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Papers from the SEVENTH SCANDINAVIAN CONFERENCE of Linguistics

I

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I

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THE STRUCTURE OF THE JOKE

1. Compositional structure of the narrative

In linguistic text analysis we may distinguish between the motive of the text and the theme of the text. The motive can be defined as the composition structure of the sentences or utterances linearly connected in the text, while thematic analysis consists in a reduction of the meaning of the text parts to one purely relational system of non linear semantic oppositions, which is a specific characterisation of the entire text meaning.

The composition structure of the text can be described as a hierarchy of functions, which are segments of text defined and connected by their linear semantic relations to other functions at the same level of analysis.¹⁾ The defining and connecting linear semantic relations are such as the following (FUNCTIONS marked by capitals, relations by small letters underlined):

CAUSE-----therefore-----EFFECT
EFFECT-----because-----CAUSE
GENERAL STATEMENT-----viz-----SPECIFICATIONS
SPECIFICATIONS-----so-----GENERAL STATEMENT
EVENT-----then-----EVENT
STATE-----while-----STATE
EVENT-----after-----EVENT
ARGUMENT-----consequently-----CONCLUSION
CONCLUSION-----since-----ARGUMENT
FUNCTION-----and-----FUNCTION
FUNCTION-----or-----FUNCTION

FUNCTION-----but-----CONTRAST
FUNCTION-----even-----FUNCTION
FUNCTION-----presupposes-----PRESUPPOSITION
PRESUPPOSITION-----makes possible-----FUNCTION

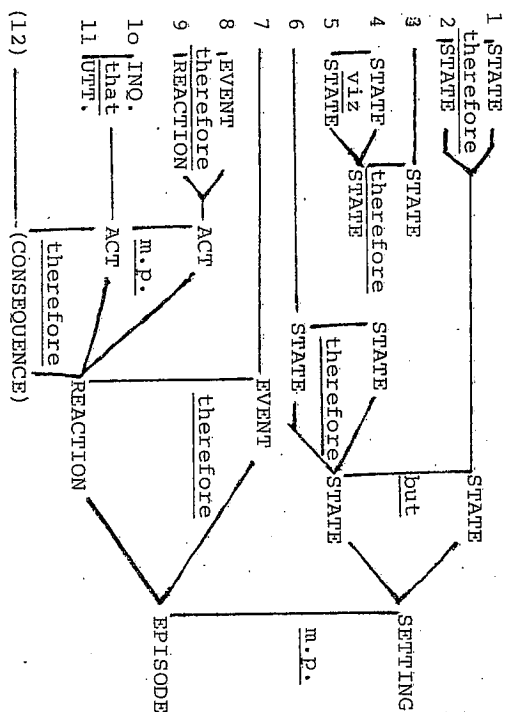
As an example the following anecdote will be analysed in a tree diagram.

The anecdote about Holberg as a barber

{1} Holberg var sin egen forlægger {2} og når han havde ud-
{1} Holberg was his own publisher {2} and when he had publi-
shend en ny bog gik folk op til ham, dels for at købe den og
shed a new book, people visited him, partly in order to buy
dels for at veksle et par ord med den navnkundige eneboer,
it, partly in order to talk with the renowned hermit,
som ellers ikke var så let at få i tale. {3} Nu var det ikke
whom it wasn't easy to meet. {3} Not all those
alle, der havde lyst til at tale med ham, som tillige havde
who wanted to talk with him could afford to buy the book too.
råd til at købe bogen. {4} De skaffede sig da et eller andet
rind, {5} og blandt unge mennesker var det et yndet trick
{5} and among young people it was a popular trick
at gå ind og spørge, om det var her, barberen boede. {6} Men
to go and ask if this was the barber's house. {6} But
Holberg anede ret hurtigt råd. {7} En dag kom en ung student
Holberg soon suspected mischief. {7} One day a young student
til ham med det samme spørgsmål, {8} og Holberg svarede be-
came and asked the same question {8} and Holberg answered in
kræftende og bød sin unge gæst en stol.
the affirmative, and offered the young guest a chair.
{9} Studenten var nødt til at tage plads og roligt overvære
{9} The student had to take a seat and quietly witness how
hvordans komediedigteren lavede skummet til. {10} Efter at
the comedy writer prepared the lather. {10} When Hol-
Holberg havde smurt den unge mand dygtigt ind op over begge
bergs had lathered the young man's face above his ears, he
øren, bukkede han pænt for synderen og sagde: {11} - Jeg sæ-
made a deep bow to the culprit, and said: {11} - I only
ber kun folk ind, men derovre bor han der rager dem.
lather people, but over there lives the man who shaves them.

Hemming Fonsmark: Alverdens anekdoter.
Kbh. 1956, p. 288.

Composition structure of the anecdote



Analysed in this way, the anecdote turns out to be an ordinary narrative following all the normal rules, containing a SETTING, where the characters are introduced and an unstable state is described, and an EPISODE with an EVENT and the REACTION.

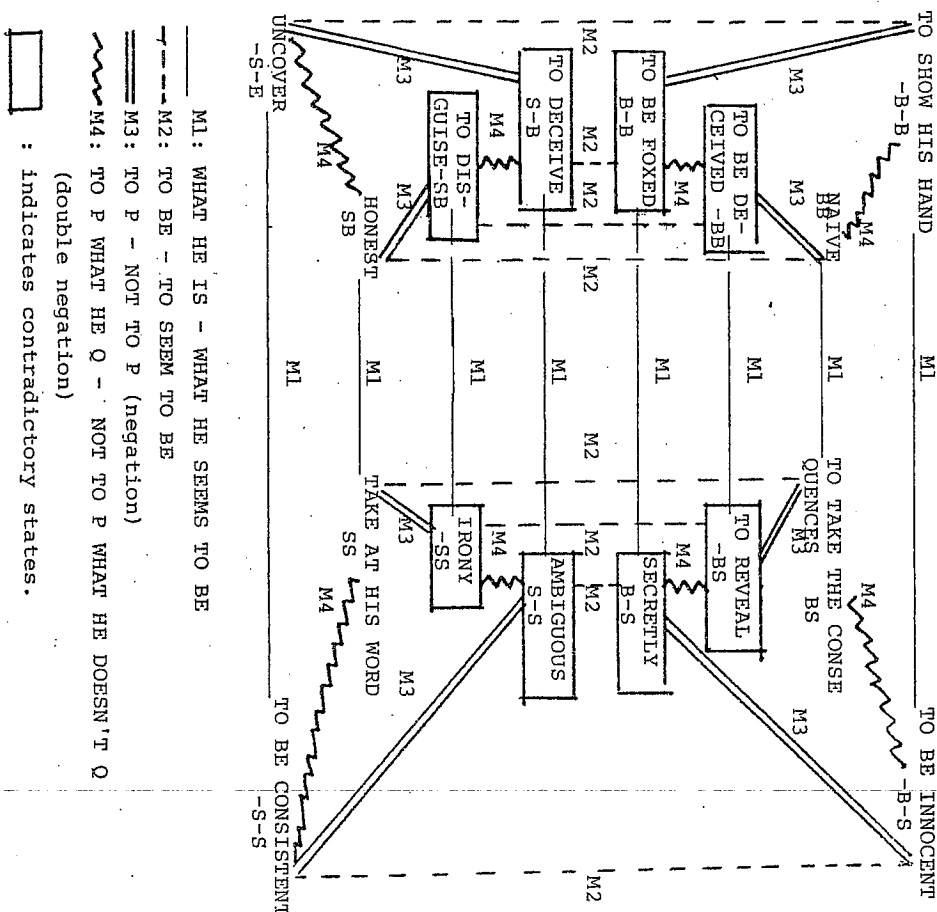
2. Thematic structure of the narrative

The thematic core of this anecdote is the semantic opposition between to be and to seem to be. This may be seen from the following paraphrase of the anecdote:

(1) H. has an ambiguous relation to his surroundings, he seems to be at the same time a poet and hermit and a publisher (S-S); (2) rich people can, by buying books, secretly (B-S) study the hermit, (3-5 & 7) but the poor people have to deceive (S-B) and pretend that they want to go to the barber, thus deceiving H. (-BB). (6) H. suspects mischief, without showing it (-SB), and then he takes the consequences (BS); in (SS). (9) The student now takes the consequences (BS); in this way he avoids to reveal his identity (-BS). (10-11) But

now H. "shows his hand" (-B-B), and says that he is not the one he is not, so that the student is foxed (B-B) and becomes what he is not, viz at the barber's.

In the parentheses I have indicated that seeming and being can be combined in many ways. You can be what you are (BB), or you can be what you seem to be (BS), or you can seem what you seem to be (SS) or you can seem what you are (SB), and in all the formulas one or both parts can be negated. So the theme of the text can be described as a purely relational system of semantic oppositions such as the following:



This system has the following characteristics: 1) each of the 16 semantic items is defined by its contrastive relations to the other items, the contrastive relations being M1, M2, M3, and M4. So DECEIVE can be defined as M1-AMBIGUOUS, and SECRETLY as M2-AMBIGUOUS (the contrastive relation as an operator to the semantic item). Two or more contrastive relations can be combined by a binary operation, yielding another contrastive relation in the system. So TO BE FOXED can be defined by a combination of M1 and M2 in relation to AMBIGUOUS: M1-M2-AMBIGUOUS. Starting at any semantic item, combining any of the contrastive relations, you will always find a semantic item belonging to the system. The system is closed under the operation of combining. 2) The combining operation is associative, i.e. three contrastive relations can be combined by combining two of them and then combining the result with the third. So TO SHOW ONE'S HAND can be defined both as M3-TO BE FOXED, and as M3-M2-TO DECEIVE. 3) Some element has to be chosen (arbitrarily) as the point of departure for the description and will serve as the neutral element in the system corresponding with the identity relation, MO, which applied to a semantic item yields the same item; MO-AMBIGUOUS = AMBIGUOUS. 4) For any contrastive element in the system there is an inverse element which makes it possible to reverse to the initial element; the contrastive relation between AMBIGUOUS and DECEIVE is the inverse relation to the contrast between DECEIVE and AMBIGUOUS. So M1-M1 = MO, and M1-M2-M3-M4-M4-M3-M2-M1 = MO. 5) The combining operation is commutative, i.e., M1-M2 = M2-M1. That defines the equifinality of the system: from the same initial element you can get to the same element by different routes; TO BE FOXED can be defined as M1-SECRETLY and as well as M2-TO DECEIVE.

These 5 properties of the system mean that it is a manifestation of a mathematical group (commutative group). 3) A group is defined by the triple $\langle E, -, = \rangle$, where 'E' is a (non empty) set, '-' is a binary operation, which applied to the elements of E yields a new element in E, and '=' is the equivalence relation, so that for any $x, y, z \in E$

(2) $x-(y-z) = (x-y)-z$ (associative)

- (3) there is an e, such that $e \in E$ and $e-x = x-x-e$ (neutral element)
- (4) there is an x' such that $x'-x = e = x-x'$ (inverse element)
- (5) $x-y = y-x$ (commutative).

Example: the set of positive and negative integers with the operation + and the neutral element 0; $3 + 4 = 7$, $2+(3+4) = (2+3) + 4$, $0 + 3 = 3 + 0$, $3 + (1-3) = 0$, $3+4 = 4+3$.

In many fields of investigation Group Theory plays a very important role. In the cognitive psychology of Jean Piaget Group Structures are seen as fundamental to all the operations children (and adults) can perform, and the properties of the group are seen as the properties of thinking.

Thus, if Piaget says that the classificatory behavior of a eight-year-old indicates that he possesses the grouping of logical class addition, he means that the child's thought organization in the classificatory area has formal properties (reversibility, associativity, composition, tau-tology etc) very like those which define this logico-algebraic structure.

John H. Flavell: The Developmental Psychology of Jean Piaget, New York 1963, p.169.

In the psychological theory of interaction proposed by Paul Watzlawick et al. group properties are seen as properties of all rational behavior and normal or first order change as opposed to the paradoxical character of real change or second order change.

Group Theory gives us a framework for thinking about the kind of change that can occur within a system that it-self stays invariant; the Theory of Logical Types is not concerned with what goes on inside a class, i.e., between its members, but gives us a frame for considering the relationship between member and class and the particular metamorphosis which is in the nature of shifts from one logical level to the next higher. If we accept the basic distinction between the two theories, it follows that there are two different types of change: one that occurs within a given system which itself remains unchanged, and one whose occurrence changes the system itself.

P. Watzlawick, J. H. Weakland and R. Fish: Change, New York 1974, p.10

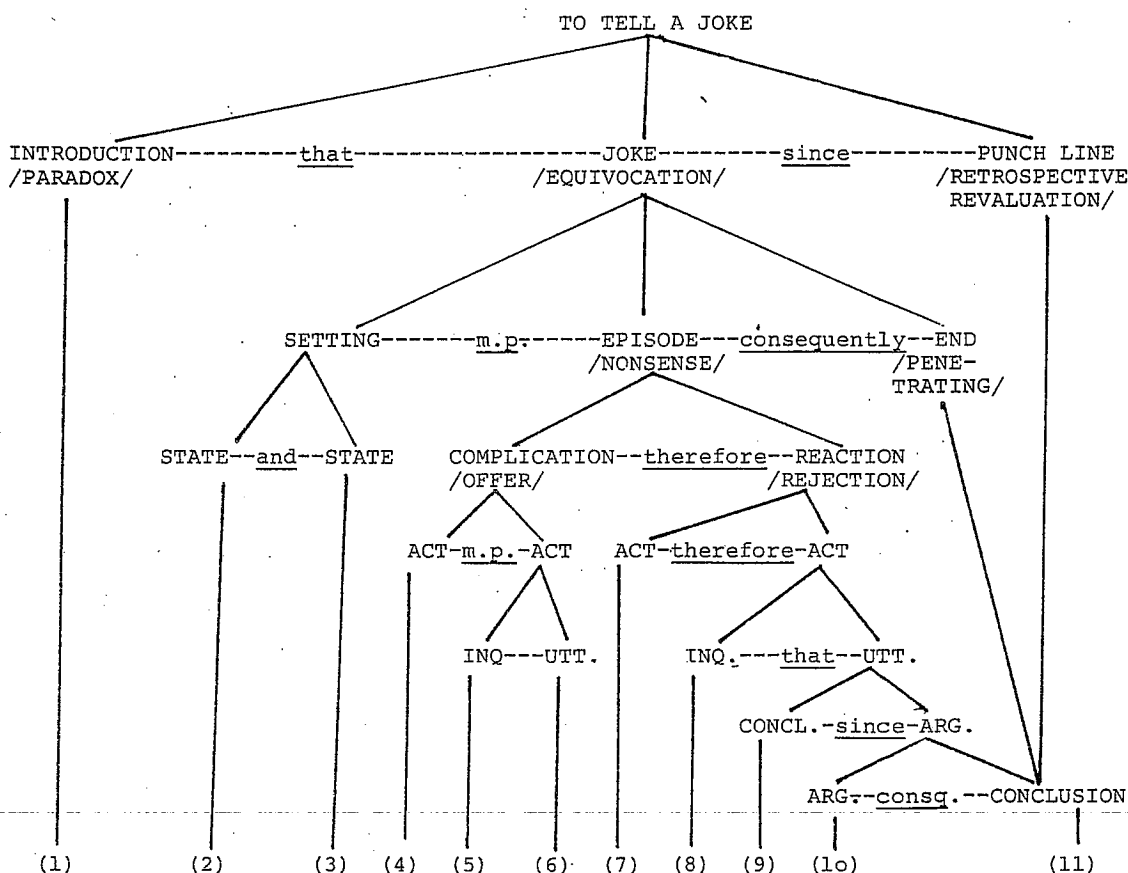
In the work of Peter Brask²) it has been shown that the thematic structure of many texts or text parts have group properties. This means that although not all the semantic items of the system have to be manifested in the text, the ending of the text doesn't fall outside the set of elements defined by the group structure. So it is not surprising that the anecdote about Holberg as a barber ends as it does; the student is foxed in a way very similar to the way Holberg was deceived in the beginning. Through the narrative the persons of the story perform many acts which all fall within the set of elements which by their interrelations constitute the group structure. It can now be put forward as a hypothesis that the thematic structure of a normal narrative always is describable as a group or a commutative group.

3. The compositional structure of the joke

The structure of the joke can only be described in relation to the structure of the normal narrative as shown above. Although a joke is a sort of a narrative, it differs from the normal narrative in composition structure as well as in thematic structure. I will analyse one joke which is rather typical: The joke about the two fools.

- (1) Historien er velkendt og meget kort: (2) to tosser* gik
(1) The story is well known and very short: (2) one evening
en aften på en mørk vej. (3) Den ene tosse
two fools were walking along a dark road. (3) One of the fools
havde en lygte. (4) Tossen, der havde lygten lader lyskeglen
had a flashlight. (4) The fool with the flashlight points with
pege op i luften (5) og så siger han til den anden
cone of light up into the air (5) and then he says to the
den tosse: (6) "Du får 10 kr., hvis du tør kravle op ad den
other fool: (6) "You will get 10 sh. if you dare to climb up
lyskegle." (7) Den anden tosse tænkte sig lidt om,
this cone of light." (7) The other fool considered for a while,
(8) og så svarede han klogt: (9) "Tror du jeg er tosset?
(8) and answered shrewdly: (9) "Do you think I am a fool?
(10) "Tror du ikke jeg kender dig? (11) Når jeg er kommet halv-
(10) Don't you think I know you? (11) When I am halfway up,
vejs, så slukker du lygten."
you will switch off the light."

Johannes Møllehave: Tusind
fluer med eet smæk, Kbh. 1982
p. 21.



Three comments are to be made about this composition structure:

Before the beginning or SETTING a joke very often has an INTRODUCTION in metalanguage saying, 'this is a joke'. It is important that this is said in metalanguage. It brings to mind the Theory of Logical Types mentioned in the quotation. As it stands here, and in most jokes, it is a sort of liar's paradox and goes as follows: If it is a joke that it is a joke, then it is the pure truth that it is a joke, and so it is a joke that it is a joke ... and so on.⁴⁾ In the very introduction to the joke it is marked that the string of sentences which follows will not be describable within the framework of Group Theory but only within the Theory of Logical Types.

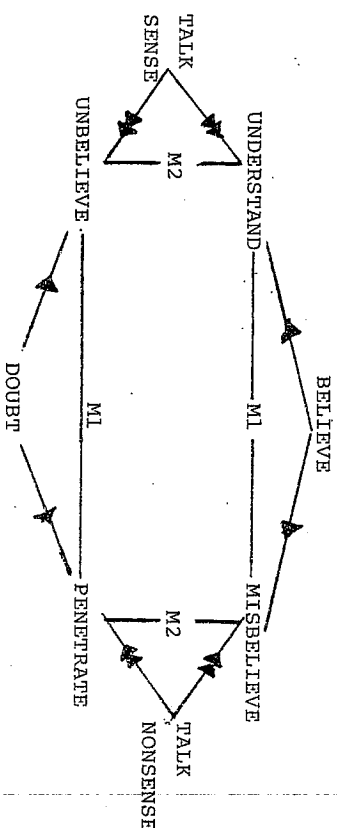
Secondly, the levels of the composition structure are mixed so that one and the same segment of the text constitutes an element on two different levels of analysis.⁵⁾ The last sentence in the story, *Når jeg er kommet halvvejs, så slukker du lykten*, is a perfectly natural CONCLUSION to the ARGUMENT in (10), and together with (10) a natural ARGUMENT for the CONCLUSION in (9), and together with (7-10) a natural REACTION to the EVENT or COMPLICATION which he has met - but at another level of analysis it is the PUNCH LINE of the joke, a segment that forces the reader to a retrospective reevaluation⁶⁾ of all the preceding sentences. What the reader expected would be an answer that would penetrate the nonsense of the first fool, turns out to be cunning of the same nonsensical kind.

Thirdly, the JOKE-function in this composition structure can be analysed partly as a normal narrative, containing the subfunctions SETTING-m.p.-EPISODE(COMPLICATION)-therefore-REACTION)-consequently-END, partly as what I have called EQUIVOCATION, a word from the same metalanguage as PARADOX and RETROSPECTIVE REEVALUATION. EQUIVOCATION can be defined as a deliberate ambiguity.⁷⁾ The equivocal part of the composition is the episode. The COMPLICATION is at the same time an offer (or perhaps a temptation) and nonsense talk; the first meaning is displaced and forgotten, because the second meaning is understood to be more important, stronger as it

were, so that it rules out the first one. A piece of nonsense cannot at the same time be a serious temptation. The functions (7.10) of the REACTION are equivocal in the same way. They are understood as a sensible reaction to the foolishness of the first fool. But in the END the REACTION turns out to be unambiguously cunning nonsense, and not sensible at all. So the listeners not only have to reevaluate the EPISODE, but also to reclassify the EVENTS and ACTS and to revise the hierarchical relations between nonsense and temptation. It turns out that the nonsense frame doesn't rule out the temptation frame, but the other way round: the temptation frame rules out the nonsense frame. The audience has to imagine how to climb a cone of light and how it feels when the light is turned off. What is changed here is not the life of the two fools, but the way of thinking of the audience. The discovery of ambiguities and revision of hierarchical relations between terms are typical metalinguistic activities, hence they pertain to the Theory of Logical Types and not to Group Theory.

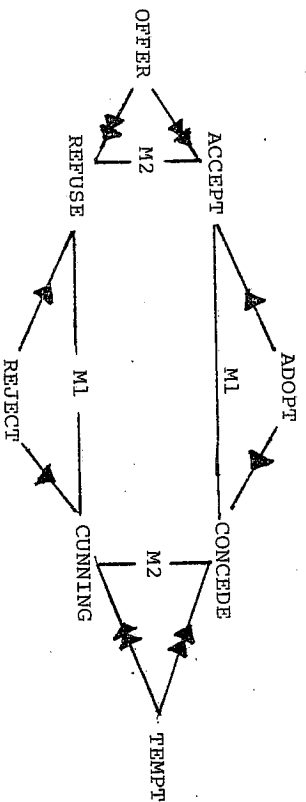
4. Thematic structure of the joke

This can be seen if we try to give a thematic description of the joke. The main semantic opposition in the text (except for the PUNCH LINE) is the one between talking nonsense and talking sense. The answer to these two forms of talk may be either to believe or to doubt. Thus the theme of the joke can be described as the following system of semantic oppositions:



- _____ M1 : the first utterance is true - it is false
- _____ M2 : to believe - to doubt
- _____ : specification
- _____ : utterance - reaction

The system of M1 and M2 is a group structure, and if the story had ended with a penetrating answer from the other fool, the thematic analysis would have shown a group structure. But the punch line of the joke can only be described by a semantic system like the following:



- _____ M1 : the speaker is honest - the speaker is not honest
- _____ M2 : trust - mistrust
- _____ : specification
- _____ : utterance - reaction

The two schemes cannot be united to one joint system because the relations between UNDERSTAND and MISBELIEVE respectively UNBELIEVE and PENETRATE (M1 in the first scheme) are not the same as the relations between ACCEPT and CONCEDE respectively REFUSE and BE CUNNING (M1 in the second scheme). The truth of the utterance is independent of the honesty of the speaker. And in the other dimension (M2) BELIEF and DOUBT presuppose disregard of the TRUST-MISTRUST opposition - and vice versa.

Thus it can be shown that the thematic structure of this joke cannot be described as a symmetrical system having the properties of a group or a commutative group. The shift from DOUBT to MISTRUST can only be accounted for as a reinterpretation

tation of the same words, and a reclassification of the same events and acts of the story. This reinterpretation and reclassification can only be performed if the listener shifts to a metalevel of consciousness. The listeners not only have to shift from one concept or class to another - as they do when listening to the anecdote - but also from one level (the level of concepts and classes) to another (the level of conceptualisation and classification). And so the PUNCH LINE of the joke is as paradoxical as the INTRODUCTION.⁸⁾ As can be seen from the composition structure, the listeners have to perceive at both levels at the same time, viz. at the time of the PUNCH LINE, both at the class-and-concept level and at the conceptualisation-and-classification level; and this mixing of levels is exactly what creates paradoxes like the liar's paradox.

5. Conclusion

In summary, we may say that a joke is a sort of a narrative. It differs from the normal narrative in three respects:
 1) It has to be introduced in the Flow of Communication, by a sort of the liar's paradox, and thus forms a bubble of unreality and nonrelation between the communication partners.
 2) One and the same compositional part of the joke, viz. the punch line, forms a functional unit at two different levels at the same time, so that the joke is terminated before it ends.
 3) While the semantic value of the end in a normal narrative always falls within a group system of semantic oppositions, the punch line of the joke always falls outside the model group of semantic oppositions established in the rest of the joke. The reader thus has to perform a metalinguistic retrospective reinterpretation and reclassification, which has the character of a paradox, and which can only be accounted for in the Theory of Logical Types. In this way a joke in the normal flow of communication, is a comment on the impossibility of rational ideal communication. Ordinary language always shows possibilities of equivocations, and equivocations show that the rational consensus of the community isn't unique and unchangeable. In the stream of common sense communication the

joke shows that the reality, such as constituted and created by common sense talk is perhaps not so real after all.

The joke is like a false preacher who marries a couple whose families cannot tolerate each other.

Notes

1) See van Dijk 74, van Dijk 77, Güllich & Raible 77, Rummelhart 75, Togeby 79 and Togeby 82.

2) This type of analysis is suggested in Greimas 66 and Greimas 70 where the process of reduction is described in detail. The model group is taken from Brask 74 and Brask 79 where the so called "structure élémentaire de la signification" of Greimas is criticized and this other version proposed.

3) About groups, see Grize and many other authors.

4) For this point, see: Fry 63, Marfurt 77 and Watzlawick et al 67.

5) See Marfurt 77.

6) See Kock 78 and Kock 79.

7) What I have called equivocation is meant to grasp what other writers have called: duality (Kock 79), bisociation of incompatible frames of reference (Koestler), complex isotopi (Greimas 66). I think it is important that this sort of ambiguity is deliberate, and that the two meanings are incompatible, i.e. rule out each other. Equivocation is a generalization of what Freud (1905, 1979) calls displacement, unification, double meaning, double use of words and condensation. Many of the phenomena discussed by Freud have other names in the classical rhetoric such as: methonymy, synecdoche, metaphor, paronomasia.

8) Fry 63, Watzlawick et al 67, Watzlawick et al 74. Here the role of paradoxes in communication in general is discussed; paradoxes are important ingredients in the schizophrenic family behavior, in the psychotherapy which is supposed to cure the schizophrenia, in dictatorship, in intelligence work - and in jokes.

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