On themes and rhemes
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1. During the last decades attempts have been made to incorporate into linguistics the logical, philosophical or psychological distinction between "the thing about which something is said" (henceforth: Theme) and "the thing said" (henceforth: Rheme). Some authors have, more or less consistently, proposed to identify the notions Theme and Rheme with the pair "old information" and "new information"; definitions of the latter distinction refer to the preceding linguistic and non-linguistic context of sentences, either directly or indirectly, via the projection of the context in the mind of the speaker, or even via the projection in the mind of the speaker of the projection of the context in the mind of the hearer. Whatever intermediate steps are introduced between a sentence and its preceding context, proposals to the effect that Theme and Rheme are identical with "old information" and "new information" remain unacceptable. Consider (1) and (2) (the symbol "=`" indicates prosodic prominence).

(1) In Amsterdam, the postoffice has been destroyed.
(2) In Amsterdam, the postoffice has been totally destroyed.

All analyses of the information structure of these sentences which are known to me say, in one terminology or another, that the phrase the postoffice in (1) is, or belongs to, the thing said, and that the same phrase in (2) belongs to the thing about which something is said.
Those who try to identify "Theme" with "old information" typically adduce all kind of interesting observations about the postoffice in (2). It can be remarked, for example, that the phrase contains a definite article, that the hearer is supposed to know which building is being referred to, that the postoffice is a part of Amsterdam, etcetera. These observations are correct, but they are beside the point, for the same observations can be made about the postoffice in (1). Consider (3) and (4).

(3) On the table is the book.
(4) The book is on the table.

In (3), the phrase the book belongs to the Rheme, while the same phrase in (4) constitutes the Theme. In both cases the phrase introduces into the sentence pre-existing knowledge. Those who wish to show that Rhemes introduce new information argue that the book in (3), although in a certain sense old information, is also new information: the really new information in a sentence, so it is argued, is not the phrase in the Rheme itself, but the connection between the Rheme and the Theme, for example in (3): the connection between the book and the table. Although this is correct, it does not help much as it stands. If the connection between the book and the table is new, then the connection between the table and the book is also new; so the same argument "explains" that e.g. the book in (4) introduces new information. The only reason why this conclusion is so seldom drawn is, in my view, that nobody wishes to show that Themes introduce new information, although at the same time it cannot be denied that Themes can introduce new information, for example when the Theme contains an indefinite article.

Having seen many examples of sentence pairs such as (1)-(2) and (3)-(4), one can hardly fail to notice that
the only relevant observation to make is that *the post-office* carries the last accent of the sentence in (1) but not in (2), that *the book* carries the last accent in (3) but not in (4). To give yet another example, in *John fell asleep* the phrase *fell asleep* is Rheme, in *John fell asleep at 8 o'clock* the same holds true, but in *John fell asleep at 8 o'clock* the same phrase belongs to the Theme. It can be concluded then that a phrase is interpreted as a Rheme if it carries the last accent of the sentence.

A contextual approach to information structure can be characterized as an attempt to prove that a phrase is Rheme independently of the fact that it carries the last accent. Consider the following statement:

"[...] I have so far not seen any language which would be an exception to the rule that the focus [here: Rheme] of a sentence is normally the carrier of the main stress" (Dahl 1974: 2).

It is sensible to formulate this rule only if it is assumed that the last accent ("main stress") of a sentence, although it happens to occur on the Rheme, could have occurred on e.g. the Theme, that thus the Rheme can be recognized as the Rheme on the basis of something other than that it carries the last accent: on the basis of the context. This assumption makes it necessary to derive such differences as between the pairs of examples adduced above from differences in the preceding context, via whatever intermediate steps. But any argument which tries to do so misses the very phenomenon for which it tries to account, namely the fact that a sentence creates its own preceding context. If in *John fell asleep* and *John fell asleep at 8 o'clock* the phrase *fell asleep* is felt to be "new", while the same phrase in *John fell asleep at 8 o'clock* is felt to be "old", the conclusion must be drawn that it is the accent on *o'clock* which is responsible for the illusion that it was already known, before
the sentence was uttered, that John fell asleep. In a coherent text it will always be possible to show that the illusion created by accentuation makes sense, but it is impossible to show that it is the context which is responsible for the illusion and thus for accentuation. The assumption which underlies a contextual approach to information structure is that sentences which differ only in accentuation are contextually variant pronunciations of the same unaccented unit, which is called, for example, proposition. It is this assumption which is the cause of the problems: the assumption makes the choice of one pronunciation or another dependent upon the context in which the proposition occurs. If it were true that the context determines how a given proposition is to be accented, accentuation would be redundant. In reality accentuation has a meaning, it signals, together with other things, which message is being conveyed in the given context, that is, in a given context more than one message can occur. Sentences which differ only in accentuation are not variants of a single invariant, unaccented proposition, but different invariants. A proposition cannot occur in any context, for such a unit does not exist in natural language (see further Keijsper (forthcoming)).

2. At present, most investigators acknowledge that the pair Theme - Rheme is not identical to the pair old - new information. Less generally acknowledged is the fact that it is thus useless to make the latter distinction (as it explains nothing); in many publications the two divisions, with non-coinciding borderlines, coexist. The contextual approach having failed, the question how the pair Theme - Rheme is to be incorporated into
linguistics is again open. This question is not often considered, which is the consequence of a remarkable development. Originally, there was the semantic fact, established by intuition, that sentences exhibit a division in what was called Theme and Rheme. It was unknown, however, which aspects of sentences are responsible for our intuition that sentences divide in this way. Then the proposal was made that not aspects of sentences themselves are responsible, but the context in which sentences occur. This proposal turned out to be incorrect. The next step then is to suggest another explanation. Pending an acceptable proposal, the distinction between "the thing about which something is said" and "the thing said" has the status of a semantic fact which is yet to be explained. Nowadays, however, the distinction itself seems to get the status of a proposal, as if it were itself an explanation. Only, it remains unclear what the distinction is supposed to explain. It must be feared that the distinction is being introduced in order to explain its own existence. Such proposals can hardly be taken seriously. One can also propose to divide a sentence in words which begin with the letter d and other words; this distinction cannot then be taken to explain that some words begin with the letter d and others do not. It must at least be said what aim is served by introducing such a distinction.

The problem cannot be solved in the way suggested by Reinhart (1982). Reinhart observes (op.cit.: 5):

"The linguists who define the topic to be what the sentence is about [...] take this notion of aboutness as a primitive, without attempting to explain what it means for a sentence to be about (the referent of) one of its expressions".

Reinhart means that the notion of what she calls "pragmatic aboutness" has to be defined more precisely, and
she proceeds to propose a definition. Although it is, of course, always recommendable to say what you are talking about, a proposal to divide a sentence in words which begin with the letter $d$ and other words does not become more sensible by saying what you mean when you say that a word begins with the letter $d$.

To be sure, I am not suggesting that the Theme - Rheme distinction is linguistically irrelevant. I am arguing against the practice of introducing distinctions which serve no aim other than showing that it is possible to introduce the distinction. This practice leads not only to the introduction of arbitrary distinctions (such as old versus new information), but also to the view that about existent semantic distinctions nothing more need to be said than that they exist. In itself there is nothing against linguistic meanings such as "the thing about which something is said" and "the thing said"; the problem is rather: of what can they possibly be the meanings?

It might be proposed that "Theme" and "Rheme" are the meanings of word order and/or accentuation, but the correlation between the formal and the semantic facts appears to be somewhat more complicated.

Consider the following sentences.

Peter. This sentence consists of an accented word; it is intuitively called a Rheme.

Peter died. This sentence consists of an accented word plus an accented word; further, the first word is called a Theme, the second a Rheme.

Peter died. An unaccented word plus an accented word; and a Theme plus a Rheme.

Peter died in the winter. Unaccented word plus accented word plus two unaccented words plus accented word. The first two words form the Theme, the rest
Now, what does it mean for a word to be accented or unaccented? Obviously not that it is then Rheme and Theme respectively.

The book (Theme) is on the table (Rheme).

The book (Rheme) is on the table (Theme/Rheme).

On the table (Theme) is the book (Rheme).

On the table (Rheme) is the book (Theme).

What does it mean for the phrase the book to precede or follow on the table? Obviously not that it is then Theme and Rheme respectively.

So on the formal side we have the fact that some words are accented and some words unaccented, and the fact that some words and phrases precede or follow others, on the semantic side we have something which we call Theme and Rheme, and we have the link that a word which carries the last accent belongs to what we call Rheme. In one way or another, these facts are to be made into a coherent whole.

In the remainder of this article I shall argue that our intuitions about Themes and Rhemes are intuitions about the way in which meanings are mapped onto the world as it is perceived at the moment of speaking, and that the way of mapping is expressed partly by word order and accentuation.

3. As far as I know, it has never been proposed to analyze a sentence such as The table as a Theme plus a Rheme. One cannot paraphrase the information conveyed by this sentence as: I tell you about the that (it is a) table. Other sentences, which also consist of an unaccented word plus an accented word, e.g. John read, can sensibly be paraphrased in this way: I tell you
about John that (he) read. These sentences are, in my view, examples of the different ways in which complex meanings can be related to the world. A hearer who gets the message the table has to concatenate the meanings "the" and "table" into the complex thought "the table" before the message makes sense. In contrast, the meaning of John read is to be related to the world in two steps: first "John" and then "read". Schematically:

\[
\text{The} \uparrow \text{table} \downarrow \quad \text{and} \quad \text{John} \downarrow \text{read} \uparrow.
\]

Let me assume that a hearer, being confronted with a string of words, starts interpreting the string from left to right (in chronological order). For each word, or rather for each thought evoked by a word, he decides, I assume, between 1. concatenating it to the thought evoked by the next word(s) \((x \uparrow \downarrow)\), and 2. directly relating it to the world \((x \downarrow)\).

Starting with this hypothesis, we can split up the Theme - Rheme problem into a number of specific questions. Three questions will be discussed here.

To begin with, which properties of the sentences The table and John read prevent from writing The\, book\, and John\, read\, , i.e. why cannot the function as Theme, and why cannot John read function as one Rheme, one complex thought about the world ? (I am aware that some authors would deny the latter because of the fact that John need not be "old" information). This question will be taken up in section 8. below.

For the second question, consider again

(5) Peter died : I tell you about Peter that he died.
(6) Peter died in the winter : I tell you about Peter's death that it took place in the winter.

The problem over which the contextual approach stumbles (section 1.) is that Peter died in (6) is interpreted to evoke the thought of an event about which something
is said as a consequence of the fact that a further accent occurs in the same sentence. If the phrase *in the winter* were absent, or unaccented, *died* would not have the function of Theme, but of Rheme (as in (5)). Likewise, *Peter* in (5) evokes the thought of an entity about which something is said as a consequence of the accent on *died*; if *died* were absent, or unaccented, *Peter* would have the function of Rheme. There can be a Rheme without a Theme, but not a Theme without a Rheme; basically: *I tell you about* (*Peter* (Rheme)) *that* (*died* (Rheme)), and *I tell you about* (*Peter* (Rheme)) (*that* *died*). The assumption that a hearer who is interpreting a sentence proceeds from left to right, thus leads to the observation that what we call Theme in these sentences is a reinterpretation of what we call Rheme, which takes place in the context of a further (accented) Rheme. That is, every accent is a final accent until the next accent occurs. What exactly is the change that takes place from *Peter* (Rheme) to *Peter* (Theme) *died* (Rheme) to *died* (Theme) *in the winter* (Rheme)? See 4., 5., and 7.

Finally, the sentence *John read* is, as far as information structure is concerned, equivalent to e.g.

*John read the book*

*John read the book of the neighbour*

*John read the book of the neighbour about birds*

*John read the book of the neighbour about birds in Africa.*

One can become conscious of the equivalence for example by realizing that all these sentences can be used as a coherent answer to the question: What did the boys do?, or by realizing that all the sentences can be sensibly paraphrased by: *I tell you about* *John that* *y*; in this formula, "y", although of varying complexity, conveys one thought about John (to be sure, formally identical strings can have more than one reading, for example, the longest string can be used as a coherent answer
not only to: What did the boys do ?, but also to: Where did the boys read the book of the neighbour about birds ?). Why is it that *John read the book*, and not *John read the book*, is equivalent to *John read*, why is it that *John read the book of the neighbour*, and not *John read the book of the neighbour*, is equivalent to *John read the book*, etcetera ? This problem will be discussed in section 8.

4. Imagine that you are looking out of the window. You see an empty street. Then a red car drives past. Before the car entered your visual field, it was in another street, where cars of all possible colours may be travelling. Instead of a red car, it could have been e.g. a green car which enters your street. In your fixed visual field, the car which you perceive is "new": first you saw the street without the car, and then with the car.

Now imagine the following scene. Someone is buying a car. He is looking at a number of cars, a green one, a red one, etcetera, and he finally chooses the red one. An act of choosing is possible only if a number of things is simultaneously present, all these things are "given" at the moment of selection.

The distinction just exemplified is, in my view, essential for the understanding of what we call Theme and Rheme. Schematically, the first scene can be pictured as follows:
This picture indicates that different cars can pass through a given fixation point. I shall say: the members of this set are PARADIGMATICALLY OPPOSED to each other. The buying of a red car rather than a green one can be pictured as follows:

That is, attention is being focused on the red car rather than on the green one. I shall say: the members of this set of cars are SYNTAGMATICALLY OPPOSED to each other.

The difference between a paradigmatically and a syntagmatically perceived opposition can be used to formulate the conceptual difference between 1. adding \( y \) to \( x \), and 2. adding \( x \) to \( y \).

Let there be two sets, \{"non-x", "x"\} and \{"non-y", "y"\}. The expressions "non-x" and "non-y" stand for the complement of "x" and "y" respectively.

Consider

That is: from the set \{"non-x", "x"\} I choose "x" as the fixation point; I bring "y", from the set \{"non-y", "y"\} to the fixation point; I add "y" to "x". The operation of adding "x" to "y" is then:
A more complex operation is, for example, the addition of "y" from \{"non-y", "y"\} to "x" of \{"non-x", "x"\}, plus the addition of "z" from \{"non-z", "z"\} to "y" from \{"non-y", "y"\}:

Here, we have subsequently two fixation points; "y" is opposed to "non-y" paradigmatically with respect to "x", and syntagmatically with respect to "z".

Imagine now that the boxes in the pictures are thoughts (or: projections), and that the page is the world. Consider again:

The thoughts "non-y" and "y" are projections of the piece of the world occupied by "x". I shall say: the set \{"non-y", "y"\} is paradigmatically mapped onto
the world.
The thoughts "non-x" and "x", forming a set which is syntagmatically mapped onto the world, define different pieces of the world: there is a piece of the world defined by having the thought "non-x" attached to it, and there is a piece of the world defined by having the thought "x" attached to it.
I am now going to propose a definition of the meaning of accentuation.
An accent on a word \( y \) signals, in my view, that the presence of thought "y" in the stream of information being conveyed at the moment of speaking is communicated, i.e. that the presence of "y" in the stream is opposed to the absence of "y" in the stream. I shall paraphrase this meaning as: 'I think: "y"' (an assertion of the speaker).
The absence of an accent on a word \( y \) signals, in my view, that the presence of thought "y" in the stream of information being conveyed at the moment of speaking is not communicated; the word \( y \) is present in the stream, so the thought "y" is present, but the presence of "y" is at the moment of speaking not opposed to the absence of "y". I shall paraphrase this meaning as: 'I do not not think: "y"'.
The interpretation of these meanings takes place within a given perception of oppositions. Consider again:

\[
\begin{array}{c|c}
\text{non-y} & \text{y} \\
\hline
\text{y} & \\
\hline
\text{non-x} & \text{x}
\end{array}
\]

By accenting \( y \), the speaker asserts: 'I think: "y"'.
This signals here the act of adding "y" to "x": first there is "x" without "y", then there is "x" with "y".
The full expression would be: 'I think of x (of the piece of the world defined by having "x" attached to it) and I think: "y"'.
The absence of an accent on the word y signals that the first phase is absent: there is only "x" with "y", not first "x" without "y" (the act of concatenating is not communicated): 'thinking of x I do not not think: "y"'.
Consider now another possible perception of the same pair of oppositions:

<table>
<thead>
<tr>
<th>non-x</th>
<th>non-y</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>x</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>y</td>
<td></td>
</tr>
</tbody>
</table>

Let me take again accented y. The speaker asserts: 'I think: "y"'. This signals here the act of choosing "y" rather than "non-y" as the fixation point, that is, as "non-y" and "y" define different pieces of the world, the act of picking out the piece defined by having "y" attached to it rather than the piece defined by having "non-y" attached to it; first the speaker surveys the whole world (non-y and y), then he focuses attention on y alone. The expression: 'I think: "y"' is here equivalent to: 'I think of y (of the piece of the world defined by having "y" attached to it)'.
The absence of an accent on the word y signals that the first phase is absent: the speaker does not first see the whole world and then y alone, but only y alone: he was already thinking of y ('I do not not think: "y"', i.e. 'I do not not think of the piece of the world y').
It will be clear that the interpretation of 'I think: "y"' as either 'I think of x and I think: "y"' or 'I think of y' depends upon the way in which the opposition between "y" and "non-y" is perceived, and that the way in which this opposition is perceived depends upon the direction of the addition: is "y" being added to "x" or is "x" being added to "y"? The act of adding e.g. "y" to "x" implies, of course, the act of choosing "y" rather than "non-y" as the thought to be added to "x", but it is more: it is also the act of bringing "y" to the fixation point "x". The introduction of a fixation point with respect to which the meaning of accentuation is interpreted enables to understand the statement (see section 1.) that in "On the table is the book" it is the connection between the book and the table which is "new": the table is being thought of both without and with "the book" being present. In "The book is on the table" the concatenating of the two parts of the complex thought progresses the other way round: "the table" is being concatenated to "the book", so now it is the book which is being thought of both without and with "the table" being present.

5. Uttering and interpreting a sentence starts, I assume, with focusing attention on the world as perceived at the moment of speaking (or on a piece of the world$^5$). Consider the message: The book: 'I think of the world (presupposed) and I think: "the book"'.$^6$ There could have been another message, let me say non-(the book). Attention being fixed on the world, the thoughts "the book" and "non-(the book)" are paradigmatically mapped onto the world:
At this point the message can stop; we have then a so-called Rheme. But the message can also continue: the book is on the table. In order to add "is on the table" to "the book", "the book" is chosen as the fixation point (but see section 6.). This amounts to making "the book" and "non-(the book)" into syntagmatically opposed projections:

\[
\begin{array}{c|c}
\text{non-(the book)} & \text{the book} \\
\end{array}
\]

By the transfer of the focus of attention the message 'I think of the world and I think: "the book"' is reinterpreted in: 'I think of the book' (of the piece of the world defined by having the projection "the book" attached to it); the entire message becomes: 'I think of the book and I think: "is on the table"'. The remarkable fact is that the message does not become: 'I think of "the book" and I think: "is on the table"' (what is pictured as being on the table is the book, not the thought "the book"). We can say that the entity of which "the book" is a projection becomes the book by adding to "the book" accented is on the table.

The difference between the two types of mapping projections onto the world is most clear when a type of intonation is used other than an assertive type. For example: The book? (the question mark indicates here a certain
type of pitch movement). It is the paradigmatic type of mapping which enables to interpret the pitch movement as a question. For only with this type can we distinguish between the thought conveyed and the (piece of the) world projected (see the pictures in 4.). A paradigmatically opposed projection "the book" can be an incorrect one for the given piece of the world; we can thus ask whether or not "the book" is the correct projection (or whether or not the world contains a piece corresponding with "the book"). In *The book is on the table* the phrase *the book* can be spoken with the same pitch movement as the one in *The book?*, but this movement cannot be interpreted as a question, for it follows from the syntagmatic opposition between "the book" and "non-(the book)" that the piece of the world projected in "the book" is the book (is defined by having "the book" attached to it), there can be no other projection of the same piece of the world, for other projections are projections of other pieces of the world.

With another pitch movement we can assert that a given piece of the world is the book (or that the world perceived at the moment of speaking contains such a piece); but the pitch movement involved can be interpreted as an assertion only if "the book" is paradigmatically opposed to "non-(the book)". In e.g. *The book is on the table*, *the book* falls outside the scope of assertion, because the entity projected in "the book" cannot fail to be the book. In Keijsper (1983) I have made an attempt to describe the meaning of some types of pitch movement in Russian on the basis of the view that the description should cover final as well as non-final occurrences of the movements.

During the preceding argument I have implicitly proposed that the meaning of the order of phrases in *The book is
on the table is that "the book" has to be interpreted before "on the table".

As to accentuation, compare The book is on the table with The book is on the table. In the first case the book is being picked out from among other entities in its environment, in the second case the book has already been picked out (at the moment of speaking "the book" is only present, not first absent, i.e. the speaker conveys that he was already thinking of the book). Further: The book is on the table versus The book is on the table. In the first case, there is first a thought of the book without a thought "is on the table", and then a thought of the book with a thought "is on the table" (i.e. the sentence signals the act of concatenating the two parts). In the second sentence there is no thought of the book without the thought "is on the table" being present.

6. Of the sentences discussed in the preceding section, the sentence The book is on the table deserves separate comment. This sentence has two interpretations. I shall first discuss the interpretation "the whole sentence is Rheme", e.g. Look, the book is on the table! Such sentences are used for communicating sudden, unexpected events. They are uttered in order to convey that, in contrast to what was to be expected, the first part is at the moment of speaking not present without the second part. For example, Peter died conveys (approximately): 'you may expect that you can at this moment think of Peter without thinking: "died", but this expectation does not come true'. With respect to "died", "Peter" is syntagmatically opposed to "non-Peter": 'thinking of Peter I do not not think: "died"', but the projection as a whole is paradigmatically mapped onto
the world as it is perceived at the moment of speaking: 'I think of the world (at this moment) and I think: "Peter died"'. The sentence has, in my view, both aspects: 'I think of the world at this moment (presupposed) and I think: "Peter"; thinking of Peter I do not not think: "died"'.

The necessity of making such fine distinctions will be clear when we look for a moment at the difference between The book is on the table and On the table is the book, or, more clearly, A book is on the table and On the table is a book. In the first members of the pairs, the referent of "the/a book" is singled out from among other entities in the world in order to add "is on the table", the entity is thus present in the world and selected independently of the question whether or not it is on the table; the sentences convey that at the moment of speaking the entity does not fail to be on the table. In the second members of the pairs, "the/a book" is, together with "is" (is the book), paradigmatically mapped onto the world; while the table is being thought of (and thus present) both without and with "is the/a book" being present, the/a book does not enter the part of the world projected at the moment of speaking without being on the table.

The first interpretation of The book is on the table has now been described as: "the book" is syntagmatically opposed to "non- (the book)" with respect to "is on the table", and the projection "the book is on the table" as a whole is paradigmatically mapped onto the world as it is perceived at the moment of speaking (compare: The book is on the table: syntagmatically opposed "the book", paradigmatically opposed "is on the table", i.e. the parts together do not entertain a single type of opposition; cf. also examples (1) and (2) of section 1.).
The second, so-called "contrastive", interpretation of *The book is on the table* (and not, e.g. the paper) consists, in my view, in not perceiving "the book" in a syntagmatic opposition with "non-(the book)" at all: 'I think of a piece of the world and I think: "the book"' plus: 'thinking of a (the same) piece of the world I do not not think: "is on the table"'. The presence of the thought of one particular (unidentified) piece of the world is presupposed, this piece gets both "the book" and "is on the table" attached to it (two paradigmatic mappings). This is a sort of "emergency" interpretation, which is possible for final accents in all types of construction, and which is chosen when something prevents the perception of the accented element in a syntagmatic opposition.

In both interpretations, "is on the table" adds a projection to "the book" (in this order). In the first interpretation (the whole sentence is Rheme) the entity of which "the book" is a projection is being singled out from among other entities by the property that it has the thought "the book" attached to it; in the second interpretation attention is being fixed on the entity of which "the book" is a projection by other means than by its projection "the book".

The difference between the two interpretations has been described as a difference of attention only. This may seem an esoteric notion, but I think it is exactly this notion which has to be pinned down. Hopefully, the following example more clearly shows my point.

A woman is in panic and calls her doctor: *Doctor, I fell down the stairs!*. Or she says: *Doctor, my husband fell down the stairs!*. But imagine that she says: *Doctor, I fell down the stairs!*. A typical reaction of the doctor would be: "You have not yet told me that someone fell down the
stairs" (see further, on accentuation). Here the doctor chooses the "emergency" interpretation because 1. he assumes that the woman is conveying a projection of the world as it is at the moment of speaking, and 2. you cannot view the world at the moment of speaking with yourself belonging to the entities present in the world; you cannot focus attention on yourself, for you are the person who does the focusing; in contrast, you can pick out your husband from among the entities present. So the doctor concludes that the woman is thinking of some entity and is conveying about this entity the thought: "I". It is sufficient to remove the first assumption for the sentence I fell down the stairs to get the other interpretation. Imagine that the woman calls her friend in the evening. She recounts what happened in the morning: "It has been such an unlucky day today! First we overslept; then John cut himself while he was shaving; and when at last he was ready to leave I fell down the stairs.". Now the woman is looking back from the moment of speaking to the world as it was in the morning. In this world she sees herself among the other acting characters, so she can pick out herself by means of the projection "I" attached to the entity involved. Another way of putting yourself in the world being thought of consists in "looking through someone else's eyes" (by making someone else into the person who does the thinking; note that the person called "I" remains identical with the actual speaker). For example (with the accentuation which suggests the point of view meant):

I was lying in bed, but suddenly John came home.
John came home (and what did he see?): I was lying in bed.
I came home (and what did I see?): John was lying in bed.
John was lying in bed, but suddenly I came home.
The two interpretations of *The book is on the table* are clearly distinguished by the attendant interpretations of the meaning of accentuation: only in the "contrastive" (emergency) reading does one have the feeling that "is on the table" in some way 'comes from the context'. In fact, it is the interpretation of accentuation which is reflected in the name "contrastive" interpretation; strictly speaking, both readings involve a "contrast" between the projection "the book" and other projections, or, in the other example, between "I" and "my husband". In both readings the meaning of accentuation is, in my view: the presence of "(the) book" in the stream of information being conveyed is opposed to the absence of this thought; "(is on the) table" is at the moment of speaking only present, not first absent.

When *The book* reads: 'thinking of the book' (first interpretation), the absence of the thought "the book" is equal to the absence of the thought of the entity about which "is on the table" adds a projection. When the thought of this entity is absent, the question whether or not the entity is on the table cannot be raised at all. The meaning of the absence of an accent on *is on the table* can apply only given the thought of the entity, i.e. in this case, given the presence of "the book"; given the thought of the book, "is on the table" is not absent. But when the thought of the book is absent, the thought "is on the table" is also absent. In short: *is on the table* falls under the scope of the accent on *book*.

In the "contrastive" reading it is not "the book" which introduces the thought of the entity about which "is on the table" adds a projection, the presence of the thought of the entity is presupposed. Given the thought of the entity, the thought "is on the table" is not absent, in
short, "is on the table" comes, together with the thought of the entity, 'from the context'.
This is a general rule: if "y" adds a projection about an unidentified entity, then, if the thought of the entity is absent, "y" is also absent (the meaning of the presence or absence of an accent on y applies only given the presence of the thought of the entity). If it is "x" which introduces the thought of the entity involved, "y" is thus absent whenever "x" is absent (y falls under the scope of an accent on x).
The name "Theme" is often used for two different things: 1. for a syntagmatically opposed projection (e.g. "the book" in The bōok is on the tāble and The book is on the tāble), but only if it is not a part of a paradigmatically opposed larger projection; and 2. for a paradigmatically opposed projection "y", if the thought of the entity about which "y" adds a projection is not introduced by another part of the sentence (e.g. "is on the table" in the "contrastive" reading of The bōok is on the tāble).
If one wishes to retain the name for both cases, a definition would be: a Theme is a part of a complex projection the correlating form of which A. does not fall under the scope of an accent on the form correlating with another part of the complex projection, and B. does not bear the final accent. But as the name is often associated with the (in my opinion) mistaken view that e.g. in the "contrastive" reading of The bōok is on the tāble "the book" is being concatenated to "is on the table" instead of the other way round, I would propose to abolish the name or to restrict it to case 1. above.
7. In the preceding sections I have made the following steps.

1. Section 3. introduces a distinction between a direct relation to the world (\(x\)) and an indirect one, via the next thought(s) (\(x'\)).

2. Sections 4. and 5. derive the notion Theme from the notion Rheme: the accent on \(y\) in \(x_y\) and \(x_{y'}\) causes the initial paradigmatic opposition between "\(x\)" and "non-\(x\)" with respect to the world at the moment of speaking to be reinterpreted as a syntagmatic opposition.

3. Section 6. discusses the scheme \(x_y\). Two interpretations are distinguished: a. "\(x\)" is syntagmatically opposed to "non-\(x\)" with respect to "\(y\)", but (together with "\(y\)"), paradigmatically mapped onto the world at the moment of speaking, and b. both \{ "\(x\)", "non-\(x\)" \} and \{ "\(y\)", "non-\(y\)" \} are paradigmatically mapped onto the world at the moment of speaking (without an intervening syntagmatic perception of \{ "\(x\)", "non-\(x\)" \}).

I would like to add the following remarks.

A. The formulation: 'I think of \(x\) and I think: "\(y\)"' has been used for two different things. In e.g. 'I think of an unidentified entity and I think: "Peter"', the entity and Peter coincide (the projection identifies the entity). But in e.g. Peter died: 'I think of Peter and I think: "died"', a larger whole is created, namely the situation characterized by the fact of Peter's death. The formulation should therefore be something like: 'I think of Peter and I think: "the situation: "died""'. Note that Peter died can also be interpreted as: 'I think of Peter...
in an unidentified situation and I think; "died". In the latter case "died" identifies the situation of which the thought is presupposed to be present.

B. In e.g. *Peter died in the winter* the scheme $x, y, z$ is expanded to $x, y, z$:
The accent on *died* turns 'I think of the world and I think: "Peter"' into: 'I think of Peter'; the accent on *winter* turns 'I think of Peter and I think: "the situation "died""' into: 'I think of the situation of Peter's death'. The last part remains: 'I think: "in the winter"'.

In the same way longer sentences can be described.

C. The statement that an accent on *y* in $x, y, z$ causes the set {"x", "non-x"} to be syntagmatically mapped onto the world at the moment of speaking holds true for "classical" Theme - Rheme sentences. When other relevant facts are brought into the framework, a structure with two paradigmatic oppositions is to be included in the list of possibilities (with accented *y*, cf. 3. above). As far as I know, such a structure occurs only in sentences with quantifier-like meanings and/or negations. Compare, for example:

*With no job John would be happy*
*With no job would John be happy.*

The second sentence has a reading with *would be happy* under the scope of negation. In this case there are two complex projections of the same piece of the world: "with no job" together with "would John be happy" projects the same piece of the world as the absence of "with no job" together with the absence of "would John be happy". That is, if you remove "with no job" (which renders "with a job") and "would John be happy" (for convenience:
"would John be unhappy"), you are left with a projection of the same situation as the one pictured by "with no job would John be happy".

In contrast, the first sentence connects both the absence and the presence of "John would be happy" with "with no job", so that "with no job" and "with a job" define two different pieces of the world (states of affairs). Only this sentence is a "classical" Theme - Rheme sentence.

D. I have discussed the sentence *The book is on the table* (and other sentences with the same linear arrangement) and not *On the table is the book* because the latter sentence involves a combination with the \(x^\circ\) type to be discussed in the next section. The fact that the sentence *On the table is the book* has only a "contrastive" reading is to be explained on the basis of this combination. Basically, the combination says that, although "on the table" in *On the table is the book* is syntagmatically opposed to "non-(on the table)", the world is not being divided in on-the-table's and non-on-the-table's, but in unidentified entities or situations on the table and unidentified entities or situations elsewhere; "is the book" adds a projection of such a situation on the table.

8. I now turn to the indirect relation to the world symbolized as \(x^\circ\). Two subtypes are probably to be distinguished (roughly: one in modifier - head and one in head - modifier), but I shall discuss here only the general features (as opposed to \(x^v\)). In section 3. it was remarked that *John read* is, as far as information structure is concerned, equivalent to *John read the book of the neighbour about birds in Africa*
(and shorter sentences).
The effect of replacing *John read* by *John read the book*
by *John read the book of the neighbour* etcetera is that
"the possible range of referents is narrowed", as
Ladd (1979: 126) calls it. In *John read* the thing read
can be anything, in *John read the book* the possibilities
are restricted to the book, in *John read the book of the*
neighbour the books which do not belong to the neighbour
are excluded, in *John read the book of the neighbour about*
birds the books of the neighbour which are not about
birds are eliminated, and in *John read the book of the*
neighbour about birds in Africa the books of the neighbour
about birds other than birds in Africa are rejected.
Every subsequent step specifies further the thought
which the speaker wishes to convey about John.
Now, when you get the message *John read*, you do not
think of a number of things possibly read; only when
*John read the book* occurs do you think of the possibility
that John read something other than the book. *John*
read the book does not evoke the thought of more than
one book; but when *John read the book of the neighbour* occurs
it is implicitly conveyed that other books than the
book of the neighbour could have been read by John.
Etcetera. There is thus not first the thought of a
number of alternatives and then a selection from this
number; the thought of the alternatives is evoked by
the step which excludes them; there is a splitting
procedure rather than a selection:

\[
\text{non-read} \quad \text{read non-(the book)} \quad \text{read the book of non-(the neighbour)}
\]

\[
\text{read the book of the neighbour about non-birds} \quad \text{read the book of the neighbour about birds}
\]
read the book of the neighbour about birds in non-Africa

read the book of the neighbour about birds in Africa

This scheme applies only if, as in the example, all words except the last are unaccented.

Formulated more generally, concatenating a thought "x" to the next thought "y" consists in taking "y" as the fixation point and bringing "x" to this point. But, as x precedes y, the choosing of "y" rather than "non-y" as the fixation point for "x", takes place in the presence of "x", so that not only a connection "x y" but also a connection "x non-y" is created (and the latter excluded). (Compare: in y^x^ no connection is created between "x" and "non-y".) Schematically:

In this way, the direct relation to the world of "read" in John read is in the longest sentence postponed until Africa: the intermediate thoughts are split over the "world" formed by the next thought and its complement, and the next thought rather than its complement is chosen.

Each subsequent step introduces the thought of a situation or entity of which the preceding thought is a projection (note: not adds a projection; if the correlating forms are unaccented, the thought introduced by the next step and the preceding projection coincide). For the longest sentence (pretending that the relevant words are accented):
'I think of John and I think:
"read", but only (the) "read" which is a projection of a situation with the book, but only "the book" which is a projection of an entity of the neighbour, but only "the book of the neighbour" which is a projection of an entity about birds, but only (the) "birds" which is a projection of an entity in Africa'.

In this way, the "read" which is a projection of a situation with something other than the book is excluded, "the book" which is a projection of an entity belonging to someone other than the neighbour is eliminated, etcetera.

As before, an accent signals that the presence of the thought involved in the stream of information being conveyed at the moment of speaking is opposed to the absence of the thought; the absence of an accent signals that the presence of the thought is not opposed to the absence. An accent on the last word has the broadest scope: "in Africa" introduces the thought of the entity of which "birds" is a projection, so "birds" is absent whenever "in Africa" is absent (see section 6., general rule); "about birds" introduces the thought of the entity of which "the book of the neighbour" is a projection, so "the book of the neighbour" is absent whenever "about birds" is absent, etcetera. The absence of an accent on all words except the last signals that: given "in Africa", "birds" is not absent, given "about birds", "the book of the neighbour" is not absent, etcetera.

I have argued that the presence of an accent, and the absence of an accent, have the same meaning everywhere. But in different structures the application of a meaning has a different informational effect. In order to get the same informational effect in different
structures, another meaning has to be applied. Compare, for example, *John read the book* with *John read the book of the neighbour*. In the latter sentence "the book" is a projection of an entity of the neighbour; when "the book" is removed from the stream, the thought of an entity of the neighbour remains present; the latter thought can only be removed by putting an accent on neighbour. In contrast, in *John read the book* the thought "the book" is not embedded, so here the removal of "the book" does not leave behind the thought of an entity (besides "John"). While *read in John read* has to contain an accent in order to convey that John is being thought of both without and with the thought-correlate of the rest of the sentence being present, in the longer sentences all words except the last have to be unaccented in order not to convey more than that; only then is the same informational effect created.

In order not to overburden the formulations, I have hitherto neglected *the, of, about, in*. The thoughts evoked by these words are always split in the sense explained. For example *the book*: 'I think "the", but only that "the" which is a projection of a feature of the entity book' (thereby excluding the's among the non-books). The English language does not allow for the opposite: 'I think "book", but only that "book" which is a projection of an entity defined by having "the" attached to it' (i.e. the language does not permit to divide the world in the's and non-the's by splitting "book" over these categories). When *the* occurs as a sentence, it does have a direct relation to the world (*the*), but in that case the thought of an entity about which "the" adds a projection is always presupposed to be present.

The meaning of a (grammatical) subject - predicate
construction does not split the subject. For example, the sentence \textit{John read} does not mean: 'I think "John", but only the "John" which is a projection of an entity defined by having the thought "read" attached to it'. Such a reading would introduce more than one John (a John among the reading entities and Johns among the non-reading entities), would divide the world in reading entities and non-reading entities, and would define the referent of the construction as an entity instead of a situation. Therefore, a hearer who is confronted with a subject - predicate sentence has to process the information in two steps, e.g. \textit{John, read}. The symbol \( x^\ast \) abstracts from all semantic differences between different syntactic relations (in the sense of Ebeling (1978)) except for the element "embedding by splitting" sketched above.

The main point of the indirect relation to the world discussed in this section is that the embedding proceeds progressively. In itself, a procedure of "narrowing the possible range of referents" can also be imagined as a procedure of picking out subsets of preceding sets. But I have argued that preceding sets are dissolved in sets introduced by the next steps, namely by splitting the preceding sets over the newly introduced sets.

The latter conception enables to bring modifier - head and head - modifier under one type, enables to account for the fact that alternatives are introduced by excluding them, for lexical restrictions on the occurrence of the type (not discussed here), and for the facts of accentuation.

A regressive type of narrowing is, I think, difficult or even impossible because of the linear character of the interpretation process; in \( x y \), if "y" is to be
concatenated to "x" (x>y) rather than "x" to "y" (x>y), "x" cannot wait to be related to the world, but when "x" relates to the world (x y), "y" is no longer split over "x" and "non-x", "y" conveys a thought about x alone (this thought can, however, consist in excluding x's on an afterthought).

9. In this section I intend to discuss some points which may clarify the foregoing. Consider the sentence John, read the book. In section 5, I argued that "John" is the syntagmatically opposed part in such structures, and "read the book" the paradigmatically opposed part. In 8, it was said that the book evokes the thought of, and excludes, other things possibly read, i.e. that "the book" and "non-(the book)" define different pieces of the world, i.e. are syntagmatically opposed. It is indeed my contention that inside the paradigmatically opposed part "read the book" a syntagmatically opposed "the book" is present, and that, consequently, the accent on book signals different things on different levels. Inside the part "read the book" the accent signals the presence versus absence of the thought of the book (the book is being singled out from among other things possibly read); on the level of the sentence as a whole the accent signals that John is being thought of both without and with the thought "read the book" being present ("read" and "the" can be taken together with "book" on this level, for the absence of an accent on the words involved signals in the given structure that "read" and "the" are not absent when "book" is present, and absent when "book" is absent (see 8.)). The syntagmatic opposition
between "book" and "non-book" is perceived in what can be called the permanent frame of reference, i.e. the projection of the world as defined by the language; the paradigmatic opposition holds with respect to the world as perceived at the moment of speaking. Such a multi-level organization of complex thoughts is also assumed in some logical/philosophical approaches to the phenomena under discussion. For example, Arutjunova (1979: 326) says, for the Russian equivalent of the sentence [accent added] Once upon a time there was an elephant the following [translation mine]:

"The existential part of this assertion directs the communicative focus to the denotation [thing denoted] of the term, and the taxonomic part to the signification. The doubleness of the Rheme is in accordance with the doubleness of the logical structure of existential sentences, which unite an existential and a taxonomic assertion [there exists something and that is an elephant respectively]"8.

Note, however, that what I have called "meaning", or "projection", or "thought", does not consist of a signification and a denotation; I am speaking about types of opposition in which a meaning participates. Schematically, Arutjunova's sentence is:

```
non-was was
  \  /
  \ / permanent frame of reference
  / /
non-elephant elephant
```

"world perceived at the moment of speaking"

In my conception, the meaning/projection/thought "elephant" is the box elephant. This meaning enters simultaneously into two types of opposition: into a syntagmatic opposition in the permanent frame of reference, and into a paradigmatic opposition with respect to the world perceived at the moment of speak-
ing. In e.g. An elephant met his neighbour the set { "elephant", "non-elephant"} is syntagmatically mapped onto the world perceived at the moment of speaking (leaving aside further refinements introduced by intonation).

In the permanent frame of reference meanings have inherent properties concerning the type of opposition in which they preferably or necessarily participate. A meaning as "elephant", for example, is inherently different from a meaning as "something". When "something" is a part of a complex projection, this projection will, whenever possible, be organized in a way which prevents "something" from being perceived in a syntagmatic opposition with "non-something". For example, a subject-verb-object sentence can be related to the world in two ways: subject_verb_object and subject_verb~object. When the object function is carried by something, the latter type of interpretation will be avoided, because it involves the thought of something other than a something which could have entered into the situation concerned. In contrast, "elephant" cannot lose its initial syntagmatic opposition to "non-elephant". It is a fact of the English language that, when "elephant" is being attached to a given piece of the world, this piece is being identified as an elephant, while a piece of the world which gets "something" attached to it does not normally become a something, it remains, for example, an elephant. The English language assigns to a given piece of the world both the property that it can be referred to by "elephant" and the property that it can be referred to by "something", but the language also makes sure that we cannot fail to think that the piece is an elephant.

Such inherent properties are a part of the lexical
meaning of words (i.e. they have to be specified separately). There are even meanings which differ only with respect to their inherent oppositions. Dutch has quite a number of them, e.g. "een hapje_1" ("something small to eat, projection syntactically opposed"), "een hapje_2" ("something small to eat, projection paradigmatically opposed"), "een stukje_1" and "een stukje_2" ("a little piece"). When someone is eating een hapje_2, he may be eating an apple, or a sandwich, or also een hapje_1 (different things); "een hapje_2" projects a small sample from the set of eatable things (or from one such thing), as opposed to a sample of another size taken from the same set or thing; there is nothing which is stored in memory by having the name "hapje_2" attached to it. A comparable English example is probably *trifle*: "trifle_1" = "sweet dish", "trifle_2" = "something of little importance" (but trifle_1 is rather the opposite of trifle_2, for it is a heavy dessert), or *bit*: "bit_1" = "part of a harness", "bit_2" = "small quantity" (here also more features differ than in the Dutch examples). Only on the basis of such inherent properties can I explain that the so-called "neutral" accentuation of sentences with these meanings differ: She saw an elephant, She saw something, Hij eet een hapje_1, Hij eet een hapje_2 (he is eating "een hapje"), Hij schrijft een stukje_1, Hij schrijft een stukje_2 (he is writing "een stukje"), She ate trifle_1, She ate a trifle_2, etcetera (note that I do not say that sentences with the given meanings cannot have another accentuation; what I call "neutral" here is the accentuation which gives the accents the broadest possible scope).

The ways in which sentences of different types can be related to the world are also to be specified separately. For example, a subject – verb – object sentence allows
for the two ways indicated above; in a construction such as *John's book* the first member always has an indirect relation to the world ($x^*$). The construction overrules lexical preferences. For example; *John's something*. This is a strange phrase because the meaning of the construction urges the perception of "something" in a syntagmatic opposition with "non-something", that is, the entity involved is singled out from among other entities by the property that it has the projection "something" attached to it; here, the entity is a something, which is not a lexically normal use of the meaning. A more acceptable example is the phrase *Sweet Nothing*, which I came across (in the plural) as 1. the name of a column in a magazine containing small, light items of news, and 2. a mark of underwear for women. The splitting of "sweet" over "nothing" and "non-nothing" urges to view "nothing" as defining a piece of the world (an entity) different from the piece defined by e.g. "something"; the world is thus being divided in nothings and non-nothings. (The plural alone has the same effect.) More often, "nothing" projects an empty sample from the set of entities as opposed to a non-empty sample taken from the same set (e.g. *nothing sweet*: an empty sample taken from the set of sweet things).

A question which has to be thoroughly studied is the question how syntactic relations (in the sense of Ebeling(1978)) and the oppositions of the type discussed in this article affect each other, I mention some points for discussion.

1. Consider a sentence such as *About birds he read a book*. There have been discussions about the question whether *about birds* is an attribute of *book* or an adverbial phrase. It seems to me that the most relevant thing
to say is that the complex projection is formed by concatenating "read" to "a book" ($y\tilde{z}$), and "read a book" to "about birds" ($x_y\tilde{z}$). This organization is prescribed by the order of the words; it remains to be said what type of (syntactic) concatenation is involved. As the difference between

*About birds he read a book*

*He read a book about birds*

...can be accounted for in terms of the oppositions described in this article, there is, in my view, no reason to assume that different types of syntactic concatenations are involved. It goes without saying that an approach to language which regards organizations as meaningless cannot be expected to arrive at an adequate description.

2. Consider

*John, read the book of the neighbour about birds in Africa*

versus

*John, read the book of the neighbour about birds, in Africa*

...(see section 3.; the two sentences are meant to be pronounced in the same way). Besides this indication of the ways in which the string can be related to the world, it must also be said that in the former case "birds" alone is being concatenated to "in Africa", while in the second case "in Africa" is being concatenated to the whole subject - predicate group. This is, I think, information to be given by the syntactic component. The two sentences, besides being related to the world in different ways, are thus also syntactically different.

3. The discussion about pairs such as

*She left directions for him to follow*

*She left directions for him to follow*

...has concentrated upon the question whether accentuation is predictable on the basis of (presumably meaningless) syntactic structure (e.g. Bresnan (1971; 1972), Bolinger (1972), Ladd (1979)). I agree with the negative answer of Bolinger and Ladd. The following can be proposed.

Sentences of the type figuring in the discussion can
be related to the world in two ways: $x \downarrow y \leftarrow z \downarrow$ and $x \downarrow y \leftarrow z \downarrow$, e.g. she $\downarrow (left \ (directions \ (to \ follow))) \downarrow$ versus she $\downarrow (left \ (directions)) \downarrow (to \ follow) \downarrow$. The examples differ from the Africa-example discussed above in that the difference consists only in the difference between 1. concatenating "directions" to "to follow" and 2. concatenating "to follow" to "directions" (with the given order of the words); the difference is not syntactic in a traditional sense. In the first organization "directions" is viewed as a projection of something to follow, in the second organization "(something) to follow" adds a projection about the directions. Now, without a disambiguating context, sentences are preferably organized in a such a way that the accent(s) has (have) the broadest possible scope. She left directions to follow thus prefers she $\downarrow (left \ (directions \ (to \ follow))) \downarrow$, and She left directions to follow prefers she $\downarrow (left \ (directions)) \downarrow (to \ follow) \downarrow$. To be sure, both accentuations allow for both readings (see Ladd (1979: 125-126)), but on first sight one chooses the readings as indicated. Thus, for She left directions to follow:

'... I think: "left directions", but only the "directions" which is a projection of something to follow' (excluding other possible directions); the absence of an accent on directions then signals that, given the thought of something to follow, "directions" is not absent, i.e. that "directions" and "something" coincide. She left directions to follow: '... I think: "left directions"; thinking of the directions, I do not not think: "something to follow"'; here, "something to follow" is a sort of afterthought. Ladd correctly compares the difference with the difference between a restrictive and a non-restrictive relative clause (which show identical organizations). I do not agree with Ladd that
notions as "deaccenting" or "a hierarchy of accentibility" have to be introduced. In my view, the two sentences, in the readings indicated, are organized in a different way. This type of meaningful organization may also be called "syntax", but it is not the type of (meaningless) syntax against which Ladd and Bolinger are arguing, and not the type of (meaningful) syntax of Ebeling (1978). Bolinger (1972) gives many examples of what in my conception is the influence of lexical meanings and knowledge of the world on the choice of organization, with a given accentuation. I intend to discuss such examples elsewhere.

At different points in the foregoing some issues have been mentioned which have a certain tradition in logic and philosophy and which belong to the phenomena for which I am trying to develop a unifying linguistic framework (the Theme - Rheme distinction, the interpretation of intonations, the scope of negation and quantifier-like meanings, the denotation - signification distinction). I finally add a remark about truth in the (classical) logical sense.

As indicated in note 6., it is, in my view, linguistically irrelevant whether a phrase refers to something in the real world or to something in a world created by the mind. The linguistic meaning of the sentence *The king of France is bald* will thus remain the same if France becomes a monarchy. The question whether this sentence is in the present world false or neither true nor false does not bother linguistic semantics as I understand the discipline. But the discussion involved is based on intuitions about the linguistic meaning of the sentence, and these intuitions are relevant in linguistic semantics. As remarked by e.g. Strawson (1964), one would intuitively call the following sen-
tences simply false in the present world (rather than neither true nor false):
The exhibition was visited yesterday by the king of France.
The king of France is bald (in the "contrastive" reading, cf. What bald notables are there?).
The accents put here on the examples are essential. Their distribution shows immediately that Strawson is translating into logical terms his linguistic intuition that the projection "the king of France" and its complement are, what I have called, syntagmatically mapped onto the world at the moment of speaking in The king of France is bald, and paradigmatically in the two other sentences. Thus: 'I think of the king of France and I think: "is bald"' versus 'I think of ... and I think: "the king of France"'. In the first case the piece of the world involved is being singled out by the property that it has the projection "the king of France" attached to it, which implies that there is such a piece. Whether or not this corresponds with the world as it is in reality (whatever that may be) is linguistically irrelevant, but the fact that the sentence pictures the world at the moment of speaking with the king of France belonging to the entities present in the world, while the other two sentences, with the appropriate type of pitch accent, assert that the king of France belongs to the piece of the world projected at the moment of speaking, is certainly not irrelevant, it belongs to the linguistic meaning.

10. In this article, some elements of a linguistic approach to the information structure of sentences have been introduced. Although I am aware that much remains to be said, I hope to have conveyed the thought that the
process of relating a sentence to the world can be described in terms of a relatively small set of distinctions, namely along the following lines. Confronted with a string of words, a hearer starts interpreting the string in chronological order. For each thought he decides between 1. concatenating it to the next thought(s) \((x^-)\), and 2. directly relating it to the world \((x^+)\). The first is a decision to embed the thought in the way sketched in section 8. In the second case, as attention is fixed on the world, the thought and its complement are paradigmatically mapped onto the world as perceived at the moment of speaking; the paradigmatic opposition is retained unless a further accented \(x^+\) urges the reinterpretation of the opposition as a syntagmatic one.

Every \(x^+\) is a chunk of information. A chunk need not be a syntactic unit, it need not contain an accent. The decision between 1. and 2. is made under the influence of information from different sources. Some types of strings allow for one decision only (e.g. John, read, John's book). If there is a choice, knowledge of lexical meanings, knowledge of the world, the context, or accentuation can be used to decide which message is most probably being conveyed.

An accent on \(x\) reads: "the presence of "x" in the stream of information being conveyed is opposed to the absence of "x" in the stream". The absence of an accent on \(x\) reads: "the presence of "x" in the stream of information being conveyed is not opposed to the absence of "x" in the stream". These meanings are applied at the point where they occur and interpreted accordingly. The same holds true for the meanings of the different types of pitch movement.

As to word order, I am at present unable to formulate
general rules other than the left-right principle.

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NOTES

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1 For example (Daneš 1974: 111): "[...] the property of being new has two, independent, aspects: (1) "new" in the sense of "not mentioned in the preceding context", (2) in the sense "related as Rheme to a Theme to which it has not yet been related". In the former case, the property "new" is assigned to the expression itself, while in the latter it is the T-R nexus that appears as new".

2 For example (Sgall 1981: 176): "The relationship between topic/focus and contextually bound/non-bound can be roughly characterized as follows: every lexical element of a S[emantic] R[epresentation] (of the meaning or sense of a sentence) belongs either to the topic or to the focus. In the unmarked case, those belonging to the topic are contextually bound, while those included in the focus are non-bound. There are, however, exceptional or marked cases in which the topic includes also embedded elements which are contextually non-bound, or the focus includes contextually bound embedded elements".

3 My formulation of the Theme - Rheme problem presupposes the view that "a meaning of a complex form can [and has to] be completely and adequately described in terms of the meanings of the constituent forms and their interrelations" (Ebeling (1978: 1)). Another conception is imaginable (but, from the above point of view, non-linguistic). One might argue that "the thing about which something is said" and "the thing said" are primitive notions of content without a correlate in form and/or structure. This point of view is advocated in the work of Wierzbicka, where the notions appear as the semantic primitives "think of" and "say" respectively (this identification is mine).
I sympathize with Wierzbicka's practice of using in semantic descriptions as few expressions as possible in order to avoid the circularity of lexicon-like definitions (e.g. Wierzbicka (1980: 78)); the influence of this aspect of Wierzbicka's work on my formulations will become clear. But in contrast to Wierzbicka I take the area of (linguistic) semantics to be restricted to the study of the meaning of forms and their interrelations (see above). I reject, for example, an argument as the following (Wierzbicka (1980: 27)): 

"[...] Japanese has several words meaning "I". They are by no means interchangeable, but the differentiation at least in some cases seems to be pragmatic, stylistic, etc., rather than semantic (i.e. it is impossible to decompose some of these words)"

In my conception, the circularity of this argument is inadmissible; the argument defines the object of semantics as "the distinctions in content which can be described in terms of my primitives". I am, of course, aware that Wierzbicka uses this argument only in the last resort, and that she is prepared to alter her set of primitives if the (semantic) facts cannot be covered by it, but ultimately the argument is there. For me, if Japanese has several forms a, b, c, which are not interchangeable in all contexts, the differentiation is per definition semantic, i.e. Japanese has the meanings "a", "b", "c", none of which is "I" (which then does not exist in Japanese). It follows that my distinctions are language-specific (although they can coincide in different languages); my objective is thus quite different from that of Wierzbicka, who aims at developing an alphabet of human thought. But given Wierzbicka's point of view, sections 4-6 of the present article can be read as a proposal to derive Wierzbicka's "think of" from her "say"; or, if "say" is to be distinct for other reasons, I would propose that "think" rather than "think of" is a primitive. For Wierzbicka's account of phenomena of word order and accentuation see Wierzbicka (1975; 1980: 233-236).

The objection against current conceptions of the Theme - Rheme distinction formulated in the main text is not directed against opinions as Wierzbicka's, for in her work the introduction of the primitives does serve an aim: the primitives are used in analyses of the meaning of linguistic expressions other than the primitives themselves. I object against "semantic primitives" without a formal/structural correlate which are introduced in order to "analyze" their own existence, and against proposals to circumvent the resulting arbitrariness of the descriptions by replacing vague formulations by better defined ones. Such conceptions put an end to semantics as a serious discipline.

It follows that sentences with an about-construction are (imprecise) paraphrases of original sentences without about only if they are read with the same accentuation as the original sentences. Therefore I put accent marks on the paraphrases. Ironically, Reinhart (1982: 10-11) proposes to use such paraphrases (without accent marks) as a test for verifying "topichood" of expressions in original sentences without
about (and without accent marks): "such structures [with about] signal the topic both syntactically and semantically". This is incorrect. The only thing which can make the about-phrase into a topic is an accent further on in the same sentence. As the paraphrases are themselves examples of the topic-problem, they do not signal that something is topic; I used them to make one conscious of the fact that e.g. the in the table cannot be made into a topic by the accent on table. The statement: "A sentence can be paraphrased this way only if the NP following about can be its topic" (ib.) is correct (the word can is essential). The paraphrases used from section 4. on show the same impossibility to paraphrase the meaning of accentuation without using this meaning. I see no way out of this problem.

The difference will not be discussed here. Roughly, focusing attention on the world renders sentences of the type there is an x, attention on a piece of the world gives sentences of the type that is an x.

Logically, the first step should be: 'I think: "the world"', but linguistics starts on the level where one can say: 'I think of the world'. The world in the formulations need not be the real world, it can be a creation of the mind (the difference is linguistically irrelevant). The notion "the world" used here can probably only be defined in a circular way, for example: the set of projections of which one can think. I would say, with Wierzbicka, that it is a primitive.

The second sentence has yet another interpretation; cf. With no job, would John be happy? When a (particular type of ?) intonation boundary occurs after job, only the latter interpretation is possible. I borrowed the example from Rochemont (1979).

"Экзистенциальная часть этого утверждения направляет коммуникативный фокус на денотат имени, а таксономическая - на синтагматик. Удвоенность ремы соответствует удвоенности логической структуры бытийных предложений, объединяющих экзистенциальное и таксономическое утверждения."

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