuring of learner language (see Klein & Perdue, 1997).

The crucial point in the present context is this: second language learners, just as first language learners, clearly distinguish between ‘infinite utterance organization’ and ‘finite utterance organization’. Thus, the evidence from language acquisition, first and second, supports the notion that finiteness is not just tense or mood, let alone merely a matter of inflection - it is a major organising factor in the structure of utterance. This should be reflected in syntactic and semantic properties of all languages. We shall now examine this in a language with a quite transparent marking of finiteness, i.e., German.

3. FINITE AND NON-FINITE FORMS IN GERMAN

The starting point of all verb forms, simple or complex, is the bare verb (abbreviated Vs) as a lexical unit, such as *lach-* ‘laugh’, *geh-* ‘walk’, *hol-* ‘fetch’.³ When integrated into some construction, Vs has to undergo some morphological operation which turns it into an inflected form. Such an inflected form can be finite, as the second person singular *lachst*, or non-finite, as the infinitive *lachen* or the participle *gelacht*. Is Vs itself finite or non-finite? The grammatical tradition has no opinion on this issue. In what follows, I shall say that it is ‘non-finite’. Then, of course, a distinction has to

be made between Vs and those forms which are explicitly marked as non-finite; the latter I will call 'infinite'. Hence, we have two types of non-finite forms: those which are marked as infinite, and bare stems that are not finite but can be made finite by an appropriate operation; I shall say that such a form is 'FIN-linkable'. Infinite forms are not FIN-linkable unless they undergo further syntactical operations. In this regard, they are on a par with adjectives or nouns.

Forms such as *lachst* or *gelacht* are morphologically compound but syntactically simple. They can be combined with other verb forms, resulting in syntactically compound forms; these can be finite, such as *gelacht zu haben scheinst* 'seem (2nd person singular) to have laughed', or infinite, such as *gelacht zu haben scheinen* 'seem (infinitive) to have laughed'. There are numerous constraints on this composition, not to be considered in the present context. But one fact deserves to be noted:

- (2) One finite element constraint:
A syntactically complex verb form can contain several infinite forms but maximally one finite form.

This restriction, which seems to be universal, is well-known but difficult to explain. Why is it possible to say in English *He must be able to dance* but not *He must can dance*, although finiteness is not even explicitly marked? The reason cannot be semantic incompatibility, since *be able to* and *can* both express ability. It could be a mere idiosyncrasy. Then, however, it would be surprising that we find this constraint in so many languages.

There are three infinite forms in German:

- (3) a. Infinitum I: This is the 'bare infinitive' which, a few exceptions aside, is formed by attaching the suffix *-en* to Vs: *lach-* is turned into *lachen*.
- b. Infinitum II: This is the so-called present participle or 'Partizip I'. It is formed by attaching the suffix *-end* to Vs: *lach-* becomes *lachend*.
- c. Infinitum III: This is the so-called past participle or 'Partizip II'. Its form varies considerably, depending on the particular verb stem. Most commonly, *ge-* is prefixed and *-t* is attached as a suffix: *lach-* becomes *gelacht*. But there are many other possibilities.

The situation is much more complicated for finite verb forms, since they are regularly inflected for tense, mood, person, and number (not for voice). The latter two result from agreement and have no independent meaning, hence have no apparent connection to the function of finiteness — if it has an independent function at all.⁴ This leaves us with two tenses, usually called *Präsens* and *Präteritum*, and three moods, usually called *Indikativ*, *Konjunktiv* and *Imperativ*. Hence, we have the following system (I give the form of the third person singular of *geh-* 'walk' for *Indikativ* and *Konjunktiv*:

(4)	Indikativ	Konjunktiv	Imperativ
Präsens	<i>geht</i>	<i>gehe</i>	<i>geh</i>
Präteritum	<i>ging</i>	<i>ginge</i>	-

There are many morphological variants which depend on the particular Vs. It is unclear whether the imperative should be considered to be finite or infinite. In fact, it is not easy to see on which grounds such a decision could be made; the traditional notion of 'finite form' is too ill-defined. Here, I will focus on the two forms of the *Indikativ* and only marginally deal with the *Konjunktiv*, whose functions are hard to determine and subject to much variation.

For the following discussion, a brief look at the composition of a finite form such as *geht* will be useful. This form has two components - the bare verb stem Vs *geh-* and a morphological marking *-t* which turns Vs into a finite form. Here, the carrier of finiteness is a simple affix. In other cases, however, the changes on Vs are very different, as illustrated by *ging*. I assume therefore that finiteness is represented by a more abstract operator whose application on Vs results into the finite form. This operator will be called FIN0 in the case of present forms and FIN< in the case of past forms (if the difference does not matter, FIN is used). Hence, *geht* is the result of applying FIN0 to *geh-*, whereas *ging* is the result of applying FIN< to *geh-*. FIN as well as Vs contribute to the entire meaning of the finite form. The contribution of Vs — its lexical content — is relatively clear: it provides an argument structure and assigns properties to its arguments, in this case, to its single argument. The contribution of FIN0 and FIN< is what is at issue here; somehow, it is related to 'tense', but it may have other functions, as well. In syntactically simple forms, such as *geht* or *ging*, the finite component and the lexical component are merged in one word. In syntactically compound finite forms, these two meaning components may be partly or fully distributed over two or more words. The latter case is exemplified by constructions with finite auxiliaries or copulae, such as *hat gelacht* 'has laughed' or *ist gegangen* 'has gone'. The finite forms *hat* and *ist* do not provide descriptive properties; these originate from the other part, here from the verb stem embedded in the past participle.

4. SYNTACTIC EFFECTS OF FINITENESS

There are at least three salient finiteness effects in syntax, to be discussed in turn.

4.1. *Word Order*

The basic word order of German follows three core rules, all of which are closely connected to the finite verb:

- (5) a. In declarative main clauses, the finite verb is in second position (i.e., after the first 'main constituent').
 b. In subordinate clauses, the finite verb is in final position.
 c. In yes-no questions and in imperatives, the finite verb is in initial position.

There are a few exceptions, two of which are of interest here. First, there are hypothetical and counterfactual subordinates of the type *Käme Hans, ginge ich weg* 'If John came, I would leave'. Here, the finite verb is in initial position, just as in yes-no questions and imperative clauses. With these it shares the property that whatever is expressed, here the arrival of Hans, is not said to be true: these sentences are not assertive. This also applies to the second exception. These are main clauses of the type *Käme er nur nicht hierher!* 'Hopefully he won't come here!' They express wishes, something like *I wish he didn't come here, but I am afraid he will*. We shall come back to these exceptions in section 8.

The rules in (5) have been stated for centuries in more or less the same way in every school grammar, and the first of them has given rise to the familiar notion that German is a V2-language. Now, this formulation is somehow ambivalent. A morphologically simple finite form merges two components, the lexical content from Vs, and finiteness from FIN. Which of these components is responsible for the three rules in (5)? It is finiteness, as becomes clear when lexical content and finiteness are not fused in one word:

- (6) a. Dann hat er einen Kuchen gebacken.
 then has he a cake baked.
 b. obwohl er dann einen Kuchen gebacken hat.
 although he then a cake baked has.
 c. Hat er dann einen Kuchen gebacken?
 has he then a cake baked?
 Sei nicht so ängstlich!
 be not so shy!

Hence, the familiar word order rules of German have nothing to do with the verb as a lexical category. This impression comes from the fact that sometimes, Vs and FIN are fused in one word, and then the positional constraints on finiteness win over those of the lexical verb.

A similar argument can be made for another important grammatical constraint linked to the verb since Ross (1967) first introduced it: ‘gapping’, i.e., the omission of the verb in one of two parallel clauses, as in *John drank a beer and Peter ___ a wine*. As I have argued elsewhere, this type of ellipsis has nothing to do with the verb as a lexical category but with finiteness (Klein, 1981). If the carrier of finiteness is identical, it can be omitted on the second occurrence, as in *Hans ist gestern abgereist und Peter (ist) heute angekommen*. If, however, the lexical verb is identical, then it cannot be omitted: *Hans war gestern abgereist und Peter ist heute *(abgereist)*. It is possible, though, if the finite element is omitted, as well: *Hans ist gestern abgereist und Peter (ist) heute (abgereist)*. Hence, if finiteness falls, everything else can fall in appropriate context.

These observations on word order and gapping give rise to two comments. First, they show that the common classification of German and other languages as SOV, SVO, OSV is highly misleading. What matters for word order is not the lexical category V but finiteness — whatever it is. This fact casts some doubt on all typological classifications based on SOV, SVO and OSV word order. Second, if indeed finiteness and not the lexical verb is at the very heart of basic word order, then there is the natural question: Why is this so?

There is no straightforward answer. FIN carries tense. Under its traditional interpretation, tense indicates the temporal relation between the situation described by the sentence and the moment of speech. There is no obvious reason why this information should be given in second position in declarative main clauses and in final position in subordinate clauses. The same reasoning applies to the other category traditionally associated with finiteness, mood. A hint comes from the observation that FIN is in second position just in those cases in which the sentence has a kind of assertive function. This is not the case in subordinate clauses, in yes-no questions and in imperatives; nor is it the case in some other FIN-initial constructions like those noted after (5) above. This hypothetical association between ‘assertive function’ and the position of FIN is violated by another type of sentence not mentioned so far, *w*-questions such as *Wen hat Hans angerufen?* ‘Whom did Hans call?’ *Wann kommt Hans?* ‘When does Hans come?’ But first, these sentences have an explicit illocutionary marker which may suspend the assertive status. Second, they normally presuppose the truth of an underlying less specific proposition, here the proposition that Hans called someone, or that Hans will come. All that is at issue is *whom* he has called, and *when* he

will come. No such presupposition is made in a yes-no question such as *Hat Hans angerufen?* 'Did Hans call?' or *Kommt Hans?* 'Does Hans come?'.

Modern English has a similar but weaker association between the position of FIN and assertive status: subordinate clauses have FIN in second position, too, and in main clauses, the subject (which normally occupies the first position in English) may be preceded by a 'topicalized' constituent. Note, however, that the 'non-assertive' character of subordinate clauses may be due to the complementizer, and that topicalized constituents somehow deviate from the default structure: they exhibit a particular topic structure, a point that might be relevant for the role of finiteness.

4.2. Subject Licensing

There is a second familiar syntactic fact that is related to finiteness: in the absence of FIN, the argument position slots provided by Vs cannot be completely filled by appropriate noun phrases. In traditional terms, the grammatical subject requires the presence of a finite verb, or in more recent terms, only AGR licenses a nominative. I shall state it as in (7):⁵

- (7) Subject licensing:
No grammatical subject without finiteness.

There are a few exceptions such as the ones given in (8):

- (8) a. Ich und das Geschirr spülen —
I and the dishes clean
das muß ich mir erst mal überlegen.
that must I me first think about.
b. Ich das Geschirr spülen —
I the dishes clean
das muß ich mir erst mal überlegen.
that must I me first think about.'

Why this constraint on the filling of one argument slot? After all, it is the lexical content of Vs, and not FIN, which provides these slots. Again, the answer is not obvious. If finiteness is just tense or mood, why should the possibility to have a grammatical subject hinge on the presence of tense or mood, let alone upon the presence of agreement features such as person or number? If there is no finite element, agreement is superfluous anyway. Hence, there must be something else in FIN that is responsible for this constraint.

The exceptional cases in (8) may give us a hint. First, sentences of his type have no assertive character. In a way, they just rise a possibility - the existence of a hypothetical situation which the speaker considers somewhat surprising but surely not excluded. Second, they only include given information. The possibility of this situation must have been mentioned before. Third, their intonation gives the impression of two topics: as for me and as to the possibility to clean the dishes — that is something I must first think upon. This observation is confirmed by the fact that in (8a), both components are separated by *und*. These observations are in no way conclusive; but tell us that constraint (7) has something to do with, first, the assertive character of an utterance, and second, with the topic status of the constituents.

The notion of grammatical subject, though used by everybody, is not well-defined. Typically, it combines three features (see, e.g., Keenan, 1976; Reis, 1982): case marking (nominative), agentivity, and topic-hood. None of these is obligatory. In German, there are subjects in the dative or in the accusative, there are non-agentive subjects, and there seem to be cases in which the subject is not topic (bearing in mind the notorious fuzziness of this notion). It might well be that constraint (7) is related to the third of these features but not to the others.

4.3. Expletive Licensing

Expletives, too, regularly require the presence of finiteness. Now, the term ‘expletive’ may refer to somewhat different phenomena across and also within languages. In what follows, I will consider only German *es*, which corresponds in many ways to English expletive *there*, but is much more common in presentational constructions.⁶ Thus, *Es ritten drei Reiter in die Stadt* ‘Three horseman rode into town’ is as well possible as *Drei Reiter ritten in die Stadt*; sometimes, it is clearly preferred, as with *Es ging das Gerücht, daß Hans krank war* ‘Rumour had it that Hans was ill’ vs. *Das Gerücht ging, daß Hans krank war*. German expletive *es* cannot go with infinite verb forms. Again, the question why this is the case, and just as in the syntactic effects of finiteness observed so far, it does not seem plausible that this has to do with tense or mood. There is no full agreement on what the precise function of expletives is. It seems clear, first, that they are often used to express the existence of something, and second, that they lead to a peculiar information structure. Since expletives are not possible without finite verbs, it seems more plausible that these two functions are served by the combination of expletives and finiteness, rather than by the expletive alone. This points in precisely the same direction as the other syntactic facts.

We may sum up the observations of this section in three points:

- (9) a. Finiteness is not just verb inflection: it clearly serves syntactic functions.
 b. These functions can apparently not be explained in terms of tense or mood.
 c. They rather seem to be connected to assertion and topic-hood, or, more generally speaking, with information structure.

So far about syntactic effects; let us turn now to semantics.

5. SEMANTIC EFFECTS OF FINITENESS

It has often been noted that verbs do not behave uninformatively with respect to indefinite noun phrases in object position:

- (10) a. John found a unicorn.
 b. John sought a unicorn.

In (10b), the object NP has a specific and a non-specific reading. So, John may have tried to find a particular unicorn — an entity which can have a proper name —, or he may have tried to find anything provided it is a unicorn. In (10a), only the first reading is available. Since the two utterances only differ in the lexical meaning of the verbs *to find* vs. *to seek*, it is generally assumed that the difference in the object NP readings is due to the lexical difference between these verbs. Verbs like *to find* are usually called ‘transparent’ (with respect to the object), and verbs like *to seek* are usually called ‘opaque’ (with respect to the object). It is also generally assumed that transparent verbs are the rule, and opaque verbs are the exception. This is in line with the common existential interpretation of indefinite NP’s, such as *a unicorn*, *a proof of Fermat’s Last Theorem* or *a former girl friend*. Thus, (10a) is understood to mean ‘There is an x such that x is a unicorn and x was found by John’. Such an analysis is possible, too, for the specific reading of (10b), but not for its non-specific reading. Hence, this reading requires a different analysis. Several proposals have been made to this effect; they are aptly surveyed, criticized and enriched by a new one in Zimmermann (1993).

Common to all of these proposals is the fact that the difference is considered to be due to the verb, more precisely to the lexical content of the verb. Now, the verbs in (10) are finite, hence, they include the Vs, the carrier of lexical content, as well as FIN, which carries tense, mood and perhaps something else. In principle, both components could be responsible for which readings are available. Consider now the following examples:

- (11) Finding a unicorn — what a bizarre idea!
- (12) It is the dream of each hunter to find a unicorn.
- (13) In order to find a unicorn, the hunters first went to the forest of Broceliande.

In all of these cases, the normal reading of the object NP *a unicorn* is non-specific (although a specific reading is not necessarily excluded). If, for example, (11) is true, then it is probably not meant that finding some particular unicorn, say the unicorn Senta, is a bizarre idea.

Apparently, transparent verbs such as *to find* show the transparency effect only when they are finite, as in (10a), but not when they are infinite, as in (11)–(13). A specific reading is enforced only by the presence of some ‘higher’ finite verb which governs non-finite *find a unicorn*. This is not so suggestive in (11)–(13). Consider now the following examples:

- (14) The hunter managed to find a unicorn.
- (15) The hunters succeeded in finding a unicorn.

Clearly, these sentences have a specific reading (in fact, it looks as if they have only a specific reading). This effect disappears if the governing verb is not finite, either, as in (16):

- (16) Succeeding in finding a unicorn is something that requires a lot of luck.

There is a straightforward conclusion:

- (17) Finiteness constraint on specificity:
Indefinite noun phrases have a specific reading only if they are (directly or indirectly) in the scope of a finite verb.⁷

By directly, I mean that the NP is the argument of a finite verb, by ‘indirectly’, I mean that the NP is the argument of a non-finite verb which, in turn, is in the scope of some finite element. This neither means that finiteness alone necessarily leads to a specific interpretation, nor does it mean that the lexical content of the verb which governs the indefinite NP is irrelevant. It only means that finiteness is indispensable for a specific reading. Why?

Again, it is hard to imagine that this effect of finiteness is a mere consequence of mood or tense, let alone agreement features which go with the finite verb. Intuitively, one of the differences between (9a) and (9b) is the fact that in (10a), there is a time at which a situation ‘obtains’ in which a unicorn is present; this is the time at which the unicorn has been found. In

this particular example, this time is in the past. It could also be in the present or in the future. Hence, mere tense is not crucial. In (10b), no claim is made that there is a time at which a situation obtains in which a unicorn is present. But it is not excluded, either. Such a situation could have obtained at some earlier time, for example. It seems plausible that specificity results from precisely this difference: the term *a unicorn* is specific with respect to a particular time talked about. If there are three times about which such an assertion is made, then there should be three specific unicorns — specific relative to the asserted situation. This is indeed the case:

- (18) a. Three times, John found a unicorn.
 b. Whenever John went out, he found a unicorn.

It is not excluded, of course, that this is the same unicorn in all cases, or in some of them. All that is said is this: The expression *a unicorn* is specific to a particular situation, which is claimed to obtain at some time. In (18a), such a claim is not made about one but about three times; in (18b), it is about an unspecific number of times. This is different in (18c):

- (18) c. John found a unicorn three times.

Here, only one claim is made about some — possibly very long — temporal interval in the past. This time contains three sub-intervals, at each of which a unicorn was found. This must be the same unicorn. Hence, what matters is indeed the temporal interval about which the claim is made: if there is only one, then there is only one specific unicorn — although there are three finding situations. In other words, it is not the situation times that are crucial to specificity, but the times talked about.

These observations generalize to all number-specific indefinite NP's:

- (19) a. Three times, John found two unicorns.
 b. John found two unicorns three times.

There are precisely two unicorns for each time talked about, for which it is asserted that John found them, just as there is precisely one in the case of (18c). It does not extend, however, to noun phrases which are not number-specific, such as bare plurals or mass nouns, since there is no specific number or amount for a particular time, about which the assertion is made.

What has this to do with finiteness? Infinite forms such as *to find a unicorn* or *finding a unicorn* describe a situation of unicorn finding (omitting the finder, though). They do not relate it to some time (or several times) talked about, and no assertion is made that such a finding situation obtains at

this time (or these times). Hence, the term *a unicorn* cannot have a specific reading.⁸ This appears much in line with the considerations from the preceding section about the function of finiteness.

6. WHAT IS FINITENESS I: THE CONTRASTIVE INTONATION TEST

How can we determine the meaning contribution, which an expression makes to the meaning of the entire construction to which it belongs? There is no royal way. The first and most obvious strategy is to ask our intuitions. We know what it means *to walk* or *to cook*, and we know what *a curtain* is and what *a shower* is. But the appeal to our intuitions often fails. First, it does not show the fine-grained structure of meanings. It may tell us, what the difference between *to go* and *to walk* is; but it does not tell us why *Where did he go?* is directional (a natural answer is *to the park*), whereas *Where did he walk?* can be directional, but normally is positional (the first answer is *in the park*). Second, it does not work very well with more functional meaning contributions. An appeal to our intuitions does not reveal us very much about what finiteness is.

A second and often more reliable test is to highlight the contrast of the relevant expression to expressions. Thus, if we say *John found THREE unicorns*, then this is understood to mark the particular fact that there were three, and not two or seven, unicorns. And when Conrad Hilton once put the gist of his life-long learning in the sentence *The shower curtain must be IN the shower*, then he highlighted the particular 'in-ness' of the spatial constellation, in contrast to the possibility that the curtain might be outside the shower.

What does this test reveal when we place contrastive intonation on FIN? Since a finite lexical verb conflates FIN and Vs, it is useful to begin with a case in which the finite element bears no descriptive content:

(20) The curtain WAS in the shower.

By uttering (20), the speaker claims that the curtain was in the shower. But this is also the case if the element *was* is not stressed at all, let alone is the only stressed element. The highlighted contrast can go in (at least) two directions, as illustrated by (21a) and (21b), respectively:

- (21) a. The curtain is in the shower. — That's wrong, the curtain WAS in the shower (but it isn't any longer).
 b. The curtain was not in the shower. — That's wrong, the curtain WAS in the shower.

In the first case, the contrast relates to the particular time about which a claim is made here: The contrast is between *is* and *was* (or between *was* and *will be*). Hence, it is the time component of FIN which is highlighted by the contrastive intonation. This is in agreement with the traditional notion of finite verbs.⁹

In the second case, the time component is not at issue. The contrast seems to be between *was* and *was not*. What is highlighted, is the mere claim that the curtain's being in the shower at some unspecified time in the past is the case (in contrast to the possibility that the curtain's being in the shower at that time in the past is not the case). We may conclude therefore:

- (22) FIN carries (at least) two distinct meaning components:
1. The tense component: it marks past, in contrast to present or future;
 2. It marks that an assertion with respect to whatever is said is made — in contrast to the possibility that no such assertion is made.

In example (20), the finite element is a copula, which lacks inherent descriptive content. How is this when the lexical content and FIN are fused into a finite verb form, as in (23):

- (23) John SOUGHT a unicorn.

This can at least express a two-fold contrast, as illustrated by

- (24) a. John SOUGHT a unicorn, but he doesn't seek a unicorn/it any longer.
 b. John SOUGHT a unicorn, but he didn't find one/it.

In the first case, it is again the inherent tense component which is highlighted, and in the second, it is the particular lexical content of *seek* in contrast to, e.g., *find* or *shoot*. Is it also possible to highlight the mere claim of his seeking the unicorn by (23), in contrast to the possibility that he did not seek it at that time in the past? The answer is clearly negative. In order to do this, the finite component must be 'extracted' from the finite verb and given independent expression:

- (24) c. The idea that he didn't seek a unicorn is wrong: John DID seek a unicorn.

The *do*-form in (24c) also carries tense — but it is not the tense contrast that is highlighted in (24a). It appears, therefore, that it is the basic function of the finite element to carry the ‘assertive nature’ of the utterance in question.

This idea is very close to Höhle’s notion of *verum-focus* (Höhle, 1992; Jacobs, 1984). There is a crucial difference, however. As stated in (22), the contrast is between ‘assertion made’ and ‘no assertion made’. The contrast as implied by *verum-focus* is between ‘*verum*’ and ‘*falsum*’. The latter contrast presupposed the former: as long as no assertion is made — and I assume that this is the case in non-finite constructions —, it does not make sense to speak about ‘*verum et falsum*’. In other words, there is a difference between whether something is assertion-marked at all or not, and if the former is the case, the polarity of the assertion. Consider the two sentences *Hans behauptet, das Buch gelesen zu haben* ‘Hans claims to have read the book’ and *Hans bestreitet, das Buch gelesen zu haben* ‘Hans denies to have read the book’. The proposition at issue is *Hans das Buch gelesen haben*. This is a mere description of a situation. The two matrix clauses relate this description to reality — either with positive or with negative polarity. So, the two matrix sentences have something in common — they introduce ‘assertion-marking’; and they differ in something — the polarity of this marking.

The presence of FIN does not suffice to mark an utterance as assertive in this two-fold sense. It is a necessary, but not a sufficient condition. For a sentence like (20) to function as an assertion (with positive polarity), it must have a falling intonation. If it has an intonation rise between *was* and *in* and no fall until the end, then no assertion is made. Still, in contrast to a bare non-finite description such as ‘the curtain be in the shower’, it is somehow ‘assertion-related’: the issue, so to speak, is raised, and it is just left open in which direction the assertion goes. What precisely is this assertion-markedness brought about by FIN? And what is the role of FIN, if the sentence does not make an assertion at all? Before examining these questions, we shall first briefly consider the relation between tense and the assertive role of FIN in simple declarative clauses, that is, in those cases in which indeed an assertion is made.

7. WHAT IS FINITENESS II: TENSE AND ASSERTION

Finiteness in German (and in related languages) minimally involves two meaning components: It carries tense and it carries assertion-markedness. How are these related to each other? According to its canonical definition, tense serves to locate the situation, which is described by the utterance, in the past, present, or future. Thus, in *Mika was sick*, Mika’s sickness is placed into the past; in *Mika is sick*, it is said to be at, or to encompass, the time of utterance; and in *Mika will be sick*, it is in the future. This understanding of

tense is common but false (see Klein, 1994 for an elaborate argument on this point). Suppose *Mika was sick* is said in answer to the question *Why didn't Mika come to the meeting this morning?* Then, it need not at all be the case that his sickness does not include the time of utterance. He could still be sick. The point is more obvious in sentences such as *The dog was dead*. It surely does not mean that the dog's being dead does not include the time of utterance. What is meant by the simple past is the fact that at some particular time span in the past, Mika was sick, and the dog was dead. An assertion is made only about this time span in the past, and it is simply left open whether the state obtaining at this time also obtains later or earlier. It is not the truth of his being sick or dead at a certain time that is crucial but the fact whether something is asserted about some time. Such a time span for which an assertion is made I call 'topic time', and it is the function of tense to mark whether the topic time precedes, contains or follows the time of utterance. The time of the situation itself may precede, contain, or follow the topic time. I think it is this relation between the topic time and the time of the situation, which is traditionally called 'aspect'. Aspect is often morphologically marked, although it need not be marked (just as little as tense, which is marked in English or German, but not, for example, in Chinese). A simple analysis of the English progressive is therefore that it marks that the topic time is included in the time of the situation (this is the aspectual component), whereas the simple form marks, that the topic time includes the time of the situation; the topic time in turn can be in the past, present, or future (this is the tense component). This naturally accounts for the intuition, that in the progressive, an event is presented 'from the inside', as 'on-going', whereas in the simple form, it is presented 'from the outside', as 'completed'. I will not elaborate this analysis here. What matters in the present context is the clear connection between tense, assertion and finiteness.

In declarative clauses, finiteness marks that (a) an assertion is made, and (b) this assertion is restricted to the 'topic time'. Tense indicates how the topic time is related to the utterance time. What is asserted is provided by the remainder of the sentence, that is, by its infinite part. This part I will call an 'assertable expression' or 'sentence base'. Minimally, a sentence base consists of a FIN-linkable element — i.e., a verb stem — and an appropriate filling of the argument slots (including the subject) provided by its lexical content. In German, in fact in all Indo-European languages, a sentence base can normally not be used as an independent main clause. There are a few exceptions, as illustrated in (8) above. They are not marked as asserted. This does not necessarily exclude that they are interpreted as an assertion. But then, this is just a matter of general context and world knowledge on the part of the interlocutor; there is, however, no explicit assertion marker, as FIN in the Indo-European languages.

8. TWO PROBLEMS

There is an obvious argument against this idea: not all finite sentences express an assertion. Essentially, there are two such cases, which will now be discussed in turn.

8.1. Non-Declarative Main Clauses

Non-declarative main clauses may serve many functions, in particular:

- (a) Imperatives: They do not express the speaker's opinion that something is true but that the addressee should perform an action which makes something true.
- (b) Yes-no questions: They raise the question of whether something is true.
- (c) Norm-creating statements, such as laws: They do not express that something is true but that something holds as a norm within a group of people.

Whereas imperatives and yes-no questions typically have a special (finite) form, normative statements are often identical in form to declaratives.

In all of these cases, there is a sentence base, as well: it gives a description of what should be made true (imperatives), is to be decided whether it is true (yes-no-questions), or ought to hold (norm-creating statements). There is also a counterpart to the topic time. In the imperative, this topic time must be after the utterance time. There is no difference for questions. Norm-creating sentences also hold for the future; sometimes, they explicitly specify the beginning time. So, the crucial difference seems to rely on the notion of assertion.

This notion raises a number of terminological as well as substantial problems; see e.g., Stalnaker (1998). I take it to be a particular illocutionary role of utterances: something is asserted if the speaker marks that he or she takes it to be true in relation to a particular time and perhaps other factors. Imperatives, yes-no questions and norm-creating statements have a different illocutionary role, whose precise characterization is not an easy task. In a way, declaratives, imperatives and norm-creating statements have in common that something 'holds' or, as we also may say, is 'valid'. Whereas declaratives only indicate the speaker's conviction in this regard, both imperatives and norm-creating statements bring about this validity, if certain conditions are met. No attempt will be made here to specify this; I shall simply state that in all of these cases, the illocutionary role of the utterance is to mark 'validity'. Yes-no questions are different. They relate to truth, not to

validity in a more general sense, and they are assertion-marked. I assume that they leave the polarity of the assertion open: this polarity becomes a topic in itself. We shall return to this point in section 9.

8.2. Subordinate Clauses

Subordinate clauses do not make an assertion either. Some of them do indeed reflect the speaker's opinion that the sentence base holds, others do not:

- (25) a. I wonder why he called.
 b. I wonder if he called.
 c. That is the man who called.
 d. Do you think that he called?

In all four cases, the sentence base is *he call*. In (25a) and (25c), it is implied that this sentence base holds, whereas this is not the case in sentences (25b) and (25d). Whether a subordinate clause is assumed to hold depends on numerous factors — the complementizer, the matrix verb (some verbs are factive), illocutionary status of the main clause, and others. In any event, we cannot assume that subordinate clauses always involve an assertion or validity with respect to some topic time.

There are two possible solutions. First, there may be an operator higher than FIN which encodes validity. This operator can be realized on the surface in two ways, namely, by a complementizer, thus creating a subordinate clause, or by being projected on FIN, if no other target is available. Under this view, FIN itself initially carries only tense and mood, and so it continues in subordinate clauses. In declarative main clauses, it takes over validity. Let me call this the 'indirect carrier view'. The second analysis assumes that there is no such abstract operator, and that FIN always carries validity (as well as tense and mood). The meaning contribution of FIN can be overruled by the semantic contribution of higher operators, in particular complementizers. Depending on the particular complementizer and other factors (such as the matrix verb), FIN may preserve or lose its initial validity: *if* and *whether*, for example, suspend it, *why* and *relative pronouns* usually preserve it, and so on. We may call this the 'direct carrier view'.

Both solutions explain that subordinate clauses need not involve validity. The direct carrier view yields a uniform structure for subordinate clauses and main clauses. But it has the unpleasant property that just in the canonical case of an assertion, in declarative main clauses, the initial carrier of validity is not visible. There is no sufficient evidence to decide between these two solutions. In either case, FIN eventually *is* the carrier, and this is what matters here.

9. TOPIC COMPONENT, SENTENCE BASE AND FINITENESS

Let us return now to declarative clauses, in which finiteness serves (a) to mark that the sentence base is assertion-marked (with positive polarity), and (b) to mark how the topic time is related to the time of utterance. Consider now 26, uttered by someone right now:

(26) A priest attended.

Is this utterance true or false? Even if you know what the entire world is like, was like, or will be like, there is no reasonable answer to this question. It simply depends on which situation the speaker is talking about. If it happens to be the funeral of my grandfather, then the answer is *yes*. If it happens to be the death of Voltaire, the answer is *no*. Asserting some sentence base makes only sense if the situation talked about is identified. Various types of information can contribute to this situation identification. It may be provided

- (a) by an explicit question, which includes the necessary information, for example *What did you notice at my grandfather's funeral* or *What do you know about Voltaire's death*;
- (b) by contextual information, for example if the utterance is part of a longer text;
- (c) by information which comes from the utterance itself.

Very often, all three types of information cooperate in order to identify the situation to which the assertion applies.

If this is correct, then a full finite sentence consists of three components. First, there must be a specification of the situation about which the utterance says something. This I will call the 'topic component'. Minimally, it includes a topic time (TT) this is the time to which the assertion (or whichever the illocutionary role is) is confined. It is plausible to assume that the topic component also contains a topic world and a topic place. Optionally, other elements can be added, for example a topic entity, typically realized by the grammatical subject. Second, there must be a 'sentence base', i.e., a non-finite verb and minimally an appropriate filling of its argument slots. And third, there must be a marking which relates the sentence base to the topic component, i.e., finiteness. We may depict this as in (27):

(27)	UTTERANCE	
	FIN	SENTENCE BASE
	topic topic topic (topic time place world entity)	V _s and arguments

The way in which these components are packed into a full, finite sentence is highly language-specific. In German, there are constructions that immediately reflect these tripartite structure:

- | | | | | | |
|---------|-------------|-------|---------|-----------|------------|
| (28) a. | Es | hatte | jemand | für dich | angerufen. |
| | it | has | someone | for you | called |
| b. | Gestern | hatte | jemand | für Dich | angerufen. |
| | yesterday | has | someone | for you | called |
| c. | Dreimal | war | Schnee | gefallen. | |
| | three-times | was | snow | fallen | |
| d. | Hier | war | Schnee | gefallen. | |
| | here | was | snow | fallen | |

In (28a), the topic component is filled by a lexically empty element *es*: no information about TT or any other is given; the finiteness marker *hatte* indicates that TT precedes the speech time; the non-finite component is *jemand für dich angerufen*; although this is not directly the sentence base in the sense explained above (it does not contain the bare stem but an infinite form marked as such, the past participle), we have a very close match. Utterance (28b) is much the same, except that the topic time is now lexically specified; note, however, that in German, an adverbial in this position can also specify the event time, i.e., the time of the call. Hence, there is no necessary relation between the initial position and topic function. In (28c), we have quantification over topic times: there are three topic situations about which something is said. In (28d), finally, a topic place rather than a topic time is indicated by the lexical element in first position.

This picture is rapidly blurred, if other syntactic operations come into play, for example, if more topic information is to be given, if the verb has more arguments, or if the finite component and the non-finite component of the verb are fused in one form. I shall not try to follow this up but only make a few general comments (see Dimroth *et al.*, 2003 for a detailed analysis of how German and Dutch children acquire the specific patterns in their languages).

The connection of FIN with the topic time was examined in section 6. A case which makes this connection particularly clear is a court setting, in which the judge may ask the witness *What did you observe, when you entered the room?* In this case, the witness is supposed to say something about exactly this time, and if he says *A man was on the floor. He was dead*, then this means that his assertion is confined to precisely this time. The time at which the man was on the floor, and the time at which he was and is dead is probably much longer. But this does not matter: the witness' testimony is only evaluated with respect to the topic time, as set by the question of the

judge. The two other minimal elements of the topic component are much more speculative. If mood — the other category which is typically connected with FIN — indeed expresses hypotheticality, counterfactuality or, as in the case of imperatives, non-existence but desirability of the situation, then we may say that the utterance is not about the real world or not *only* about the real world but about specific possible worlds; hence the world parameter. I am not aware of any language in which reference to space is grammaticalized in a way similar to time and — under the assumption just made — world; so, it may well be that this parallel assumed here is wrong. It would however make some sense that time and space serve a comparable function in the situation identification.

The sentence base minimally consists of a non-finite verb stem and an appropriate filling of the argument slots. In the most straightforward case, sentence basis and topic component are clearly separated. It is also possible that parts of the descriptive information from the sentence base help to identify the situation talked about, in particular by marking one of its arguments as topic entity. Such an argument is often called subject. It should be clear, however, that there is a difference between subject as a lexically characterized element of the sentence base (e.g., the agent), and subject as a specific part of the topic component. These two properties may go hand in hand, and in fact, they often do. Under the assumption that the grammatical subject is indeed topic entity as well as semantic subject (i.e., as specified by the lexical content of the verb stem), then it becomes plausible why non-finite sentences normally cannot have a subject (see section 4.2): no finiteness, no topic component, no topic entity.

Other expressions can be added to the sentence base, for example by adverbials. These, too, can contribute to the identification of the situation about which something is asserted. Temporal adverbials, for example, can but need not specify the topic time (note that FIN only gives a rather general restriction on how the topic time is situated on the time line). This is best illustrated with verb forms in which topic time and situation time are clearly separated, as in the pluperfect:

- (29) a. At five, John had left the party.
 b. John had left the party at five.

Both sentences involve a situation time (the time at which John left the party), and a topic time, at which the situation time is over. In (29a), the temporal adverbial *at five* specifies the topic time; the time of his leaving is not made explicit, but it must precede the topic time. In (29b), the temporal interval *at five* specifies the situation time; the topic time must be in the past (as marked by *had*), and it must be after the situation time; but its precise

position on the time line is not indicated. Sometimes, both situation time and topic time can be specified by an adverbial, as in (30):

- (30) a. On Monday, my office hour is from two to four.
 b. My office hour is on Monday from two to four.

In (30a), an assertion is made only about Mondays (not to a specific Monday, but any Monday), and it is asserted that at those topic times, the office hour is from two to four (in contrast to, for example, Tuesdays where it might be from seven to nine). In (30b), there is no explicit restriction to the time spans talked about; the assertion is more general, and it is said that the office hour in general is on Monday from two to four.

The question of whether a certain element from the entire sentence base contributes to the topic component or not, and how this is indicated — by word order, as in (29) and (30), by intonation, or by specific particles —, raises a variety of problems, three of which I would like to address briefly.

First, if elements from the sentence base are used to specify the topic component, then the simple equation between sentence base and assertable construction, and thus the clean cut illustrated in (27), breaks down. Within the sentence base, we must distinguish between an assertive and a non-assertive part. The latter includes those elements of the entire lexical content which contribute to the topic component. In the assertive part, these elements are replaced by variables, that is, elements which play a certain role in the structure (for example the role of an agentive argument) but are void of lexical content. Note that this is in a way the exact opposite of the classical focus analysis suggested by Akmajian, Jackendoff and others around 1970 and then taken up by numerous linguists.¹¹

Second, the distinction between elements which contribute to the topic component and those which belong to the assertive part must not be confused with given vs. new information. There can be maintained topics as well as new topics. In a narrative, each sentence from the story line may report a new event and hence has a new topic time. In straightforward cases, this shift follows from the principle of chronological order (i.e., the order of mentioning corresponds to the order of events); but it may also be made explicit by temporal adverbials like *then*, *two years later*, etc. In picture descriptions or in route directions, there may be a similar chain of topic places introduced by adverbials such as *a bit to the left*, *at the next junction*, and so on. Each of these topic places is new with respect to the preceding utterance. (This is discussed in great detail in von Stutterheim, 1997). As a consequence, the assertive part as well as the non-assertive part can bear an intonational contrast, as in *To the right, there is a tree. To the left, there is a little creek*. This does not preclude a strong interaction between given and

new information, on the one hand, and the two parts of the sentence base, on the other.

Third, many of the syntactic effects from section 4 turn out to be a reflex of this tripartite structure if we assume that the place where FIN is realized forms a watershed between the topic component and (the remainder of) the sentence base. This is not far-fetched given the fact that FIN expresses the relation between topic component and sentence base. Other principles may intervene. Thus, the topic component may be filled by an expletive element. Nothing from the sentence base — not even the grammatical subject — belongs to the topic component; all it has is a topic time, which comes with finiteness marking itself. This leads to thetic constructions (Sasse, 1987): they have a subject with all lexical properties of the subject, but without topic status. Without finiteness, such an expletive element does not make sense, since there is no topic component at all, that could be filled by an expletive. This explains why expletives are licensed by finiteness.

10. CONCLUDING REMARKS

It was not the aim of this paper to present a theory of finiteness. I rather tried to bring together a number of observations that show that it is not just an epiphenomenon of verb inflection but plays a crucial role in the syntactical and semantic structure of utterances. These observations have also led to an incipient picture of this structure which, when worked out in more detail, might help to understand a number of puzzling facts. These include the strong association between finiteness and the presence of subjects and expletives in Indo-European languages. Another one, noted under (2) in section 3, is the fact that syntactically compound verb forms can contain many infinite forms but maximally one finite form. It simply does not make sense to express more than one assertion relation (or, more generally speaking, validity relation) to the topic component of a sentence. Hence, this restriction finds a natural explanation. A third one concerns the loss of the 'transparent-opaque' distinction, if the relevant verb is not finite; if specificity is relative to a situation that is supposed to obtain at some topic time (or topic times), then non-finite constructions cannot yield this specificity.

Examples came mainly from German. How is this in other languages? I believe that the distinction between a component that identifies the situation (or the situations) talked about and a component that provides a description of what might be valid at that time is found in all languages. I also believe that all languages have means to relate these components to each other. In Indo-European languages, this device is coupled with the lexical verb, and it often includes information about the time (and perhaps the world) talked about. Other languages use other means. In Chinese, for example, FIN is

never coupled with verb inflection, since there is no verb inflection; instead, the function of finiteness is served by so-called aspectual particles which constrain the assertion to certain sub-intervals (see Klein *et al.*, 2000). Still other languages, such as Classical Arabic, combine elements which serve the function of FIN with the verb but differentiate between FIN-linkable elements with lexical content and without lexical content. In the latter case, the carrier of FIN can often be omitted, thus giving rise to copula-free predicative constructions. Within Indo-European languages, the interplay between the three components varies within certain limits. But I do not think that this variation, neither the more general variation in how languages realize this tripartite structure, affects the general picture sketched here.

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12. NOTES

¹ The first three of these examples are from the Simone-Corpus (quoted after Lasser, 1997, 15), the last three from my daughter Eva.

² Lasser (1997, 127-181) surveys this evidence and carefully reanalyses the most comprehensive German corpus to date, the Simone tapes. She also demonstrates that a great deal of the child’s infinite constructions are also found in the adult language.

³ See, for example, Becker & Dietrich (1996) for a fine-grained study of how the development of finiteness marking and negation evolves in advanced learner varieties.

⁴ Vs can be morphological compounds, as in *aufess-* ‘eat up’, *weggeh-* ‘go away’; but this is not relevant in the present context.

⁵ In the light of the Western grammatical tradition, this view may be premature. The classical definition of ‘(de)finite’ inflectional forms according to Priscian (1494, 86) includes ‘person’ as a feature. Maas (2000) examines this historical background and argues that ‘person’ may be the most important feature of finiteness. For reasons that will become clear later, I do not share this view; but I agree that it is in line with the traditional notion.

⁶ The traditional definition of the restriction suffers from the notorious fuzziness of the notion ‘grammatical subject’. The definition in terms of case licensing suffers from the fact that the constraint is also operative when the relevant NP does not require nominative but accusative or dative, as in *Mich friert* ‘I am freezing’ or *Mir graut* ‘I have a horror’. None of them has any explanatory value; they just state the facts.

⁷ The functions of the English expletive *there* are served by two expressions in German. If the existence of some entity is asserted, as in *There are no pianos in Peoria*, German has a fixed form *es gibt*: *es gibt in Peoria keine Klaviere*. Here, word order can be changed, but *es* cannot be omitted: *In Peoria gibt es keine Klaviere*. Presentational usage of *there*, as in *There came a man into a bar* corresponds to *es* + finite verb. Here, *es* can be omitted when word order is changed: *Es kam ein Mann in eine Bar - ein Mann kam in eine Bar - in eine Bar kam ein Mann*. It is this latter *es* in which we are interested here.

⁸ It is not easy to see how this constraint could be implemented in a formal account. It would not suffice, however, to add an intentional operator to all non-finite forms (a possibility suggested by a reviewer); additional measures would have to be taken in order to ensure that this operator does not affect other types of noun phrases, and that its effect is reverted as soon as the indefinite object noun phrase is in the scope of finiteness.

⁹ We observe the same effect if the verb is finite but the clause does not make an assertion for other reasons, for example the *if*-clause in *If I find a unicorn, I will be famous*. (Thanks to an anonymous reviewer, who pointed out this example).

¹⁰ It is not easy to tell whether there is also a ‘mood contrast’, as would be predicted by the traditional idea that finite verbs also express mood, except perhaps if a different mood expresses counterfactuality: *Er WAR nicht hier - er WÄRE hier* ‘He was NOT here – he WOULD BE here’. But even so, such a correction sounds somewhat odd, although not as odd as *Er ist nicht hier - er sei hier* ‘he is not here – he (ought to) be here’. I shall not follow up this point here.

¹¹ Throughout this paper, I tried to avoid the term ‘focus’, not because I believe that this is an irrelevant notion but because I find it increasingly problematic. Typically, the focus is a prosodically prominent element of a sentence. But topic elements can bear a contrastive intonation, too. They can also encode new information, and they involve ‘alternatives’. I do not think, either, that a sentence can in general be partitioned into a ‘presupposed part’ (the topic) and a ‘non-presupposed part’ (the focus). The notion of presupposition, derived from the full sentence by replacing the focus by a variable and existentially quantifying over this variable, makes sense in some cases, but is highly problematic in others. Take, for example, a sentence such as *Hans war NICHT hier* ‘Hans was NOT here’, where the focus is on *nicht*. This sentence cannot have the presupposition *Hans war hier* ‘Hans was here’. Even if we assume that *nicht* is replaced by a kind of polarity variable, then the resulting structure would only say that this sentence has a polarity. This is no presupposition in the usual sense.

13. REFERENCES

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