What is the thought expressed by a metaphorical utterance? When Romeo says »Juliet is the sun«, what thought of his does this utterance express?

I shall claim that the thought expressed by a metaphorical utterance, U is the thought which would normally correspond to the *literal meaning* of U. So the thought expressed by Romeo's saying is the thought that Juliet is the sun. It would be convenient to call such thoughts »metaphorical thoughts« if it were not for the fact that »metaphorical thoughts« correspond to literal, and not to metaphorical meanings of utterances.

It is now pretty much agreed that the creation of metaphors is a cognitive process, and it would be natural to suppose that the primary result of such process is a thought or something akin to a thought. I think that this train of reasoning is correct. However, there is a strong tradition which sees metaphors primarily as *linguistic* items, a tradition which finds its inspiration in the popular picture according to which the speaker, in using a metaphor, says one thing but means another.

This linguistic picture is potentially misleading. It is correct in directing our attention to the non-literal component of the metaphor, and also in pointing out that the audience usually figures out the metaphorical »sense« of a speaker's utterance without bothering to discover the speaker's thoughts. But if it is taken to suggest that the speaker has no thought which corresponds to the litteral meaning of his utterance, then it is surely false.

First, how do you write a (metaphorical) sentence without thinking the thought it expresses? Second, is there anything wrong with a person saying »Man is wolf to man« without being able to give a precise account of all respects in which the presumed similarity holds? Not much. The heuristic value of famous metaphors (Hobbes' wolf metaphor, Freuds energetic metaphors, today's computer metaphor) lies precisely in giving expression to a fruitful yet vague thought, not in offering a fancy formulation of a definite and precise but unexpressed thought.

We may, then, safely assume that metaphors have literal meanings which correspond to thoughts.

What is then the cognitive structure and value of metaphors?

II

Let us take our starting point from the so-called *situation semantics* (Barwise and Perry, 1983). In situation semantics, meaning is seen as arising from (naturalistically definable) relations between situations, called *constraints*. Human beings, like other living organisms, are *attuned to constraints* and exploit them in order to learn from given situations about other situations. The TV watcher exploits constraints which link the situation on the TV-screen to situations in real life, in order to learn about distant real life situations, say in Beirut or in the Persian Gulf.

We may try a similar approach with metaphors. Take the Juliet-sun case. As Romeo's further explanations in his monologue show, he is comparing two situations: Juliet appearing among her friends and the rising of the sun which makes the stars invisible. Call the first situation the Juliet-situation, and the second the sun-situation. The two situations are similar, they share some properties, and we may treat this sharing of properties as the constraint which links the two.

It would be ludicrous, however, to suggest that one could learn any astronomical facts by observing Juliet, nor facts about Juliet by observing the sunrise, the way we learn about street fights in Beirut by observing the surface of CRT in our TV-set.

Still, mobilising our everyday knowledge about the sun's warmth and brightness we might come closer to imagining the impression Juliet leaves on Romeo. In the case of some other metaphors, the cognitive usefulness is much more clear — if we believed Hobbes' statement »Homo homini lupus«, we might, by using our everyday knowledge about wolves (gleaned from comics and cartoons, I suppose) learn something about typical human relations.

Now, what is the difference between the TV-case and the case of metaphor? Is the use of metaphor just a particular case of *exploiting constraints* one is attuned to?

It seems that there is a significant general difference between the usual constraint-exploitation and the comprehension of metaphors. In the case of TV-watching we are already attuned to the relevant constraint. We do not have to know much about the functioning of the TV, but we must be able to interpret the visual situation on the screen correctly (to know, for instance that the titles do not belong to the scene of action). In the case of metaphor, we have to discover the relevant constraint. So, the general difference between normal learning and the comprehension of metaphors lies in the direction of the search. In the TV-case we have one situation, and the constraints, and we learn about the other. In the case of metaphor, we have some idea of the situations, and we look for constraints.

So, Romeo says »Juliet is the sun«. The audience is apprised of two situations — Juliet appearing amongst her female friends, and the sun rising on the previously starry night. The statement made by Romeo is literally false. But it points to (perhaps, conversationally implicates) a statement claiming that there is some relevant constraint linking the two situations. It is now the task of the audience to locate the constraint — it could be the similarity of appearance, the similarity of causal powers, of effects or whatever. Suppose that the relevant constraint is the similarity of appearance (if we wanted a

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high-brow term we might coin one, say *phenomenal properties constraint*). Then the audience could learn more, by further exploiting the constraint. Perhaps the first similarity is that both the sun and Juliet are beautiful (not a very good one). By locating the constraint among the phenomenal properties, one could hit upon another similarity, say *radiance*, and so on. If, however, the relevant constraint is relational — Juliet is to her female friends what sun is to the other stars — one could go on with the comparison, and note more and more features which make Juliet excell among her peers.

In this way we have given a situation semantical twist to the classical idea of metaphor as model. It could be made more precise, and it should be. For the moment, let me just summarize the main idea.

We start from the metaphorical statement whose literal meaning is that an individual a satisfies a predicate P. The metaphor then has three components:

- (a) the proposition P(a) which is normally false
- (b) the implicit claim about two situations or two classes of situations S_1 and S_2 where α is an element of S_1 , and predicate P is true of some element in S_2 , stating that there are relevant and interesting constraints C_1 , ..., C_n linking S_1 and S_2 . Call this claim »claim about constraints«
- (c) the implicit command to the audience to find the relevant constraints: Bring it about that you know C_1, \ldots, C_n .

Further, after fulfilling the command, the audience might proceed to learn more about S_1 by exploiting some constraint C_1 (one of C_1, \ldots, C_n).

A brief comment is in order.

The first point, (a), captures the intuition that metaphorical statements have literal meaning, and that this meaning is usually false (Davidson).

The second point, (b), identifies a claim that could be true or false, and which is true in the case of successful metaphors. This answers to our intuition that there could be a dispute about the appropriateness of the metaphor which does not center on any kind of conversational or social appropriateness, but on the relation between the metaphor and the relevant state of affairs. For instance, if I said »Mao is the red sun of the East«, my co-symposiast, professor Potrč, would certainly reply: »No, he is a bloody dictator!«, and we would have a disagreement about a presumed fact. The way to represent this disagreement is in terms of constraints — what I am claiming is that there is some sensible constraint linking the activities of the late Mao to the image of the rising sun, whereas my interlocutor is denying that there is any such link. Therefore, although the literal meaning of the metaphor is a false proposition, there is room for further factual disagreement, namely over the claim that there is a relevant constraint.

The third component (c), is responsible for the intuition that metaphors constitute a *task* for their interpreters. Knowledge imparted by means of metaphors is not a ready made gift. At best it is a tool for knowledge acquisition.

This brings us to the pleasant topic of the usefulness of metaphors. A lot has been said about it, by authors like M. Black, R. Boyd or P. Ricosur, and it is difficult to add anything of interest. The story about constraints if correct, points to a general moral: sometimes, in order to be able to exploit some constraint, the inquirer has to figure out explicitly what the constraint is,

Interpreting metaphors seems to be a playful may of doing just this — learning

to identify relevant constraints.1

It is plausible to suppose that people speak of living metaphor only in cases in which constraints are not obvious; require some guessing to be discovered. Locating constraints can demand experience and insight into different possibilities. This may partly account for certain findings concerning children's production and comprehension of metaphors. These findings seem to indicate the following:

1. young children are very bad at comprehending metaphors, and they

tend to interpret metaphorical utterances of grown-ups literally,

2. young children can be very good at producing utterances which are taken by adults to be successful and creative metaphors, but there is no evidence that these are intended as metaphors. On the contrary, the evidence of poor comprehension seems to indicate that they are not.

Now, the second finding is quite difficult to explain, but the first finding could be accounted for by noticing that interpreting metaphors on the constraint account is very much like hypothesis building — you start from particular cases and you have to guess at connections and regularities. And this is notoriously hard.

This completes the sketch of the situational story. There is of course much more to be done.

First, the notion of constraint is very vague (it is possible that I have overextended the use Barwise and Perry make of the word »constraint«, to cover cases which they would not consider to have to do with constraints). This is not so important on the level of a first sketch, because what should be stressed is the general idea that metaphor involves a correlation between situations, and that these correlations are what is sought after when one interprets a given metaphor.

Second, given that, traditionally, metaphors are taken to deal with individuals and their properties, and not with state-of-affairs kinds of entities (like situations or possible worlds), our approach needs a much more elaborate

defence when contrasted with the traditional one.

Third, the notion of relevance in »relevant constraints« should be spelled out. It is clear that not any old constraint will do when one interprets a metaphor (Juliet and the sun have in common, among other things, that they are both bigger than an ant, that they are not numbers etc.), and it is probable that what is relevant might vary with age, person or state of knowledge.

When this is done, the situational approach will shine forth in glory. Like Juliet and the sun.

Second, most metaphors one comes accross are concerned with things having properties, and not simply with the existence of things. "Homo homini lupus" does not address the question of the existence either of men or wolves, but of their traits.

Much of the motivation to write this paper, and maybe some of the ideas, I owe to Matjaž Potrč and to Vanda Božičević. This is the right place, however, to register a disagreement with Potrč's point of view on metaphors (and with some of the similar things Boyd says in his classical paper). Potrč thinks that a referential role is essential to metaphors, so that the primary role of metaphor is to help us *focus* upon objects. I can't see that this is the case. First, the production and comprehension of a metaphor presupposes successful reference at least to the most important objects with which the metaphor is concerned, so it cannot result in referring or focusing.

of the existence either of men or wolves, but of their traits. It might be true that expressions like "short term memory" which form part of a larger metaphor, the computer metaphor of the mind, can help scientists to refer to some mechanism of the mind, and that this is important for philosophers of psychology, but such cases should not be overgeneralised. Most metaphors do not imply the existence of problematic entities to which we would like to be able to refer, nor do they have to do with reference.