Focus as identification

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Abstract
Recent attempts at defining the functions and domains of focus make a distinction between information focus and identificational or contrastive focus that is shown to be much less significant. Both types of focus are identificational, and they differ in that information focus incorporates a weaker relationship between the set of individuals identified and the relevant set of discourse available to both speaker and hearer. In a reexamination of focus domains in the focus sensitive language Hungarian it is shown that their range has previously been taken to be too limited and too wide at the same time: a number of syntactic constituents disqualified before can be interpreted as focussed provided syntactic and prosodic factors are both taken into consideration, while others prove to be focussable only as parts of larger syntactic and semantic units.

1. Introduction

This paper is an attempt at redefining the functions and the semantic domains of focussing. Our central thesis considers focus to be a function of identification; and focus is understood here to comprise both information focus and identificational or contrastive focus. (We will try to clarify terminology, or at least list various terms and their usages, as we go along.) As far as the functions of focus are concerned, it will be shown that they differ in the sets they make reference to: information focus involves a subset relation, while contrastive focus makes use of a proper subset relation. Moreover, whether or not there is an explicit contrasting complementary set, such a complementary set is always created in case of contrastive focus. Once we define (some types of) focus, it is necessary to attend to the problems of where focus is manifested, i.e. what grammatical constructions can serve as the loci of focus. In this part we will show that earlier proposals are at fault when confining the domains of focussing to a fraction of what actually seems to be the case.

It is a corollary of the central thesis that identification can subsist only between items of a certain kind: those which have extensions in the world, i.e. things, actions, properties and propositions. Corresponding to this 'Fregean universe' are linguistic expressions such as referential noun phrases or DPs, predicates or VPs, and clauses or CPs/IPs. These exhaust the set of focussable categories in language, according to the proposal put forward here. As a consequence of the nature of the questions, our investigation is not directed to the syntax of focussing; it makes use of syntactic phenomena only insofar as they provide a diagnostics for the semantic

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properties and domains in question, and it makes reference to syntactic constituents only because they are the formal or categorial representations of such domains, although new data relevant to the syntax of focus will also be included.

First, various definitions of focus will be briefly surveyed. Then we will argue that identification characterizes both information and contrastive focus, and point out the difference between them. Next we will define the list of focussable categories, exclude adverbial adjuncts and attributes from their group, and show in what ways the latter resemble.

Focus arises in an intricate interaction of prosody (stress and/or pitch), syntax (at least in some languages), semantics and pragmatics. While it is not very easy to put one's finger on some specific type of focus in a number of languages, there are languages in which at least some subtype of focus is grammaticalized, and just as it is easier to discuss gender by means of examples from languages where the distinction is manifest, so is focus more conveniently illustrated and ultimately accounted for if one can draw on examples that clearly exhibit it. It is for this reason that examples from Hungarian, a language known for its overt syntactic and prosodic focussing procedures, will be extensively used. As is clear from the discussions to follow, even in a focus movement language, such as Hungarian, prosody has an important role in determining the constituents in (semantic) focus. Nonetheless, no effort will be made to determine the prosody–focus relation along the lines of, e.g., Gussenhoven (1984) or Zubizarreta (1998), partly because it would lead us to far afield, and partly because, at least as far as Hungarian in concerned, it is still possible to adhere to our proposals in Vogel and Kenesei (1987, 1990) and Kenesei and Vogel (1998).

2. The varieties of focus

While focussing seems to be well-defined when one considers a single language, it becomes more elusive when examining it in several languages: prosodic highlighting may serve various, sometimes overlapping purposes. If focussing forms a continuum from different kinds of contrast to mere affective emphasis, then, depending on what one considers to be 'focus', we may end up selecting different regions from the sphere of prosodic highlighting. It is with this caveat in mind that we embark on giving an admittedly cursory survey of a sample of definitions of focus in this section, with the aim of indicating which one(s) of them will be relevant to our investigation.

2.1. Emotional highlighting, 'contexts of repair', parallelism

Beginning with Bolinger (1961), one type of prosodic prominence has been distinguished from more 'semantically based' instances of focus. Even in this single subgroup at least two different types of 'focus' are subsumed. In the one, the speaker gives vent to his/her emotions, as in (1a). In the other, s/he repairs, as it were, something that went before in the turns of conversation, cf. (1b), and/or calls attention to a parallel expression, making the difference 'audible', see (1c). Others who have noticed and identified similar examples include Chomsky (1971) and Rochemont and Culicover (1990). (Nuclear stress is marked by bold type throughout, except when for reasons of unequivocal notation it is marked by double primes.)

(1)  a. I **hate** them.
   b. I **didn't say** blue**berry**, I **said** blue**bird**.
   c. John is more concerned with **affirmation** than with **confirmation**.

2.2. Verum/polarity focus


Another type of focus not discussed in this paper was called 'verum focus' by Höhle (1988: 4), who gives this definition: "The truth of some proposition known from the context [is] highlighted." Others who took notice of some of the characteristics of this kind of focus setting it apart from constituent focus include Hetland (1992) and Kálmán et al. (1989), from whose work the following examples are quoted, respectively.

(2) a. *Weisst du, dass Petra gestern ein Kind bekommen hat?*  
    know you that Petra yesterday a child born has  
    'Do you know that Petra gave birth to a child yesterday?'

   b. *Ich weiss, dass sie ein Kind bekommen hat (aber nicht dass es gestern war).*  
    I know that she a child born has (but not that it yesterday was)  
    'I know that she gave birth to a child (but not that it was yesterday)

(3) a. *Anna olvas-ni fog.*  
    Anna read-INF will  
    'Anna will be reading.'

   b. *Anna fog olvas-ni.*  
    'Anna (indeed) will be reading.'

In the German example (2b) the pitch accent on the complementizer *dass* signals that it is the whole clause rather than any one of its constituents that is focused. The Hungarian sentence (3b) has pitch accent on the auxiliary, which is impossible to carry constituent or contrastive focus, thus creating the effect of verum focus.

2.3. "Psychological" focus

In an overview of various types of focus Gundel (1999: 294) makes the following observation: "An entity is in (psychological) focus if the attention of both speech participants can be assumed to focus on it because of its salience at a given point in the discourse." The phrases in small capitals are in psychological focus.

(4) a. *Emily hasn't changed much. SHE still looks like her mother, doesn't SHE.*

   b. *We stopped for drinks at the hotel bar before going to the Thai restaurant. THE WAITRESS was from Bangkok.*

Unstressed personal pronouns, zero anaphors, and weakly stressed constituents are symptomatic of this type of focus. Other expressions included here are 'inferrables', i.e., expressions which are licensed by the context. The *waitress* in (4b) is a legitimate psychological focus because the hotel bar has been mentioned. Note that these inferrables are distinguished by Gundel from items that follow from encyclopaedic knowledge. While Gundel's definitions are consistent, we will not follow them, since what she calls psychological focus, is one type of topic for others, whose work is more closely followed in this paper, as will be seen below.

2.4. Narrow vs. broad/wide focus

Following Halliday's (1967) initiative in discussing the influence of syntax on the semantics of focus, Chomsky (1971) introduced the concepts of narrow and broad focus into generative grammar. His lead was followed up by Jackendoff (1972), Berman and Szamosi (1972), and Selkirk (1984), to list some of the more prominent works in the literature. The issue Halliday raised can be termed as the focus projection problem, and it concerns
examples such as (5a, b), cited from Chomsky and Selkirk, respectively, in which the boldface item has prosodic prominence, but every one of the bracketed phrases can be taken to be a (semantic) focus domain, thus projecting, as it were, the focus feature from the word having pitch accent to the category dominating it. If focus is confined to the boldface item, we have narrow focus. If it is projected onto a higher category, wide/broad focus is created.

(5)  a. He was [warned [to look out for [an ex-convict with [a red [shirt]]]]]  
    b. She [sent [her [sketches]] to the publisher]

A further problem in this context is the ‘irregular’ stress pattern of some sentences having broad focus. That is, in (6a) the whole sentence is in focus, rather than the subject, but, unlike an ‘ordinary’, i.e. sentence final, pitch accent placement, it is the subject that carries it.

(6)  a. The sun is shining.  
    b. #The sun is shining.

This contrast is carried over to a free word order language like Hungarian. Here the difference is not realized by means of (only) stress, but by departing from the unmarked subject–verb order.

(7)  a. Süt a nap.  
    b. #A nap süt.

Another set of examples are often quoted in this connection, also following Halliday (1967). They were used to show how truth conditions may change due to a change in stress patterns. On a closer examination, however, it transpires that in addition to the interdependence of stress and contrastive focus, the interaction of a deontic modal and the (non)generic interpretation of the subject noun phrase also contribute to the difference between the two sentences.

(8)  a. Dogs must be carried.  
    b. Dogs must be carried.

This is particularly vividly shown by their Hungarian counterparts, where the apparent formal similarity is totally lost.

(9)  a. Kutyá-t kell vin-ni.  
    b. A kutyá-t/kutyá-k-at vin-ni kell.

2.5. Contrastive topic

Szabolcsi (1981b) discovered a curious constituent in the Hungarian sentence, where the topic(s) invariably precede(s) the single constituent that can occur in the preverbal focus position: it has a rising pitch and was interpreted by means of an implicature.
If the initial noun phrase were in topic, the sense translation would be all that is needed. But since it is identified as a contrastive topic, the speaker, who is presumably a disaster of a lawyer, implies that his client killed someone other than the jeweller. This and other properties of contrastive topics have been extensively discussed in the literature, including Büring (1997), Molnár (1998), and most recently Gyuris (to appear) and Hetland (2003). Not all agree in terminology: Kenesei (1989) labels it 'counterfocus' on the assumption that it requires a (contrastive) focus in the sentence, and Gundel (1999) calls it 'contrastive focus', because it incorporates the notion of contrast.

Contrastive topic seems to be a multifarious phenomenon. Although there have been attempts at providing a unified semantic analysis for it, it is hardly conceivable that distinct semantic operations, such as identification with contrast, scope reversal, and selecting a distributive reading for an expression that can be interpreted either distributively or collectively, can all be represented by a single semantic function.

We are here interested in the first of these, illustrated further by examples such as the following from Molnár (1998) after Válduví and Engdahl (1996).

(11) A: Where can I find the cutlery?
   B1: [CT The forks are in the cupboard, but [CT the knives] I left in the drawer.]
   B2: The cutlery/It is in the cupboard.

The expression the cutlery provides the superset, which has, among others, the (proper) subsets the forks and the knives. Once the forks have been mentioned in answer to the question, other subsets of the cutlery are also relevant and form contrasting subsets with it. Similarly, in the following example Bill has more than one sister, thus mentioning only one of them is tantamount to contrasting her with the other(s).

(12) A: What did Bill's sisters do?
   B: [CT Bill's youngest sister] kissed John.

2.6. Presentational focus

Presentational (or presentative) focus is perhaps best defined as a sentence that contains new information as a whole. The term 'presentative' was first used by Hetzron (1975) with reference to African languages and has been picked up by other Africanists, such as Lecarme (1995), who supplies the following example from Somali, an SOV language.

(13) waxaa yimid tareen
   EXPL  came train
   'A train came.'

Note that the SVO language Hungarian requires a similar change in word order for presentative sentences, such as the one below, which can be used, for instance, by hotel receptionists to alert each other.

(14) Érkezett egy vendég.
   arrived a  guest
'There has arrived a guest.'

These sentences can be said to contain only a rheme, or in a different framework, following Sasse (1991), are thietic judgments, which have no logical subject-predicate structures, unlike categorical judgements of the usual Aristotelian tradition.

2.7. Information focus

This and the following type of focus are the subject of this paper, so here only preliminary definitions are given. Jackendoff (1972) calls information focus the information in the sentence that is assumed by the speaker not to be shared by him/her and the hearer. Note that this is practically the same definition as Rochemont's (1986) for presentational focus. Guéron (1980) observes that prosodic focus on the object NP in English results in either contrastive or noncontrastive interpretation, while prosodic focus on the subject NP is compatible only with contrastive focus.

Roberts (1998), following Rooth (1985), defines information focus as a constituent in an utterance whose value is permitted to vary in determining the Focus Alternative Set for the utterance; its denotation. She gives the formulas in (16) for the question-answer pairs in (15). (The '#' sign stands for 'infelicitous' turns.)

(15) a. Who did Mary invite?
   b. Mary invited Archibald.
   c. #Mary invited Archibald.

(16) a. Q-alt(?Who did Mary invite) = {m invited u: u ∈ D}
   b. ||Mary invited [Archibald]e|| = {m invited u: u ∈ D}
   c. #||Mary invited Archibald|| = {u invited a: u ∈ D}

É.Kiss (1998a) defines information focus as new, nonpresupposed information marked by one or more pitch accents without expressing exhaustive identification on a set of contextually or situationally given entities.

(17) a. Hol jártál a nyáron?
   where went-you the summer
   'Where did you go in the summer?'
   b. Jártam Olaszországban.
      went-I Italy-to
      'I went to Italy [among other places].'

(18) Mari ki nézett magának egy kalapot.
    Mary out picked herself-DAT a hat-ACC
    'Mary picked for herself a hat.'

2.8. Contrastive focus, operator focus, identificational focus

In Selkirk's (1984) prosodically based analysis contrastive focus must exhibit explicit contrast and is understood only as narrow focus (see 2.4 above).

(19) She didn't watch "M*A*S*H", she watched "Kojak".

Roberts (1998) determines contrastive focus with respect to information focus: contrastive focus differs
from information focus in that it is marked for exhaustiveness modulo representations such as (16).

É. Kiss (1998a) calls it identificational focus and gives this definition: identificational focus "represents a subset of the set of contextually or situationally given elements for which the predicate phrase can potentially hold; it is identified as the exhaustive subset of this set for which the predicate phrase actually holds." (É. Kiss 1998a: 249) She distinguishes identificational focus from contrastive focus, which operates on a closed set of entities whose members are known to the participants of the discourse; the identification of a subset of a given set also identifies the contrasting complementary subset. An identificational focus can be [+exhaustive] and [+contrastive], as in the following examples.

(20)  *Olaszországban jártam.*  
   Italy-to went-I  
   'It was Italy where I went.'

(21) a. *Mari egy kalapot nézett ki magának.*  
    Mary a hat-ACC picked out herself-ACC  
    'It's a hat that Mary picked for herself.'

b. *A Háború és béket Tolsztoj írta.*  
    the War and Peace-ACC Tolstoy wrote  
    'It was Tolstoy who wrote *War and Peace*.'

According to É. Kiss, there is a nonexhaustive but contrastive focus in Finnish, which she dubs as 'contrastive topic', as in the following example.²

(22) a. *Where do Anna, Kati and Mikko live?*

b. *[Anna] asuu täällä.*  
   Anna lives here  
   'Anna, she lives here.'

The interpretation is then again like that in (11)-(12), with {Anna, Kati, Mikko} in the superset, of which only Anna is identified and thus contrasted with the other members.

### 3. Focus defined as identification

3.1. Lists, sets, exhaustivity

The first to discuss the semantics of focus in a generative framework was Chomsky (1971), who in effect divided the sentences into focus and presupposition, and attributed to them the semantics of an identity statement, cf. (23).

(23) a. *John writes poetry in his study.*

b. *It is in his study that John writes poetry.*

c. *the place where John writes poetry is his study*

Chomsky's problem at the time was how surface structure, and, in particular, accenting (contrastively) focussed constituents, can determine or modify semantic interpretation, and it was along these lines that Jackendoff (1972) elaborated some of Chomsky's initiatives, before Chomsky (1976) himself continued to discuss this and

² For an alternative view on contrast in Finnish, see Molnár and Järventausta (2003).
related issues. Szabolcsi (1981a, 1981b) challenged the received view of focus/presupposition division by claiming that exhaustive listing was the predominant characteristic of focus, at least in the Hungarian examples she made use of. In her analysis the sentence (24a) was to be assigned the reading in (24b).³

(24) a. Péter aludt a padlón.
   Peter slept the floor-on
   'It was Peter that slept on the floor.'
   b. 'For every \( x \), \( x \) slept on the floor if and only if \( x \) is Peter.'

This move was supported, by her observation that the clause in (25a) can be continued equally well by any one of (25b-d).

(25) a. Nem Péter aludt a padlón,
   not Peter slept the floor-on
   b. … hanem Pál.
   … but Paul
   c. … hanem Péter és Pál.
   … but Peter and Paul.
   d. … hanem a házigazda költözött szállodába.
   … but the host moved hotel-to
   'It's not the case that Peter slept on the floor
   … but that Paul did.'
   … but that Peter and Paul did.'
   … but that the host moved to a hotel.'

In addition to the well-known contrast statement in (25a-b), Szabolcsi's new example in (25c) was meant to show that the truth of the proposition 'Peter didn't sleep on the floor' does not follow from (25a), which served to underscore the superiority of the formula in (24b). Moreover, a continuation like (25d) was intended to call into question the entire focus/presupposition division of such sentences, thus supplying further support to the proposal based on 'exhaustive listing', as set against an analysis such as (23).

Kenesei (1984, 1986) offers a reanalysis of Szabolcsi's data and argues that it is a case of misrepresentation, since the stress patterns of the clauses differ depending on what is focussed in the contrasting clauses. In fact, if a single constituent is contrasted, only the preverbal focus is accented, as in (26a). If, however, the whole clause is in focus, postverbal constituents also receive primary (i.e., focus) stress, as in (26b).

   not Peter slept the floor-on (but Paul/but Peter and Paul)
   'It's not Peter that slept on the floor (but Paul/but Peter and Paul).'
   b. Nem Péter aludt a padlón (hanem a házigazda költözött szállodába).
   not Peter slept the floor-on but the host moved hotel-to
   'It is not (the case) that Peter slept on the floor, but that the host moved to a hotel.'

Kenesei suggests that the function of focus is 'exclusion by identification' interpreted on some set of individuals

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³ Szabolcsi translates these sentences by simply accenting focussed constituents, rather than using clefts. I have departed from her practice here.
in the universe of discourse. By selecting one element of the set, all other members are excluded. Thus, the sentence in (24a), now understood as having focus only on the subject noun phrase, would correspond to the interpretation in (27a), which returns to Chomsky's (1971, 1976) original formula, and can be generalized for similar types of foci in (27b) as paraphrased in (27c).

(27) a. 'The one that slept on the floor is Peter.'
   b. \( \forall x (Fx) = a, x \in R \) (where R is the relevant set in the universe of discourse)
   c. the \( x \), such that \( x \in R \), for which \( F(x) \) is the case, is identical with \( a \)

Szabolcsi (1994) accepted this interpretation for reasons related to the difference of focus and quantifier interpretation elaborated further in Szabolcsi (1997). She approves of the following formula, noting that (28a) presupposes that there is a unique individual that is asleep and asserts that this individual is Mary, and adding that the formula's apparent restrictedness to singular individuals can be easily amended.

(28) a. \( \textit{Mari} \) alszik.
    Mary sleeps
   b. \( \forall [\text{sleep}x] = m \)

Katalin É. Kiss's (1998a, 2002) recent contribution to the analysis of the semantics of focus is the definition quoted above in 2.8 and is put to use in examples such as those below, in which, of the relevant set of entities, it is always \( \textit{egy angol könyv} \) 'one English book' that John got as a present, and the sentences differ in the sets of entities from which \( \textit{one English book} \) is selected.

(29) a. János \( \textit{egy angol könyvet} \) kapott ajándékba.
   John one English book-ACC got as-present
   'It was \textit{one English book} that John got as a present.'
   b. János \( \textit{egy angol könyvet} \) kapott ajándékba.
   'It was \textit{one English book} that John got as a present.'
   c. János \( \textit{egy angol könyvet} \) kapott ajándékba.
   'It was \textit{one English book} that John got as a present.'
   d. János \( \textit{egy angol könyvet} \) kapott ajándékba.
   'It was \textit{one English book} that John got as a present.'

The relevant sets that the object denoted by \( \textit{egy angol könyv} \) 'one English book' is a subset of differ in the following ways. In the case of (29a) it is the set English books of various cardinality, in (29b) the set of books in various languages, in (29c) the set of English objects, and finally in (29d) it is a set of objects believed by the speaker to be known to the hearer. In other words, unlike others, including Rooth (1985), É. Kiss regards the bracketed items as focussed, rather than the boldface ones (É. Kiss 1998a: 260)

Although she proceeds to make the claim that identificational focus has to be constrained to exclude \textit{that}-clauses, infinitival clauses, VPs, as well as predicative NPs and APs, which we will show to be in error, it is this proposal upon which we might base our analysis of focussing. We will first examine the relationship of information focus to identificational focus.

3.2. Information focus

Information focus is characterized as 'new information' (for the hearer) and we believe this position to be fully justified. However, assigning the label 'new' to any constituent in a sentence contributes little to the
interpretation of the sentence in the logico-semantic analyses customary in the approaches reviewed here. One of the objectives this paper has set out to achieve is to integrate information focus in precisely those approaches.

Although there is no general procedure to determine information focus, most researchers make use of answers to question-word (or wh-) questions to decide the constituents involved, and it is this method that we will apply here. To begin with, let us recall Roberts' (1998) and É. Kiss's (1998a) examples.

(30) a. Kit hívtál meg?
   who-ACC invited-you PV
   'Who did you invite?'

   b. Meg-hívtam például Jánost.
      PV-invited-I for-example John-ACC
      'I invited John, for example.'

(31) a. Hol jártál a nyáron?
   where went-you the summer
   'Where did you go in the summer?'

   b. Jártam Olaszországban.
      went-I Italy-to
      'I went to Italy [among other places].'

If questions are requests for identifying the value of the variable in them along the line of Chomsky (1977), then the two questions above can be rendered in the following manner.

(32) a. For which \( x \), \( x \) a person, you invited \( x \)

   b. For which \( x \), \( x \) a country, you went to \( x \) in the summer

Clearly, the restrictor, which gives the set that the variable is a member of, was determined here with some liberty. In (32a), for instance, the set of persons is probably more limited, including only persons relevant (in some sense) to both speaker and hearer. In (32b), in turn, the question-word where does not necessarily imply names of countries. But this granted, we may conclude that the type of question that an answer containing information focus corresponds to asks for identification.

Consequently, the answer given to such questions must also contain some form of identification; however, this operation is not the type of identification that excludes (all) other members of the relevant set, but one that allows for the predicate to hold for other possible elements of the set. In other words, if other members of the relevant set happen to truthfully give the value of the variable in the question, the answer is still not false, ill-formed, or inappropriate. The crucial section of the formula that corresponds to such statements contains the 'member-of' relation, and the answers in (30b) and (31b) can be roughly interpreted as given below.

(33) a. John \( \in \) A, where A: person(s) I invited

   b. Italy \( \in \) B, where B: countri(es) I went to in the summer

What must be added to this interpretation is that it makes no claim as to the membership of the sets which include John and Italy, respectively; they may contain no more elements, or they may be indefinitely large, but they must contain at least one element each. Observe also that the questions are not (or not necessarily) inquiries as to exhaustive answers, and probably that is why 'partial' answers, such as those in (30b) and (31b) are considered satisfactory.

But the formula for answer as given in (33) suffers from a deficiency: it does not strictly correspond to the identification requested in the respective questions; all it does is assert the membership of some or another individual in a set. Therefore, we suggest that information focus be rendered rather by the following informal
representations, in which one of the propositions constitutes an identity statement.

(34) a. $\exists x$, such that $x \in \{\text{persons I invited}\}$, and $x$ is John
   b. $\exists x$, such that $x \in \{\text{countries I went to in the summer}\}$, and $x$ is Italy

At this point we can conclude that both information focus and identificational (or contrastive) focus involve an existential proposition and a statement of identification and they differ in that the latter makes use of the iota operator, whose function in Russell's (1905) sense is to ensure the unicity of the extension of individual variable in its scope. We will return to further differences in the next section.

Before we do so, let us call attention to the fact that even the empty set can be given as the extension asked for in (30a)/(31a), that is, a negative answer is quite possible, although it contradicts the ostensible presupposition in the question. In case the identification of the value of the variable is impossible or is denied, the answers may take the following forms.

(35) a. Senkit   (nem hívtam  meg).
no-one-ACC not invited-I PV
'I (invited) no-one.'

b. Sehol  (sem jártam).
nowhere not went-I
'I (went) nowhere.'

The answers in (35) are equivalent to asserting that the extensions of the sets of persons or countries are null. This is a possible and appropriate type of answer to numerous, though not all, kinds of wh-questions. In this case, the corresponding question is meant to be interpreted by the speaker, or can be reinterpreted by the hearer, as 'for which $x$, if any, does $F(x)$ hold true?' or 'is there an $x$ such that $F(x)$, and if so, what is the value of $x$?', and there would arise no problem by having to cancel in the answer the putative presupposition, which, as it turns out, is one of the conjuncts in the question. In fact, the existential quantifier in the formula in (34) points at the nature of the corresponding question: information focus questions can ask for an existential assertion, as it were, whereas contrastive focus questions contain the existential assertion as their presupposition.

3.4. Information focus versus identificational/contrastive focus

If the analysis above is plausible, then information focus will correspond to a general formula in (36a), while identificational (or contrastive) focus to one in (36b).

(36) a. $\exists x$, such that $x \in A$, and $x$ is John; $A$ contains at least one individual
   b. the $x$, such that $x \in A'$, is John; $A'$ contains exactly one individual

where the sets $A$ and $A'$ are those of the person(s) I invited, and both are subsets of the relevant set of discourse $R$. In other words, in case of information focus what is asserted is that there is an individual that I invited and that it is John, the fact that I invited someone being the presupposition, and it may very well be the case that John is the only person I invited or, equivalently, that there were more persons that I invited. By means of information focus the speaker makes no commitment as to the further membership of the set that John is an element of.

In contrast, identificational/contrastive focus must make the explicit commitment that the set of persons I invited contains no more or other individual than John, or in general, those listed in the focussed expression. But although this difference transpires from (36), one important aspect is left unaccounted for: identificational focus implies that there is at least one individual other than John for whom the proposition does not hold. Thus, we
ought to complement the formula in (36b) in the following way.

(37) the \( x \), such that \( x \in R, (Fx) = a \), where \( R \) is the relevant set in the universe of discourse, and \( a \in R \), and \( \not\exists b \), such that \( b \in R \), and \( b \neq a \).

All in all, both types of focus are instantiations of identification and the difference between them boils down to the nature of the set-theoretical relations they determine. Information focus incorporates a subset relation between the individual(s) identified and the set that the individual(s) in question is/are contained in, while identificational (or contrastive) focus relies on a proper subset relation. In a subset relation, \( \{x\} \subseteq A \subseteq R \), \( \{x\} \) is contained in \( A \), and \( A \) may or may not have an element outside the set of \( \{x\} \), with \( A \) being a subset of the relevant set of discourse. In a proper subset relation, \( \{x\} \subset R \), \( \{x\} \) is contained in \( R \), the relevant set of discourse, but \( R \) must have at least one element not in \( \{x\} \). But then if both types of focus incorporate identification, then labelling only one of them as 'identificational' is misleading. Therefore, we will return to the name 'contrastive focus'.

Not only answers, but also questions may vary as to whether they inquire about information or contrastive focus. If I am aware that Jim goes shopping occasionally and ask the question in (38a), the answer could be either (38b) or (38c). But if I saw Jim buy something yesterday in some clothing store (and he knows that I did) and then ask the question in (38a), the answer in (38c) would be out of place.

(38) a. What did you buy yesterday?
    b. (I bought) a hat.
    c. (I bought) nothing.

In the first scenario we have to do with an information focus question, in the second, a contrastive focus question. Moreover, the sentence in (38b) is also ambiguous between the two types of focus but only in answer to the information focus question. In other words, when I ask Jim what he bought, if he bought anything at all, he may choose to give me a partial answer specifying one of the things he bought, making no commitment as to reporting to me all the things he bought that day. If, however, I know that Jim bought something (and Jim is aware of this), an answer incorporating a mere information focus would be unsatisfactory. Then there is no doubt as to the fact that he bought something, i.e., the presupposition cannot be cancelled, and the merchandise that changed hands in the transaction in question has to be fully identified, as it were, set against all other items of merchandise that may have been involved in that transaction. This is essentially the same equivocation as was noted in Guéron (1980) and many others since.

The case is somewhat less ambiguous in Hungarian. Although the two interpretations of the question do not in general show up in this language either, 'positive' answers may differ in their syntax (unless they are 'short' replies).

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4 There is one possible candidate for a question whose presupposition cannot be cancelled, in which the implication is something like 'I know you bought something, but I don't remember what'. The crucial item in it is the (untranslatable) particle is.

(i) Mit is vettél tegnap?
    what-ACC PRT bought-you yesterday
    'What did you buy yesterday?' [rising intonation]

As regards 'information focus questions', plural wh-phrases seem to qualify quite well. Questions like the one below do not tend to ask for exhaustive answers.

(ii) Milyen könyv-ek-et olvastál mostanában?
    what book-PL-ACC read-you these-days
    'What books have you been reading these days?'

How pragmatics, verb semantics, and knowledge of the world interact in determining the interpretation of the question is
(39) a. Mit vettél tegnap?
   "What did you buy yesterday?"
b. \(\text{(Vettem) egy } \text{kalapot.}\)
   'I bought a hat.' (I-focus)
c. \(\text{Egy } \text{kalapot (vettem).}\)
   'It was a hat that I bought.' (C-focus)

The sentence final position of the object DP indicates that it is information (I-) focus, while the preverbal position signals contrastive (C-) focus.

It is interesting to note here that a negative sentence is satisfactory in a semantic/syntactic sense (though not necessarily from the point of view of the person asking for information), only if we have to do with a C-focus question and answer, but not in the case of I-focus. The question in (39a) cannot be answered (in either sense) by (40a); the only possible negative answer is (40b), which contains a negated C-focus, and entails that the predicate holds of some element of the complement set of the subset negated within the set of relevant objects.

(40) a. \#\(\text{Nem vettem (egy) } \text{kalapot.}\)
   'I didn't buy a hat.' (I-focus)
b. \(\text{Nem egy } \text{kalapot (vettem).}\)
   'It wasn't a hat that I bought.' (C-focus)

This is due to the difference between I-focus and C-focus: if all I-focus does is identify some entity, then its negation merely cancels the identification and then constitutes no answer to a request for identification. C-focus in turn is interpreted with respect to a set of relevant entities that it constitutes a proper subset of. If the predicate is stated not to hold for the proper subset of the set of relevant objects, it is interpreted to hold for some element of the complement set. In other words, a negated C-focus identifies some element of the complement set, but a negated I-focus identifies nothing, though it, too, should have the function of identification.\(^5\) If being 'new information' were a sufficient condition for I-focus, an answer specifying what was not bought would count as new information, and we would have no account why such an answer is unacceptable. It appears, however, that the only possible negative answer to an I-focus question is one formed with a negative universal like \text{semmi} 'nothing', which then clearly is not an instance of I-focus.

The case is somewhat different in English. To begin with, in case a negative answer to a question such as (38a) is possible, the interpretation has to be that of C-focus, for the same reasons as put forward above. In other words, if an I-focus question is asked, (41a) would be inappropriate, which is perhaps why it sounds somewhat awkward, and why answers like (41b, c) fare better.

\(^5\) One anonymous reviewer notes that the negation of a C-focus does not necessarily entail the assertion of the truth of the complement set, citing the dialogue: \text{Who will you vote for as president?} – \text{Not Bush!} which is understood as not even implying that the person giving the response will vote at all. But that follows from properties of future events, and consequently questions about them. If the question were in past tense, i.e. about a past event, no such option could arise.
(41) a. I didn't buy a hat.
   b. Not a hat.
   c. It wasn't a hat (that I bought).

In the following conversation, however, an answer of the type of (41a) scores better. This is probably due to Gricean principles of conversation: since I must know what I bought, (41a) does not observe the maxim of quantity, whereas (41b, c) could have the additional connotation 'not a hat this time', making them more acceptable in terms of this maxim. The answer in (42b), in turn, implicates that that is all the speaker knows, and thus conforms to the maxim cited here.

(42) a. What did Jim buy?
   b. He didn't buy a hat.

In summary, we are by and large in agreement with É. Kiss (1998a), based on Kenesei (1984, 1986), Szabolcsi (1994), Jacobs (1988), and others, in determining the function and interpretation of her identificational (our contrastive) focus, repeated here for convenience.

(43) a. Identificational focus represents a subset of the set of contextually or situationally given elements for which the predicate phrase can potentially hold; it is identified as the exhaustive subset of this set for which the predicate phrase actually holds. (É. Kiss 1998a:245)
   b. Contrastive focus operates on a closed set of entities whose members are known to the participants of the discourse; the identification of a subset of a given set also identifies the contrasting complementary subset. (É. Kiss 1998a: 267)

Where we disagree are the view that we promote the proper subset relation instead of her subset relation,6 and the issue of the nature of information focus, which we take to carry out the same kind of identification as her identificational focus, but which misses the proper subset relation to the relevant entities invoked or implied by the former type.

We can now follow two tracks here. The more conciliatory solution is to by and large accept É. Kiss's (1998a) generalizations and modify them only insofar as claiming that they both rely on identification and information focus is [−exhaustive], while conceding that identificational/contrastive focus is [+exhaustive, ±contrastive].

If we took the more contentious position, we could challenge the distinction between her identificational and contrastive focus and claim that they are one and the same, at least for Hungarian, especially because her arguments for the [−contrastive] feature are particularly weak. She claims that focus is [±contrastive] in examples like (21b) because "the identification of the subset for which the predicate holds does not result in the delineation of a complementary subset with clearly identifiable elements." (É. Kiss 1998a: 268)7

But is "a complementary subset with clearly identifiable elements" a necessary precondition for there to be contrastive focus? Or is it possible that there are complement sets whose membership may differ from speaker to hearer, but as long as there are elements in these sets in addition to the one represented by the subset in focus they can qualify for contrastive focushood? Clearly a question such as Who wrote War and Peace? must be interpreted with respect to a set of persons who may have written the novel, just as in the following dialogue the set of people who may have broken the window is indefinitely large, but once the answer is given any other

6 But note that É. Kiss (2002:78) has 'proper subset' for 'subset', although she does not say why the change was called for.

7 This is practically the same as Jacobs' (1988: 113) claim: "Kontrastiv ist ein Fokus dann, wenn er im sprachlichen Kontext explicit irgendwelchen Fokusalternativen gegenübergestellt wird."
member of a certainly real complementary subset is excluded. This way contrastive focus always creates complementary subsets with real, though often undetermined membership.

(44) a. *Who broke the window?
   b. Jim Jones did (break the window).
(45) a. *Ki törte be az ablakot?
       who broke PV the window-ACC
   b. Kovács János (törte be az ablakot).
      'John Smith (broke the window).'
   c. *Kovács János (be-törte az ablakot).
      ca. 'Among others John Smith broke the window.'

Note that (45c) is out because no answer giving an information focus is possible. The question cannot be answered by specifying an information focus because all and only the persons who broke the window must be given. Consequently, everyone else, i.e. all members of the complement set, whether or not it is understood by the speaker and the hearer to have the same extension, are excluded.

   If É. Kiss were right, the focus position could be filled in by exhaustively, though not contrastively focussed items, such as a nap 'the sun' in the following example.

(46) a. *[A nap] süttött ki a felhők mögül.
       the sun shone out the clouds from-behind
       ca. 'It's the sun that's shining through the clouds.'
   b. A nap ki-süttött a felhők mögül.
      ca. 'The sun is shining through the clouds.'

Since the predicate sütt 'shine; burn' is applicable in this context only to the sun in Hungarian, and thus nothing but the sun can shine through the clouds (in the original), exhaustive focus should be possible. But it is an option only in English, not in Hungarian, where the focus position has to be [+contrastive]. Note finally that if the focus position carries the property of exhaustiveness, it would be a mystery why universal quantifiers cannot be focussed, although the feature [+exhaustive] applies perfectly well to them.

(47) a. Mindenki meg-vett egy kalapot.
    'Everyone bought a hat.'
   c. *It's everyone that bought a hat.

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8 The corresponding wh-question is also unintelligible, except if it is a genuinely silly question or addressed to a simpleton with a characteristic rising intonation, instead of the normal falling one.

(i) Mi süttött ki a felhők közül?
   what shone PV the clouds behind
   'What shines through the clouds?'

   Misi Brody (personal communication) noted that such sentences are dependent on our knowledge of the world (since there can be worlds with more than one sun), and their semantic properties do not follow from the meanings of the words in them. I do not see the consequences to be fatal: as argued here, focus has to do with (sets of) denotations, i.e. entities in the real or possible worlds, therefore the judgements passed on these sentences are dependent on what is the case. (Note that unlike English and several other languages, the moon and the stars do not sütt in Hungarian, the reason being that sütt involves the production of heat, unlike shine, which is equivalent to 'emitting light'.)
If, however, focus carries the property of contrastivity, universal quantifiers will be naturally barred from this position, because they cannot be interpreted as a proper subset of any relevant set that contains a complementary subset.

3.5. The domains of focussing

We contend that É. Kiss's (1998a, 2002) delimitation of constituents in focus is too restricted: VPs and clauses can also be focussed in Hungarian (and arguably in English, too). In this section we will show that some grammatical categories are 'more focussable' than others, and in the last section we will speculate as to a possible 'focus ontology' behind this state of affairs.

3.5.1. A critique of É. Kiss (1998a)

While there is general agreement in the fact that DPs are perfectly capable of occurring as foci, other categories are often claimed to fall outside the domain of focussability, as was seen in É. Kiss (1998a). The examples to support her case are as follows. (Focussed constituents are bracketed and some of the glosses changed.)

(48) a. *János [(azt) hogy Mari elkésik] súgta nekem
    John it-ACC that Mary is-late whispered me
    *'It was that Mary would be late that John whispered to me.'

    John every year a new car-ACC to-buy wanted
    *'It was to buy a new car that John wanted.'

    John to-see the film-ACC will
    *'It is see the film that John will.'

    John tired was seldom
    *'It was tired that John was seldom.'

However, É. Kiss mistakes the syntactic focus position for (criteria of) semantic focussability by maintaining that the examples in (48) are unacceptable because the expressions in focus do not denote individuals. While the bracketed phrases indeed cannot be placed in the preverbal focus position, neither É. Kiss's list of nonfocussable categories, nor the examples in (48) can be maintained in the face of data to the contrary.

First of all, that-clauses can be focussed in Hungarian on condition that it is not the clause that is moved into the designated focus position but the expletive az 'it', which is assigned the appropriate case, while the clause carries the thematic role discharged by the verb or adjective that it is the complement of, as was demonstrated in Kenesei (1994).

(49) János (nem) azt súgta nekem [hogy Mari elkésik]
    John not it-ACC whispered me that Mary is-late
    'What John whispered to me was (not) that Mary would be late.'

Note that clauses can be 'represented' by the expletive also in the Topic position and in the so-called is 'also'
construction, usually placed between the Topic and the Focus positions in the sentence.\(^9\) Observe also that the grammar of Hungarian is quite uniform in excluding all tensed complement and adjunct (relative) clauses from the preverbal focus position, as was also shown in Kenesei (1994).

As far as VPs are concerned, Kenesei (1998) made a case for VP focus in Hungarian demonstrating that it is realized in two varieties: (a) the main verb carries primary stress with all major constituents lined up following it and receiving primary stresses; and (b) one of the referential arguments or adjuncts is placed in focus position with the verb destressed and all other major constituents stressed behind the verb. Note that the case for VP focus was also used at the time to argue for the existence of the category of VP in a subject–predicate division in Hungarian, in contrast with the proposal that Hungarian has a 'flat' sentence structure, as É. Kiss (1987, 2002) has always claimed. The (a) scenario is illustrated in (50a), the (b) variety in (50b-c). The focussed VP is indicated by bracketing.

(50) a. Péter fel-olvasta a Hamletet a kerben (nem pedig úszott).
   Peter PV-read the Hamlet-ACC the garden-in not rather swam
b. Péter [a Hamletet olvasta fel a kerben] (nem pedig úszott).
c. Péter [a kerben olvasta fel a Hamletet] (nem pedig úszott).
   'What Peter did was read out Hamlet in the garden (rather than swim).

As is seen from the examples, entire VPs can be negated in focus: in contrast with clausal or 'unmarked' sentential negation when the preverb-verb order is reversed, their order is (or 'remains') preverb-verb in the case of focussed VP-negation. In the other variety of focussed VP-negation one referential DP is placed in the focus position following the negative word.

(51) a. Péter nem fel-olvasta a Hamletet a kerben (hanem úszott).
   Peter not PV-read the Hamlet-ACC the garden-in but swam
b. Péter nem [a Hamletet olvasta fel a kerben] (hanem úszott).
c. Péter nem [a kerben olvasta fel a Hamletet] (hanem úszott).
   'What Peter did was not read out Hamlet in the garden (but swim).

Infinitival clauses can also be focussed, although they, too, are prohibited from moving into the syntactic focus position as clauses. The focussing of infinitives is carried out along much the same lines as the focussing of VPs in at least affirmative sentences: either (a) the infinitive, or (b) one of the other constituents is placed into the preverbal focus slot. In sentences containing negated infinitival focus, the carrier verb must be repeated in the contrast clause, as in (52c, d).

(52) a. János olvasni akarta a Hamletet (nem pedig szaladgálni).
   John to-read wanted the Hamlet-ACC not rather run-around
b. János a Hamletet akarta olvasni (nem pedig szaladgálni).
   'What Peter wanted to do was read Hamlet (rather than run around).'</c. János nem olvasni akarta a Hamletet (hanem szaladgálni *(akart)).
   John not to-read wanted the Hamlet-ACC but run-around
d. János nem a Hamletet akarta olvasni (hanem szaladgálni *(akart)).

\(^9\) There is yet another alternative strategy in English: Reinhart (1991) notes the following sentence:

(i) [IP [CP That Linda argued with the chairman] is surprising]

in which the clause-internal focus results in focussing the clause itself vis-à-vis the matrix sentence. Thus focussing by means of clefting is not the sole device in English, underlining the observation that semantic focus has more than one way to be expressed even in a single language.
'What Peter wanted to do was not read Hamlet (but run around).'

É. Kiss's original examples cannot be used for illustrations for reasons unrelated to the problem at hand: *minden évben* 'every year' in (48b) is a universal quantifier, which must be moved into the matrix clause, thus preventing the rest of the clause from being focussed. The example in (48c), in turn, contains a preverb-verb combination, which elicits a pattern somewhat different from the above, since the 'carrier verb', which happens to be the auxiliary *fog* 'will' here, has to be repeated in the contrast clause in both affirmation and negation.

(53) a. János a filmet fogja meg-nézni (nem pedig szaladgálni *(fog)).
    John the film-ACC will PV-see-INF not rather run-around will
b. János meg fogja nézni a filmet (nem pedig szaladgálni *(fog)).
    'What John will do is see the film (rather than run around).'
c. János nem a filmet fogja meg-nézni (hanem szaladgálni *(fog)).
    'What John will do is not see the film (but run around).'

Finally, we also disagree with É. Kiss as regards the alleged general nonfocussability of predicate nominals and adjectives: we argue that these are focussable just as other predicates are, but of course not as nouns or adjectives (or NPs, NumPs, APs, etc.), but as full predicates complete with the copula. In other words, when the following sentences are considered, it is not *(a) soldier versus (a) cook, or tired versus upset* that is contrasted, but *be a soldier or being a soldier and be(ing) a cook, or be(ing) tired and be(ing) upset*, as is illustrated by the options provided by the contrast clauses, which contain verbal predicates derived from the corresponding noun or adjective, respectively

(54) a. Péter katona volt, nem pedig szakács (volt)/szakácskodott.
    Peter soldier was not however cook was/worked-as-a-cook
    'Peter was a soldier, not a cook.'
b. Anna nem fáradt volt, hanem (csak) ideges (volt)/idegeskedett
    Anna not tired was but only upset (was)/acted-upset
    'Anna was not tired, she was (acting) upset.'

É. Kiss's example (48d) sounds unnatural for an independent reason: it contains the 'negative' adverbial *ritkán* 'seldom', whose canonical position is the preverbal focus slot, and whenever something other this adverbial is focussed, it appears as an instance of *contexts of repair*, cf. 2.1.

3.5.2. Sentential focus

For quite some time the Hungarian preverbal focus position has been considered to provide indisputable evidence for interpreting only the item occupying it as contrastive focus. As was shown in the previous section in relation to VP-focus, cf. (51)-(52), the focus position also serves as a marker for the focussing of a constituent larger than what is actually placed there. There is another set of examples from the literature that illustrates this property.

It was again É. Kiss (1998a) who called attention to a structure in which the subject occupies the focus position and the whole sentence is understood as in (information) focus.\(^{10}\)

\(^{10}\) We disagree with É. Kiss on several counts in other aspects of her presentation and, consequently, analysis. For one, she claims that the same sentence is the answer to the constituent question *Who won the Russian elections?* Sure enough, both answers *look* the same in writing, but they differ in that in the example with information focus all major notional
(55) a. What's new?
    b. [focus Jelcin] nyerte meg az orosz választásokat.
       Yeltsin won the Russian elections-ACC
       'Yeltsin has won the Russian elections.'

Note that the following nonfocused PV-verb order would also be possible and acceptable in answer to the question in (55a):

(56) "Jelcin "meg-nyerte az "orosz "választásokat
       Yeltsin PV-won the Russian elections-ACC
       'Yeltsin has won the Russian elections.'

In this sentence the subject DP Jelcin is not placed in the syntactic focus position, but is in Topic, and the sentence is in all respects identical with what has been termed 'neutral', i.e. nonfocused, in the literature on Hungarian, with primary stresses as marked by the double primes.

The slight difference that there is between the two answers in (55b) and (56) somewhat resembles that between the familiar examples from Schmerling (1976) cited below.

(57) a. Johnson died.
    b. Truman died.

This pair of sentences has been interpreted as differing in that Truman's terminal illness had been in the news for some time before he passed away, while Johnson's death was something out of the blue. In other words, the difference in the ways these sentences are focused is due to the difference in the speaker's beliefs as to the hearer's knowledge, producing presentational focus in (57a), as against a more restricted information focus in (57b).\(^{11}\)

The two Hungarian examples might differ again in terms of (speaker's beliefs of) hearer expectations: if the speaker presumes that the hearer is aware of the candidates in the elections, even though s/he may not now that the elections took place the day before, (55b) is a possible answer. If the speaker thinks that the hearer knows nothing about Yeltsin or the Russian elections, (55b) would be out of place, and (56) is a more probable reply. A similar regularity can be constructed of the following: \(^{12}\)

\[\text{constituents (except for the verb) have primary stresses, while in the example containing contrastive focus (in answer to the constituent question) all stresses following the focus are decreased, cf. Varga (2002).}\]

- (i) Who won? "Jelcin nyerte meg az orosz választásokat.
  'It's Yeltsin that has won the Russian elections.'
- (ii) What happened? "Jelcin nyerte meg az "orosz "választásokat.
  'Yeltsin has won the Russian elections.'

\(^{11}\) Note their Hungarian equivalents, which fit the pattern outlined in (7):

- (i) Meghalt Johnson.
  died Johnson
- (ii) Truman meghalt.

\(^{12}\) Judgements are delicate and not everyone agrees, although even speakers who do not accept the interpretations given acknowledge there is some difference between the relevant pairs. It is worth noting that at least one newspaper broke the news by printing a headline identical to (58a).
(58) a. [Focus "Kertész "Imre] kapta meg az "irodalmi "Nobel-díjat.
K.I. 
'Imre Kertész has received the Nobel Prize for Literature.'

b. [Topic Az "irodalmi "Nobel-díjat] [Focus "Kertész Imre] kapta meg.
'idem.'

'idem.'

For (58a, b) to be a plausible answer, Imre Kertész must be a potential, though strictly speaking, unofficial, candidate for the Nobel Prize known to the hearer; no such precondition has to subsist in case of (58c), assuming, of course, that the speaker believes that the hearer knows who Imre Kertész is. It is perhaps interesting to note here that to break the news of Kertész's Nobel Prize, (58a, b) are more likely than (58c), owing to the ensuing preferred interpretation, which suggests that 'we have known it all along that he was a potential winner.'

In short, in addition to focus on embedded clauses, it is possible to place focus on matrix clauses.

3.5.3. The nonexistent V-focus

It is practically an unquestioned fact in the literature that verbs can be focussed just as any other constituent (cf. Brody 1990, É. Kiss 1992, 1994, Choe 1995, Ambar 1999, Bayer 1999). We will now proceed to challenge that view. In the following examples from Hungarian (cf. Brody 1990) and Portuguese (Ambar 1999), respectively, the verbs are claimed to carry contrastive focus.

not hate-1SG-DEF.OB János-ACC but like-1SG-DEF.OB
'I don't hate John, I like him.'

b. A Maria beijou o Pedro.
Mary kissed Peter
'Mary kissed Peter.'

Although it is obvious that the verbs carry nuclear stress in these sentences, it is less evident that it is only the verbs that are (semantically) focussed. As far as Hungarian is concerned, this assumption follows from É. Kiss's controversial view that Hungarian sentences have a 'flat' structure without a VP, which Brody (1990) accepted at the time and which allows no 'focus percolation' to any constituent above the verb but below the level of the clause. It is easy to show, however, that in case of a putative verb-contrast, more constituents than the verb itself have to carry primary stress, showing a pattern similar to that in (29). In other words, some constituents are destressed because they (or rather, their denotations) are contained in the superset that both contrasted actions are subsets of.

This is not the place to discuss the syntax and, in particular, the alternative orders in sentential focus, but note that other orders, including verb-initial ones, are not as natural or well-formed, as SVO orders, although they are not entirely unacceptable.

(i) "Meg-nyerte Jelcin az orosz választásokat.
(ii) "Meg-kapta Kertész Imre az irodalmi Nobel-díjat.
The relevant sets that the denotations of the VPs in (60) are subsets of are actions involving the book. The fact that part of the VP is in ellipsis is hardly surprising given the wide variety of cases in which similar processes are observed, as witnessed by the following illustration.

(61) a. Anna nem [a kék kalap-ot] vette meg, hanem a piros-[N ∅]-at.
   'Anna didn't buy the blue hat; she bought the red (one).'

   'Anna bought not two hats but four.'

Although focus stress is placed on the adjectives and the numerals, respectively, it is sets of hats of various colors or sets of hats of various cardinality, rather than sets of colors or numbers, with respect to which the subsets in focus are identified.

But notwithstanding the argument from (lack of) ellipsis, verbs, in general, do not exist 'in isolation', i.e., without their (internal) argument structure: there is no buying, liking, kissing or reading without buying, liking, kissing, or reading something or someone: ellipsis or deaccenting is the result of being presupposed the same way as the book was presupposed but still part of the domain of focussing in the case of the examples in (29a-b). In other words, it is not the denotation of hate that is contrasted with that of like, but those of hating John and liking John in (59a), excluding this or all other members of the respective supersets formed of actions.

3.5.4. Adjuncts in focus

As is well-known, cleft focus in English can host at most one constituent. This observation has been used, among others, to use clefts as constituency tests, as shown in the following examples.

(62) a. It's the garden that he is showing to Maud.

b. *It's the garden to Maud that he is showing.

c. *It's Maud the garden that he is showing.

However, as was first noticed by Taglicht (1984), in certain cases more than one constituent can be focussed in a cleft sentence.

(63) a. It was three years ago (and) in London that I first met him.

b. It was rather infrequently (and) in Paris that we met after that.

Note that both items must be adjuncts, that is, it is not possible to place an argument along with an adjunct.

(64) *It was Maud (and) three years ago that I met.

Independently of Taglicht, É. Kiss (1994) recognized a similar regularity in focussing adjuncts in Hungarian. In applying Szabolcsi's (1981b) original test for exhaustive listing, she noted that an unlimited number of adverbials may simultaneously be true of one and the same action, or, equivalently, in case of conjoined
adverbials in focus, one conjunct in focus is a possible consequence, in contrast with argument DPs, cf. (25a–c).\footnote{Since manner adverbials are rather awkward in clefts, the sense translations retain their sentence final positions with focus marked by bolding them.}

(65) a. *Mari szépen vasalta ki az inget.*
   Mary beautifully ironed PV the shirt-ACC
   'Mary ironed the shirt beautifully.'
   b. *Mari szépen és gyorsan vasalta ki az inget.*
   Mary beautifully and quickly ironed PV the shirt-ACC
   'Mary ironed the shirt beautifully and quickly.'

In other words, (65b) does not contradict (65a), and the truth of (65a) follows from the truth of (65b), unlike in the case of (66a, b), where (66b) contradicts (66a), and the truth of (66a) does not follow from the truth of (66b).

   Mary Peter-ACC visited PV
   'It was Peter that Mary visited.'
   b. *Mari Pétert és Annát látogatta meg.*
   Mary Peter-ACC and Anna-ACC visited PV
   'It was Peter and Anna that Mary visited.'

To cite a new set of examples, the dialogue in (67a, b) is well-formed, since propositions containing conjoined DPs in focus are true under conditions different from when one of their conjuncts is in focus, while the dialogue in (67a, c) is ill-formed for the same reason.

   Mary Peter-ACC visited PV
   'It was Peter that Mary visited.'
   b. *Nem, Mari Pétert és Annát látogatta meg.*
   No Mary Peter-ACC and Anna-ACC visited PV
   'No, it was Peter and Anna that Mary visited.'
   c. *Igen, Mari Pétert és Annát látogatta meg.*
   Yes, Mary Peter-ACC and Anna-ACC visited PV
   '#Yes, it was Peter and Anna that Mary visited.'

In contrast, similar dialogues containing adjuncts in focus show a reversal in acceptability. That is to say, conjoined manner adverbials in focus do not contradict an assertion in which only one of the conjuncts is focussed.

(68) a. *Mari szépen vasalta ki az inget.*
   Mary beautifully ironed PV the shirt-ACC
   'Mary ironed the shirt beautifully.'
   b. *Nem, Mari szépen és gyorsan vasalta ki az inget.*
   No Mary beautifully and quickly ironed PV the shirt-ACC
   '#No, Mary ironed the shirt beautifully and quickly.'
   c. *Igen, Mari szépen és gyorsan vasalta ki az inget.*
   Yes Mary beautifully and quickly ironed PV the shirt-ACC

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'Yes, Mary ironed the shirt beautifully and quickly.'

When É. Kiss (1994) discussed the contrast between (65) and (66), she attributed their difference to the fact that these adverbials are nonreferential and focussable entities must be referential. She also noted that each adverbial in focus can also perform "identification with exclusion" in case of explicit contrast, as in answer to a question like Did Mary iron the shirt beautifully or carelessly? We might add to her observation that there needn't be explicit contrast to exclude adverbials of the same 'semantic dimension'. Once the predicate ironed the shirt quickly holds for some action, any other predicate incorporating an expression mentioning the speed of the action is out of place, i.e., excluded, but a predicate indicating some other circumstance, manner, etc., of the same action is perfectly compatible with it.

Observe that it is not simply adverbials but the predicates containing them that constitute reference sets for (contrastive) focus. And predicates, as was seen above, are perfectly focussable entities, although not referential in the sense É. Kiss seems to have used the term. However, this interpretation raises a new set of questions.

It was claimed in Kenesei (1998) that there is a contrast between referential and nonreferential adjuncts when focussed. Focus interpretation is projected onto the (internal) VP, i.e., the predicate, only if (a) the verb is initial in the VP, or (b) the syntactic focus position contains an argument, or (c) a referential adjunct, as was seen also in (51)-(52). (The scope of semantic focus is represented by small capitals, the syntactic focus position is bracketed, and primary stresses are marked by double primes.)

   Peter PV-read the Hamlet-ACC the garden-in not rather swam
   'What Peter did was read out Hamlet in the garden (rather than swim).

If a nonreferential adjunct is in the syntactic focus position, the projection to VP-focus interpretation is not possible, see (70a). Here either focus interpretation is restricted to the nonreferential adjunct, cf. (70b), or if VP-focus is intended, the adjunct must not be placed in the focus position, but moved in front of it, as is indicated by the preverb-verb order in (70c).

(70) a. *"Péter ["HANGOSAN] OLVASTA FEL A *HAMLETET (nem pedig úszott)
   Peter aloud read PV the Hamlet-ACC not rather swam
   'Peter read Hamlet out aloud.'
c. "Péter ["HANGOSAN] FEL OLVASTA A *HAMLETET (nem pedig úszott)
   'What Peter did was read out Hamlet aloud (rather than swim).'

This is a scenario analogous to the one that was illustrated in connection with the focussing of DPs containing an attribute, cf. (29b). It is a set of books in various languages that constitutes the complement set of the item identified by focussing in (71a). But note that it is possible to create a dialogue in which the book in question may have additional properties along with being in English, provided that they are not in the same 'semantic dimension'.

   John an English book-ACC got as-present
   'It was an English book that John got as a present.'
   Yes/No, John a boring English book-ACC got as-present
'Yes/#No, it was a **boring** English book that John got as a present.'

Just as (70b) is incapable of carrying VP-focus, so are (71a, b): they can only be understood as having constituent focus. But that is not at issue here; what we want to claim is that the case of (70b) resembles that of (71). According to (71a), John received an English book as a present (whether boring or not), as contrasted with a set of books in other languages (not excluding books exhibiting other properties, such as boring, or thick, or green, etc.). Analogously, in (70b) the action of reading out Hamlet aloud is identified with respect to a complement set of actions of reading out Hamlet at some volume other than 'loud', not excluding actions of reading out Hamlet in various other ways: quickly, slowly, well-articulated, monotonously, etc., just as in (65a, b) and the related examples. That is why both manner adverbials and attributes are compatible with adjuncts along different 'dimensions', but neither can project focus onto the dominating phrase node: it cannot be a set of actions at large in the case of (70b) with which 'reading out Hamlet aloud' is contrasted, and it cannot be a set of things in general in (71b) with which 'an English book' is compared. And just as (71a) is not a possible answer to a question *What happened (to John)?*, so is (70b) an impossible reply to a similar information focus question *What did Peter do at lunchtime yesterday?*

The reason why focussing a nonreferential adjuncts like *hangosan* 'aloud' is compatible with focussing another nonreferential adjunct lies in the fact that the actions they characterize are themselves not incompatible, whereas when a referential argument or adjunct is focussed (and focus is not projected to the VP), the set denoted by the focussed expression differs from any other set – except for any one of its own subsets, which is the case in (71a, b).

These observations naturally carry over to other nonreferential adjuncts, including adverbials of reason, purpose, etc. This section has served to show that whenever a nonreferential adjunct is focussed it is not interpreted with respect to some set of independent 'adverbial denotations', but as part of the predicate, whose reference is available to constitute (subsets of) reference sets.

5. Ontology and conclusion

If we take stock of what counts as focussable expressions, we find VPs and clauses in addition to referential (i.e., specific and definite) noun phrases or DPs. Excluded are attributes, i.e., adjectival and numerical expressions in noun phrases, nonreferential noun phrases (or NPs, NumPs, etc.), nonreferential adverbials, verbs and other expressions of their kind. If we wish to generalize over the expressions that can undergo focussing, we might speculate that they closely correspond to the expressions that have reference (or denotation, *Bedeutung*) in Frege's ontology.

The founding father of modern semantics, Gottlob Frege (1952), recognized two kinds of entities that linguistic expressions may denote (refer to, stand for, *bedeuten*): functions and objects. Corresponding to these two kinds, there are four types of linguistic expressions: (a) predicates, which are names of functions mapping objects to truth-values; (b) 'proper names' (or, in current terminology, referring expressions), (c) sentences and (d) subordinate clauses, which all denote objects, differing only in the kinds of objects they stand for: sentences denote two 'special' objects, the True and the False, and are capable of having 'assertive force'; subordinate clauses denote their senses: the 'thought'; and 'proper names' denote all other kinds of objects, whether abstract or concrete.\(^\text{15}\)

If the function of focussing is identification with respect to a set of entities in the real or a possible world, the sets of entities thus invoked must have existence: there must be a set of countries, of which Italy is an

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\(^{15}\)This is not the proper place to review either Frege's work or the literature on it. Note that the views adopted here are somewhat closer to Klemke's (1968) position on Frege's ontology than to Dummett's (1973, 1981).
element in example (31), there must be a set of actions possible at time \( t \), of which reading out Hamlet in the garden is an element in (51), and there must be a set of real or 'true' states-of-affairs (i.e., Frege's 'the True'), of which one is that Yeltsin won the Russian elections in (55)-(56). But there is no set in the real or in a possible world that is comprised of various properties that books may have, such as boring and interesting, or English and German, etc., only sets of books of various properties (cf. (71)). Just as there are no sets constructed of modes of ironing shirts, only sets of actions executed at time \( t \), by agent \( a \), including ironing some shirt quickly, ironing the same shirt beautifully, ironing it quickly and beautifully, etc., in (65). In this Fregean world of functions and objects, focussing is thus interpreted with respect to (proper) subsets of sets of entities, i.e., the denotations of DPs, VPs or CPs/IPs.

When information focus and contrastive focus are compared, it transpires that the crucial ingredient in them is identification. However, while information focus makes no commitment as to what other entities constitute the relevant set for which the identification in question does or does not hold, contrastive focus must make such a commitment: outside of what is identified as the entity or entities that the identification holds for, there must be at least one other entity, whether thing, action, property, or state-of-affairs, to which the identification does not hold. This complement set then may or may not have the same membership for speaker and hearer, but it must be nonempty. In other words, the exclusion by identification must be real.

Since information focus differs from contrastive focus only inasmuch as the former relies on the subset relation, while the latter relies on the proper subset relation, it follows that contrastive focus itself is a subset of information focus. In other words, all cases of contrastive focus are cases of information focus with the only difference that the contingency of a complement set in information focus turns into a necessity in case of contrastive focus.

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