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SEMANTIC LEVELS
Towards a theory of meaning

1. What is meaning?

In most theories of meaning, especially in linguistic theories, the meaning of a text is seen as exhautively compositional.

> The compositionality principle, in its most general form, can be expressed as follows:
>   The meaning of an expression is a function of the meanings of its parts and of the way they are syntactically combined.[1]

The meaning of the text is understood as a wall, it does not consist of anything but building bricks; the wall is composed by the bricks, and it can be explained by the description of the bricks and the relation between them. The meaning of a text can be explained exhaustively by a description of its parts, i.e. by a description of the sense of the words, or by a description of the components of the meaning of the words, and of the rules of their combination.

For both the theory of semantic feature semantics, and the theory of model-theoretic semantics the aim is to show how the meaning of a sentence is exhaustively compositional. Furthermore both theories of meaning understand meaning as a thing, an entity or perhaps a sort of substance which can be put into a linguistic form, which in the other hand is understood as a container that can carry or transport the meaning from the speaker to the listener. As will be shown, this hypostatization of meaning often leads to misunderstandings in semantics. It can be shown that neither feature theory nor model-theoretic semantics can explain the process of human understanding and interpretation of natural language texts, which in my view is the only reality of meaning.[2]

Other theories of meaning - not so common in linguistics - take the phenomenological view that meaning is totally holistic: either you grasp the whole meaning of the text or you do not understand a word. Meaning is like a bubble. Mysterious invisible forces have created meaning, and if you do not take it as it is, if you try by analysis to find the meaning as a product of the meaning of the parts of the text, you will puncture the whole hermeneutic circle and you will have no interpretation at all.[3]

However, meaning is neither exhaustively compositional nor totally holistic. Meaning is a historical social event. It is necessary to understand

meaning in another methaphor than either as a wall or as a bubble. Meaning is to be understood as analogous to walking into a river: As Heraclitus, the obscure, puts it: "You can walk into the same river, and you cannot walk into the same river". "New and ever new masses of water meet the one who walks into the same river." Meaning cannot be described or explained apart from the processes of understanding meaning in human interaction. And human understanding of the meaning of a text is a unique historical event. On the other hand two persons understanding the same sentence in the same situation must base their understanding on principles for combining the senses of the words to the meaning of the text. So meaning is like walking into a river, and you can walk into the same river and you cannot walk into the same river.

In this paper I will try to sketch a theory of meaning that takes into account both how the meaning of a text is to a certain degree composed the meaning of its parts, and to a certain degree is holistic, unique, and defined by forces outside the text (or sentence or word or whatever the unit of investigation is). The understanding of the content side of a linguistic unit at a certain level is always contingent on the understanding of the unit on the next higher level. So the content of a unit on the lower level cannot be compositional on that level. The content of a unit at a certain level is best understood as the struggle for life, i.e. selection, adaption and survival of an organism in its environment.[4]

It is an advantage in making a semantic description of a text if it can be done in modules dealing with different kinds or levels of meaning, which are regulated by different kinds of rules. This 'level model' will be presented in the next paragraph.

2. Levels of meaning

Seen from the viewpoint of the listener the expression side of a text is undeniably compositional. The smallest parts of a text are the **letters**; the **words** are composed by letters according to the spelling rules, the **sentences** are composed by the words according to the rules of syntax; the **texts** are composed by sentences according to the rules of composition (which are not so well known as the other two types of rules).

We all intuitively feel that corresponding to the three levels on the expression side, we have three levels on the content side: each word is by convention associated to a certain **sense**; each sentence has a certain **meaning**, and to each text corresponds a certain **interpretation**. (The terminology is not essential for me; my only requirement is to distinguish between the three levels on the content side as well.) Furthermore we think that normally the relation between expression and content on each level is a one-to-one relation, although there are exceptions, the well known ambiguities.

Seen from the viewpoint of the speakers the sense of a word is, according to the semantic feature theory, composed of the smallest compo-

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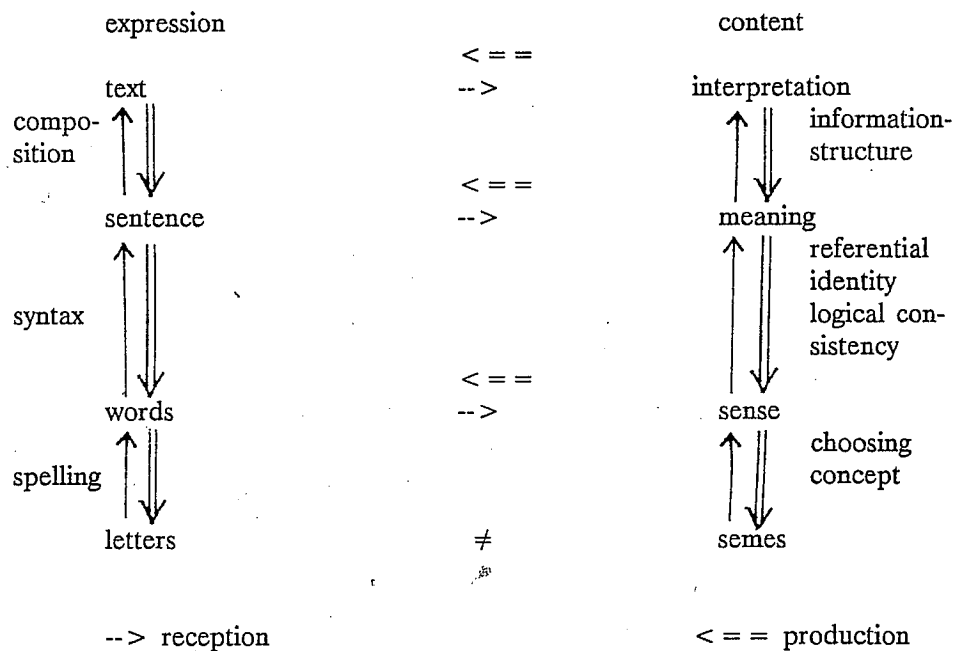ition. (The
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nents of meaning, in the following called **semes**. In producing texts human speakers choose the right word that encompasses all the intended semes. The speakers use the principles of **word formation** described in lexical theories, or they use meaning postulates when they choose words or concepts or prototypes of meaning.

The meaning of a sentence is, according to the building brick theories, exhaustively composed of the sense of the words. The compositional rules are rules for creating **referential identity** and **logical consistency** in the sentences.

And the interpretation of a text is exhaustively composed of the meaning of the sentences according to the rules **information structure**.

In producing texts the speaker on each level 'puts the content into the unit of expression', the senses into words, the meanings into the sentences and the interpretations into the texts. The whole model for meaning is shown on the diagram:

expression   content

                              < = =
        text   -->   interpretation
compo- ↑ ‖   ↑ ‖   information-
sition | ↓ | ↓   structure
                              < = =
        sentence   -->   meaning
        ↑ ‖   ↑ ‖   referential
                                          | identity
syntax | ‖ | ‖   logical con-
        | | sistency
                              < = =
        words   -->   sense
        ↑ ‖   ↑ ‖   choosing
spelling | ‖ | ‖   concept
        | ↓ | ↓
        letters   ≠   semes

        --> reception   < = = production

Now this simple view of the processes of reception and production does not hold. The main reason for that is the fact that ambiguities are not the exception but the rule on all three levels. A list of one-to-many and many-to-one relations on all three levels will illustrate the problem:

(expressions are marked by italics, content by capitals:)
word homonymy: *hack*: CUT or HORSE
word polysemy: *high*: IN SPACE, QUANTITATIVE, QUALITATIVE
                        or ACOUSTIC

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word synonymy: *cut, hew, hack, slice, scop,* or *carve*: CUT

sentence polysemy: *Peter drives fast*: THE ONE WHO DRIVES FAST IS
PETER, or WHAT PETER DOES IS TO DRIVE FAST or
PETER IS FAST IN HIS DRIVING.

sentence synonymy: *Peter borrowed 10 from Mary* or *Mary* lent *10 to
Peter*: PETER BORROWED 10 FROM MARY

utterance polysemy: *It's cold in here*: THE TEMPERATURE IS UNDER 18°C
or I FEEL COLD or PLEASE CLOSE THE WINDOW.

utterance synonymy: *Please close the door* or *shut the door!* or *Isn't it
cold in here?* or *Were you born in the underground?*:
CLOSE THE DOOR!.

The meaning of the phrase *a high castle* cannot be described as a composition of the senses of the words *high* and *castle,* because both *high* and *castle* has many senses, and only one for each of them occur in the phrase *a high castle.* Other of the senses of the word *high* is present in the phrases *high number, high principles* and *a high tone.* In other words: you cannot describe the sense of the lexical word *high* as the sum of the semes that it contains, for it contains many semes that are divergent, i.e. semes that are competitive for being actualised in a given phrase; if one of the divergent semes are actualised, say the seme QUANTITATIVE in *high number,* all the other of the divergent semes disappear, nothing of IN-SPACE or QUALITATIVE is left. The semes of *high* are not added, they are subtracted.

This process of disambiguation or monosemiation is dependent on the common divergent semes in two different words in the same actualised sentence or text. The lexical word *castle* has the divergent semes IN-SPACE or IN-CHESS. So we can select the same divergent seme in both *high* and *castle,* viz. IN-SPACE; the divergent semes of the two words are in the same semantic locality, and that is, following Greimas, called **isotopy.**[5]

In the same way most occurrences of sentence polysemy will be disambiguated if the sentence expressions occur in an actualised text, i.e. as an utterance or a speech act.[6] In the text: *John drives slowly and Peter drives fast,* the meaning is: THE ONE WHO DRIVES FAST IS PETER, but in the text: *Peter is a lazy man, but Peter drives fast,* the meaning is: PETER IS FAST IN HIS DRIVING. Only if you see the sentence in its context will you understand the right information structure of the sentence. All sentences are ambiguous with respect to information structure, and it can only be disambiguated if you know the **relevance** of the sentence with relation to the other sentences.

In the same way on the level below the word level: the number of semes understood from a word is not exhaustively described by the lexical definition of the word, the human understander always has to fill in the slots in a frame for parts of the concept, slots that are necessary for understanding, but which are not mentioned in the definition because of

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the level of abstraction; the human understander fills in **default** values when understanding a word as a concept.

On each level of text understanding or production the process cannot be described as exhaustively compositional. On each level the human text processor needs the context, the environment of the unit for processing the unit. That is what is called the hermeneutic circle: you cannot understand the whole language unit before you have understood its parts, and you cannot understand the parts before you have understood the whole. So our model is changed to the following:
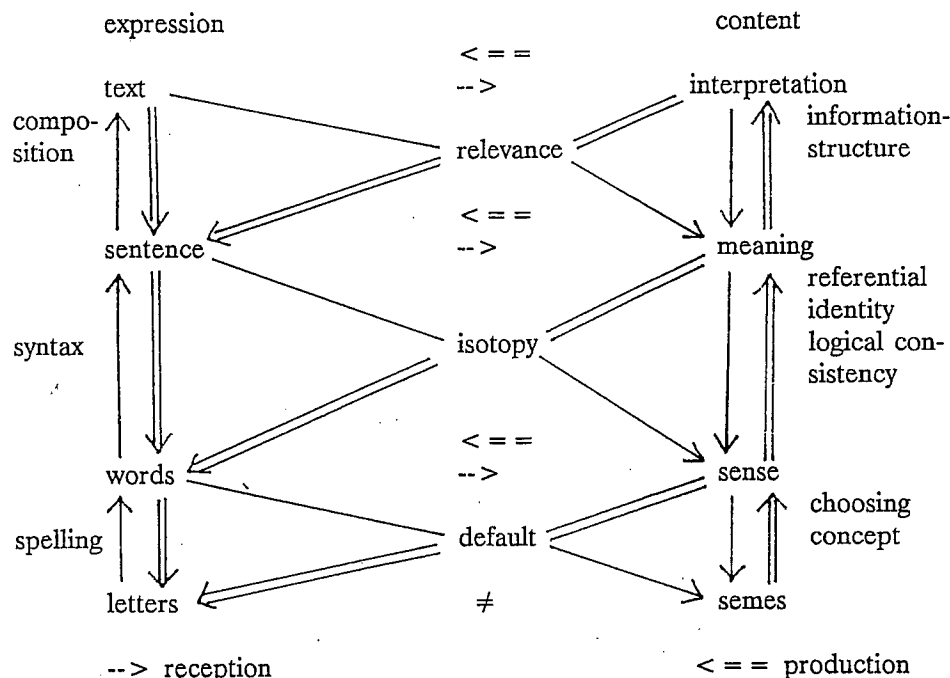
In the rest of this paper I, will show examples of (and in this order): relevance, isotopy and default.


3. Relevance

It is well known that negated sentences are ambiguous with regard to the scope of the negation. The sentence: *She didn't sleep because she was ill* may be interpretated as: HER SLEEP WAS NOT CAUSED BY HER ILLNESS, or SHE DIDN'T SLEEP AND THE CAUSE FOR THAT WAS HER ILLNESS or SHE SLEPT, BUT NOT BECAUSE OF HER ILLNESS. So scope of negations (and other logical operators) form one level of the content side of a text. Geoffrey Leech[7] has explained this ambiguity as dependent on three different information structure realisations of the same "deep semantic" meaning of

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the sentence. The general rule can be formulated as the following:

If one deep semantic predication is governed as an argument by the predicate in another predication, in surface semantics this configuration can be actualised in two different ways: *either* the first predication is subordinated under the predicate in the second predication, (i.e. typically but not always as a sentence or as a nominal) *or* the second predication is downgraded and made a feature of the predicate (i.e. typically but not always as an adverb) in the first predication.

In Leech' notation deep semantics are represented by configurations of arguments, marked by circles, and predicates, marked by lines. The deep semantics of *She didn't sleep because she was ill* is in this notation:

Deep semantic representation (nonhierarchical, unordered):
Sentence: *She slept because she was ill.*
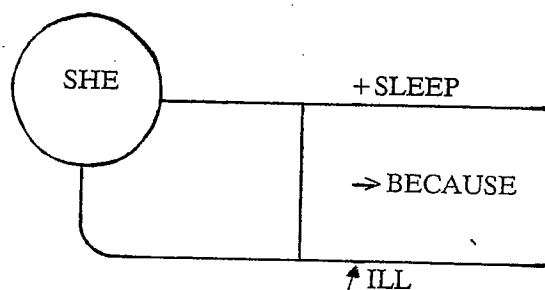
O = argument   ___ = predicate
In this configuration +SLEEP and ↑ILL are arguments for ->BECAUSE.

Now this deep semantic structure can be realised or actualised by two different surface semantic arrangements:

Surface semantic representations (hierarchical but unordered):
Sentence: *She slept because she was ill.*

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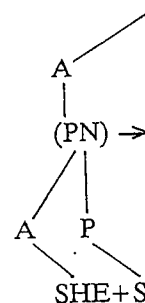
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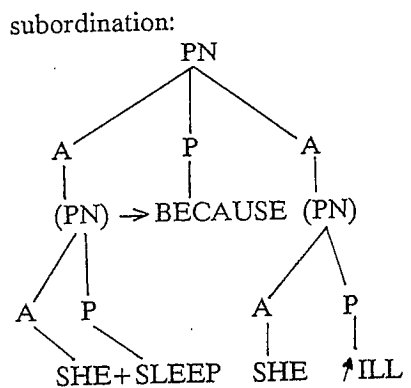sentenc

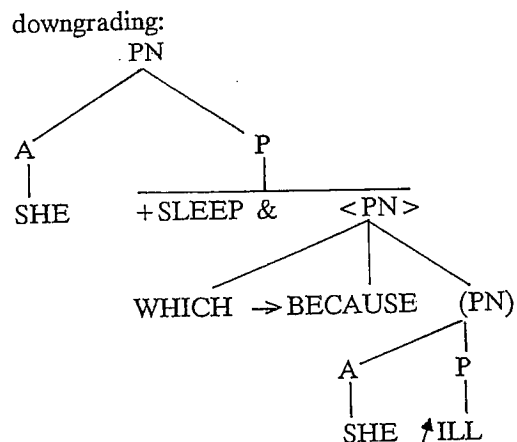subordinati

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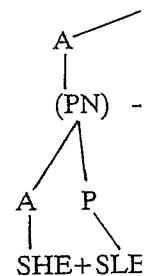
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     SHE+SLEEP    SHE  ↑ILL
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HER SLEEP WAS CAUSED BY
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downgrading:

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              PN
          /        \
         A          P
         |      _____
        SHE    +SLEEP &   <PN>
                     /      |      \
                  WHICH → BECAUSE   (PN)
                                   /   \
                                  A     P
                                  |     |
                                 SHE   ↑ILL
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SHE SLEPT BECAUSE SHE WAS ILL

A = argument, P = predicate, PN = predication, ( ) = subordination, < > = downgrading, & = feature coexistence, the order is irrelevant.

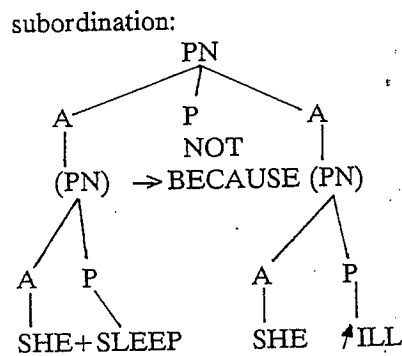If we now add a rule about negation:

the negation of a sentence negates the topmost predicate and nothing more,

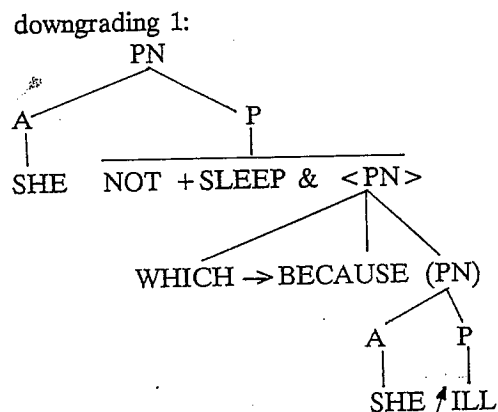we get the three different meanings of the sentence:

Surface semantic representation (hierarchical but unordered):
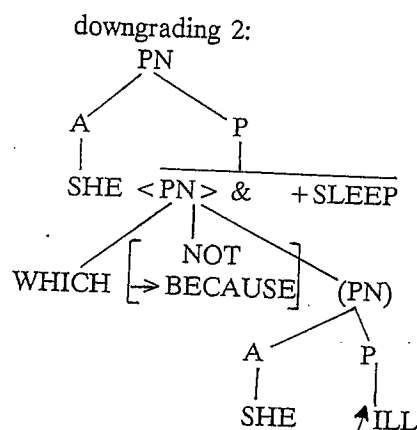sentence: *She didn't sleep because she was ill.*

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subordination:

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     (PN)  → BECAUSE  (PN)
     /  \            /  \
    A    P          A    P
    |     \         |    |
   SHE+SLEEP      SHE  ↑ILL
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HER SLEEP WAS NOT CAUSED
BY HER ILLNESS

downgrading 1:

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              PN
          /        \
         A          P
         |      _____
        SHE   NOT +SLEEP &  <PN>
                     /      |      \
                  WHICH → BECAUSE  (PN)
                                  /   \
                                 A     P
                                 |     |
                                SHE   ↑ILL
```

SHE DIDN'T SLEEP, AND THE
CAUSE FOR THAT WAS HER ILLNESS

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downgrading 2:

```
                    PN
                  /    \
                A        P
                |        |_____
              SHE   <PN> &    +SLEEP
                    /   ┌  NOT   ┐
              WHICH  └→ BECAUSE ┘  (PN)
                                   /   \
                                  A     P
                                  |     |
                                 SHE   ↑ILL
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SHE SLEPT, BUT NOT BECAUSE OF HER ILLNESS

In this way it can be explained how and why one and the same sentence can have different information structures and consequently different meanings when negated. But it is not explained how and why such an ambiguous sentence when uttered in a context is normally given one and only one interpretation. The rules dealing with that problem are of quite another kind than Leech's rules. It is a rule like Grice's maxims[8] and perhaps it is an instance of his maxim of quantity:

> Negations are used when the speaker has reasons for assuming that the listener has the belief that the unnegated statement is true.

According to this rule it is more natural to say: *The whale is not a fish* than to say: *The cat is not a fish* because the speaker could have better reasons for assuming that the listener believed that the whale was a fish when it swims in the sea, than for assuming that the listener believed that the cat was a fish when it itself eats fish.

Now the meaning of the sentence *She didn't sleep because she was ill* depends on the reasons the speaker has for assuming whether the listener believes in the truth of her sleep, the truth of its cause or the truth of the relation of causation between sleep and illness. And those reasons are not a component of the sentence. Consequently the meaning of the sentence is not exhaustively compositional. The meaning of the sentence depends on the interpretation of the utterance as a speech act in a specific historical situation.

4. Isotopy

As mentioned above nearly all lexical words are ambiguous but are disambiguated by isotopy. It can be described in the following way: all lexical words contain two types of semes: parallel semes that coexist in

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the actualised word, and divergent semes that are complementary, and which exclude each other in the actualised word. When we read a word in its context we choose among the divergent semes in the same way as you choose what to regard as the figure and what as the ground in the famous picture of the two faces or the vase:
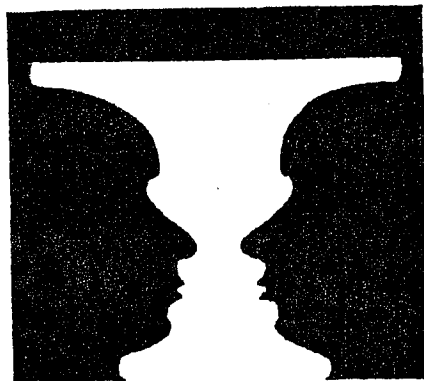
Either you see the two faces, and then nothing of the vase is left, or you see the vase, and then nothing of the faces is left. And the choice of figure and ground is not in the picture, it is only in you who see the picture.

In the same way with lexical and actualised words. *High* can have the senses: IN-SPACE or QUANTITATIVE or QUALITATIVE or ACOUSTIC. It is the reader who chooses which one of those four divergent semes is to be regarded as the figure while the others disappear as ground. The rules for referential identity and logical consistency do not permit ambiguities or ambivalence of senses and meanings. This mechanism is especially apparent in metaphors and metaphorical language, which is not so uncommon as you would think when you study the building brick theories of meaning. Look at this authentic Danish example:

Seks fik sparket af Schlüter:
Six got the kick by Schlüter

MINISTERMASSAKRE
MASSACRE ON MINISTERS

Seks ministre faldt i nat for Poul Schlüters massakre på sit kabinet: ...
Six ministers this night fell as victims of Poul Schlüters massacre on his cabinet...

Danmark vågner i dag op til i alt ni nybesættelser af ministerposter - ...
To day Denmark wakes up to nine new appointments to minister posts -...

Ekstra Bladet 12.3.86

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If we take the interpretation of the text as the sum of the meanings of the sentences, and the meaning of the sentences as the sum of the senses of the words, we would understand that the Danish prime minister had killed six of his ministers by kicking them, and by doing other even worse things. At least 3oo ooo Danes have read this text and understood quite another thing, namely that he has fired six ministers and hired six new. Why? A semantic theory should be able to explain how 300 000 Danes get the right interpretation when it is not exhaustively compositional.

Although there is a 'violence' isotopy in the text *sparket* and *massakre*, there is an even stronger 'politics' isotopy: *Schlüter, minister, kabinet, nybesættelser ministerposter*. When we - as in this text - have double (or triple) isotopy, our search for referential identity and logical consistency forces us to choose one and only one sense and one meaning as the figure in our interpretation, while the other (the violence isotopy) remains background for our interpretation. (It is not unimportant that it is the violence isotopy that is background - as will be elaborated in the next paragraph.)

The rules we use for this choice among possible isotopies, is our knowledge about whether and how two sentences put together in one utterance can belong to the same state of affairs, the same reality, or rather to the same mental representation of the reality. We know that two sentences are **autonomous** (eg. *Ulla is tall* and *Ulla is fat*) if it is possible to imagine one state of affairs where both are true, another where only one of them is true, and one where none of them are true. Two sentences are **exclusive** (eg. *Ulla is big* and *Ulla is little*) if you cannot imagine a world where both are true. Two sentences are **equivalent** (eg. *Ulla is taller than Poul* and *Poul is shorter than Ulla*), if you can only imagine a world where either both sentences are true or both are false. And so on for **implication** and **paradox** and **presupposition**.

This knowledge of how to construct a consistent mental representation of reality based on information from two sentences, is not part of the words, part of the sentences or part of the utterances, but part of our process of interpretation of texts in social situations. In this example we expect that *Seks fik sparket af Schlüter:, MINISTERMASSAKRE*, and *ni nybesættelser af ministerposter* are referring to the same event, as it is common in a news story. On the other hand we know that taken litterally the three sentences are not equivalent sentences according to the definitions mentioned; the second imply the third, but in text types like this one we would expect the converse relation: that the third one implied the second. Then we have to decide which sentences are to be taken at face value and which are understood metaphorically. In other words we have to decide whether it is a massacre that is understood in terms of appointments to posts, or it is appointments to posts that are understood in terms of a massacre. In this case it is the isotopy of the whole text that is the decisive feature.

You can call it encyclopaedic knowledge, but in the example of *MINISTERMASSAKRE* it is rather knowledge of the relation between text

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5. Default

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type, mental representation and reality, a knowledge which is particular to the people living in Denmark and reading their news paper March 3rd 1986.

It is roughly the same point in most recent theories about metaphors. Searle[9] distinguishes between *sentence meaning* (what I call *meaning*) and *utterance meaning* (what I call *interpretation*), and says that in a metaphorical utterance sentence meaning and utterance meaning do not coincide. That is what I have tried to say. But then he continues to say that in literal utterances they do coincide. I don't think that is a sound way to talk about meaning, because sentence meaning (meaning) and utterance meaning (interpretation) are not made of the same stuff, and cannot, by definition, coincide.

Renate Bartsch[10] makes the destinction between *semantically meaningful* utterances, *conventionally semantically meaningful* utterances (following the conventions for the central meanings of the words), and *semantically correct* (i.e. true) utterances and defines the metaphor as a semantically meaningful, conventionally meaningful or conventionally not meaningful, but semantically incorrect utterances. That means that only if you compare the mental model constructed while reading the text with the mental model of reality you decide whether or not the text is to be read metaphorically. I fully agree in that. And that mechanism works if the utterance is literal as well.

So you never walk twice into the same river.

5. Default

Finally, concepts, or word senses are not sharply delimited as logicians want us to believe. Words are not names of, and concepts are not mental representations of entities in the reality. Because words and concepts are always of a certain degree of abstractness. If you teach a child language, and you see a small animal with green eyes and a long tail, and the child says: *It is a dog,* you answer: *No, it is a cat;* you never answer: *Yes, it is an animal,* and you never answer: *No, it is an angora cat.* You regard a certain level or degree of abstraction to be the right one in a given speech situation.[11] So words and concepts don't correspond to entities in reality because when you use a word or a concept, you have always chosen the level of abstraction, and the level of abstraction is not part of the reality, but of your choice.

Concepts are not represented in mind by a definition, by genus proximum et specificae differentiae[12] on the contrary, instances of the same concept only have a family resemblance.[13] When we read the word *head,* we don't understand something like: "that part of the body (genus proximum) which contains the eyes, nose, mouth and brain (specificae differentiae)." If we did that, we could not use the same word in actualisations as *cabbage head, the head of the child, headlines* and *headmaster.*[14] If we indicate each seme by a capital letter the senses of the word *head* in these four instances are: ABC, BCD, CDE, DEF. The first and the fourth have nothing in common, and although we feel that they are instances of one and the

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same word. The only explanation of that is that the content side of a word is not a fixed number of semes structured in a certain way, but different configurations of semes with family resemblances.

The sense of a lexical word is best described as a prototype, i.e. the most typical instance of the family; a sparrow is more prototypical for birds than an ostrich. Many features are bundled together in a prototype. If you meet a feathered animal, you can guess that it has a beak too. As part of the sense of the concept 'bird', the semes FEATHERED and WITH A BEAK are convergent, they always coexist in the actualisation of the word, and consequently one of them is redundant and not an essential part of the definition. None of the convergent semes are essential, and if you found a bird without feathers, you would still call it a bird if it had most of the other bird properties. In the same way for beaks. So you can say that every concept contains a set of slots for properties such as SIZE, SHAPE, PARTS, FUNCTION and so on. And only some of these slots are specified in the definition of the word as the differentiae specificae.

Now if you read the actualised word *teacher* you have a frame for human beings with slots for all the possibly convergent features or semes. So you understand not only that the text is about a human being who teaches someone something, but you fill in all the slots for shape, size, sex, hair, clothes and so on with the default[15] values for the prototypical teacher. I once made an experiment: I asked 30 persons: Make a drawing of a worker, a 'social worker' and a teacher![16] 69 % of the subjects in one group drew three men, although there are more female social workers and teachers than male. They must have filled in the empty slots in the concept 'teacher' with the default values of the prototypical teacher, and for 69 % of the subjects in the group the default value for the SEX slot was MALE.

Notice that the subjects did not need to specify the sex of the persons. They could elegantly solve the problem by a drawing like the following:

Nevertheless most people in the group made drawings where they carefully indicated the sex of the person by drawing beards, cigarets, pipes, skirts and breasts; They could not grasp the meaning of the words without filling in the default values, especially in the slot SEX; some slots are more important than others!

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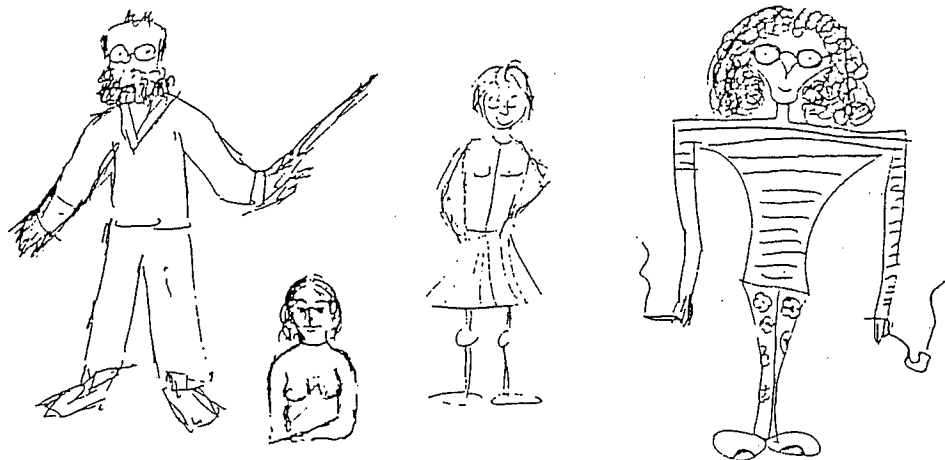: an essential part
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I think that this example illustrates the relation between word senses and
semes. When reading a text, what you get out of a word on the content
side is not the genus proximum and specificae differentiae, but the prototype
with all the important empty •slots filled in with the default values. The
default values are not part of the text, but only part of the stereotypes of
the language user. So different people with different stereotypes have
different understandings of the same text because they fill in the empty
slots differently.

In the experiment mentioned above, it was 69% of the group of men
who drew only men, women drew only 40% men, 28% women and 32% sexless
persons. Men and women have different stereotypes of the sex of 'a
teacher', but both men and women have stereotypes. You would not survive
if you had no stereotypes and filled in the empty slots with your default
values. It is not a failure in our language that it always has empty slots,
it is the very condition for its success.

In this paper I have sketched a theory about meaning as a process for
producing or receiving texts. When a person receives and interprets a text,
some part of the total meaning of the text is the **information structure**,
which is partly dependent on the structure of the sentence and partly on
the composition of the text and of the receivers assumptions about and
expectations of the knowledge of the other person in the speech situation,
in short the relevance of the sentence.

Another part of the total meaning of the text is the logical consistancy
or **coherence** of the sentence meaning. It is partly dependent on the senses
of the words and partly on the common meaning of all the words in the
sentence, and on the possibility of creating one coherent mental
representation of the meaning of the sentence, in short on the isotopy.

The third part of the total meaning, the part that is left when you
don't take into account the information structure and the coherence, is
the configuration of semes - or the **association structure**. It is a holistic,

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simultaneous, decentered and condensed mental representation of content. It is best described by Freud in his *Interpretation of dreams* and by Leech in his *Semantics*.[17] In this mental representation of meaning or content the feelings and the values play a key role. Ambivalence is not ruled out; it is the rule.

The example *MINISTERMASSAKRE* is illustrative. By the rules of logical consistency the reader will understand that Schlüter, the Danish prime minister, has not killed six members of his cabinet, he has only fired them. But the firing of the six members of his cabinet is to be understood in terms of a massacre. It means that the empty slots for the concept 'firing' are filled in by the values from *massacre*, the firing of ministers was done with more cruelty than necessary, the fired ministers were stunned, they were mentally wounded and so on. In the association structure the values of 'a prime minister firing some of his ministers' (which could be positive) and the values of 'a massacre'(which is negative) exist side by side. So the reading of the text not only leaves the reader with the understanding of the event that the prime minister fired six ministers, but also with the feeling that that was too bad.

I have tried to show that interpretation, the total meaning of a text or utterance, is not exhaustively described or explained as a composition of its parts. Interpretation of texts, meaning of sentences and sense of words are not content qualities of the same kind, and a unit on the higher level is not composed by units on the next lower level. I have argued that interpretation, meaning and sense are different abstractions which abstracts from different aspects of meaning, viz respectively information structure, coherence and association structure. In a full-blown utterance all three aspects of the content side are coexistent, and a theory of meaning must deal with all three aspects of meaning.

Footnotes

1) Partee, B.H. 1984. Compositionality. In Landman, F. & F. Veltman (eds.), *Varieties of Formal* Semantics. Foris Publications Dordrecht.

2) Johnson-Laird, P.N., 1983. *Mental Models*. Cambridge University Press, Cambridge GB.

3) The wall and the bubble is mentioned as objectivism and subjectivism respectively in: Lakoff, G. and M. Johnson, 1980. *Metaphors We Live By*. The University of Chicago Press, Chicago.

4) Bateson, G. (1973) 1978. Form, Substance and Difference. In Bateson, G. (1973) 1978. *Steps to an Ecology of Mind*. Paladin: London; Bateson, G. (1979) 1984. *Ånd og natur*. Rosinante: Copenhagen, translated from: Bateson, G. 1979. *Mind and Nature*; Wilden, A. 1972. *System and Structure. Essays in Communication and Exchange*. Tavistock: London.

5) Greima:
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5) Greimas, A.J. 1966. *Sémantique structurale, recherche de méthode.* Paris. Kallmeyer, Klein, Meyer-Hermann, Netzer, Siebert 1974. *Lektürekolleg zur Textlinguistik. Band 1: Einführung.* Fischer Athenäum Taschenbücher. Frankfurt am Main.

6) Habermas, J. 1976. Was Heisst Universalpragmatik? In Apel, K.-O. (ed.); *Sprachpragmatik und Philosophie.* Suhrkamp: Frankfurt am Main. My difference between *interpretation, meaning* and *sense* is here mentioned as the difference between *Sprechhandlung, propositionale Gehalt,* and *Kennzeichnenden Ausdruck und Prädikatsausdruck.* The difference is also mentioned in Searle, J. 1969. *Speech Acts.* Cambridge University Press: Cambridge GB, where the levels are called: *utterance, proposition* and *reference and predication.* Neither Habermas nor Searle are interested in the ambiguity of words.

7) Leech, G. (1974) 1981. *Semantics.* Harmondsworth. The same phenomenon of information structure is described by the new Praque school, but in my opinion not as elegantly as Leech does it: Sgall, P. E. Hajičová, Eva Benešová 1973. *Topic, Focus and Generative Semantics.* Scriptor Verlag: Kronberg, and Klein, W. and A. v. Stechow (eds.) 1973. *Functional Generative Grammar in Prague.* Scriptor Verlag: Kronberg.

8) Grice, H.P. (1967) 1975. Logic and conversation. In Cole, P. and J.L. Morgan (eds.). *Syntax and Semantics. VOL 3. Speech acts.* Academic Press: New York.
The maxim of QUANTITY says: 1) Make your contribution as informative as required (for the current purposes of the exchange), 2) Do not make your contribution more informative than is required.

9) Searle, J.R. 1979. Metaphor. In Ortony, A. (ed.). *Metaphor and Thought,* University Press: Cambridge.

10) Bartsch, R. 1984. The Structure of Word Meanings: Polysemy, Metaphor, Metonymy. In Landman, F. and F. Veltman (eds.). *Varieties of Formal Semantics.* Foris Publications: Dordrecht.

11) Rosch, E., C.B. Mervis, W.D. Gray, D.M. Johnson and P. Boyes-Braem 1976. Basic Objects in Natural Categories. In *Cognitive Psychology, 382-439.*

12) Kamlah, W. and P. Lorenzen 1973. *Logische Propädeutik. Vorschule des vernünftigen Redens.* Mannheim.

13) Rosch, E. and C.B. Mervis 1975. Family Resemblances: Studies in the Internal Structure of Categories. In *Cognitive Psychology 7, 573-605.*

14) The example is from Greimas: *Sémantique structurale,* but my point is the opposit of the point of Greimas.

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15) Hofstadter, D.R. 1986. Change in Default Words and Images, Engendered by Rising Consciousness. In Hofstadter, D.R. *Metamagical Themas. Questing for the Essence of Mind and Pattern.* Harmondsworth.

16) Togeby, O. 1980. En generisk ordarbejder. In Haberland, H., K. Risager, U. Teleman (eds.). *Hverdagsskrift.* RUC.

17) Freud, S. (1900) (1942) 1965. *Drømmetydning.* Hans Reitzel: København, translated from: Freud, S. (1900) (1942). *Die Traumdeutung* Vadus. Leech, G. (1974) 1981. *Semantics.* Harmondsworth.