FIGURE, SUPERORDINATE AND SUBORDINATE CATEGORIES*

by
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1. Introduction: Philosophical-linguistic background

One traditional way to inquire into the nature of language is to ask for the conditions of language learning. If we can give an analysis of how some string of language can be learned, we will by the same token have said something about what has been learned. Wittgenstein pursued this line of thought in his rule-following considerations. When we acquire a new word, we are learning a language rule as to how to apply the word correctly. Any language rule, however, is underdetermined by any arbitrarily determined number of rule applications, i.e. there are an infinite number of possible rules consistent with a determined number of applications. There is therefore no logical method that can guarantee that a language rule has been properly learned. How is it, then, that we come to use language in the same way? It is not clear what answer Wittgenstein offers, or even if any is offered at all. Kripke has in a much acclaimed argument proposed that we view Wittgenstein's rule-following considerations as posing a 'sceptical problem' concerning which sort of facts about a speaker can constitute and justify a speaker's word-usage. This sceptical problem, Kripke claims, can only be given a sceptical solution: no facts about a speaker can constitute and justify a speaker's word-usage, but no such facts are needed. Word-usage is correct if it is in agreement with the practice of a community of speakers (Kripke 1982).

In opposition to Kripke's interpretation, a number of scholars (notably Baker & Hacker 1985, McGinn 1984) have argued that the rule-following consideration does not entail any problem that only can be given a sceptical solution in the form of invoking the practice of a community of speakers. McGinn thus argues that a linguistic-dispositional analysis is consistent with the rule-following considerations (McGinn 1984:72-77). Though a rule is underdetermined by rule applications, we are disposed to choose the same rule (out of infinitely many possible ones), consistent with the examples of applications we have been taught to be correct. We therefore speak

the same language because we share forms of life, and natural languages reflect our life form.

This latter interpretation has found considerable empirical support. The empirical findings of Kay and Berlin concerning the acquisition of color terms, and the matter of which colors are given names in natural languages, make a good case for the thesis that color terms are a product of our perceptual and neuro-physiological dispositions (Berlin and Kay 1969, Kay and McDaniel 1978). Furthermore, Brown's now classic research on the acquisition of categories in taxonomies supports this dispositional approach, as it was later to be developed by Rosch into prototype theory (Brown 1958a, Rosch and Mervis 1975, Rosch *et al.* 1976, Rosch *et al.* 1978). A taxonomy is defined as a system of categories where categories are related to one another by means of class inclusion. A category is *superordinate* relative to another category if it includes this category. Similarly, a category is *subordinate* relative to another category if it is included by this category. A taxonomy can thus be hierarchically ordered from the more general to the more specific and concrete, i.e. in terms of how inclusive a category is. Brown now found that it is the categories at the intermediate level of generalization that are acquired first, whereas Rosch and her coworkers argued that this reflects our basic cognitive, perceptual and motor dispositions; they termed the intermediate level as the basic level. Categories at the superordinate and subordinate levels (relative to the basic level) are arrived at later.[1] It is, for example, well known that children between two and three years of age reject multiple terms for the same object (Macnamara 1982, Clark 1987). Terms for superordinate and subordinate categories are thus rejected inasmuch as the child already possesses a term for the basic-level category. If the child does not already possess a term for the relevant basic-level category, it may, of course, accept a term for the superordinate or subordinate category. But this will result either in an undergeneralization, e.g. accepting only dogs as animals, or, in an overgeneralization, e.g. referring to all dogs as, say, poodles.

These linguistic studies, then, support that we are cognitively, perceptually, and motorically disposed to choose the same language rule (among infinitely many ones that are consistent with linguistic praxis) for terms for basic-level categories. A new problem, however, now arises. If we are disposed qua our cognitive, perceptual and

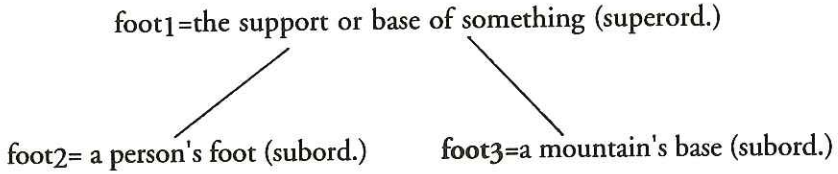
motor abilities to acquire a certain basic vocabulary, how do we ever learn terms for the superordinate and subordinate levels?

In this paper, I shall suggest that figurative processes are one way of learning terms for the superordinate and subordinate level and that such processes can explain how we transcend the disposition to think at an intermediate level of generalization. I do not suggest, however, that such figurative processes are required in all cases of superordinate and subordinate categorization, nor do I want to suggest that a given superordinate or subordinate category cannot be learned in different ways across a community of speakers. The suggestion is the more modest one of pointing to a possible set of mechanisms that can resolve the problem of how terms for the superordinate and subordinate may be learned. My suggestion, however, has (I believe) some prima facie plausibility. Thus, a natural response to how we transcend our disposition to categorize at the intermediate level is to suggest that we use terms for basic-level categories in an extended way. Since it is commonly suggested that the extended use of a term is characteristic of metaphor, I shall therefore start by considering the problem indicated above from within the theory of metaphor.

2. The question of categorization within a theory of metaphor.

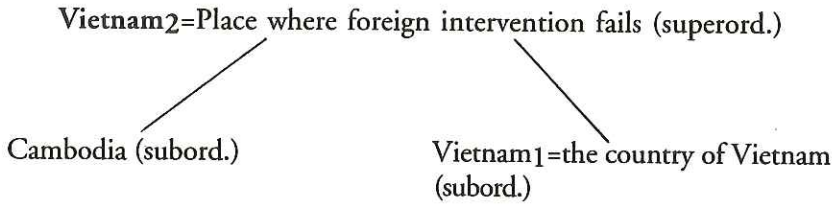
The view that metaphor is a kind of extended use of a term has most clearly been elaborated by Glucksberg & Keysar, who argue more precisely that metaphors work as class-inclusion statements (Glucksberg & Keysar 1990, 1993). Glucksberg and Keysar's thesis that metaphors are class-inclusion statements emerges through a critique of the comparison view of metaphor, which in its most basic form claims that metaphors are elliptical similes or analogies. The difference between expressing a relation between Sam and pigs by the means of simile or of metaphor, Glucksberg and Keysar argue, is a difference of communicative choice. If I say that 'Sam is like a pig', I will be likening Sam to pigs. When I metaphorically assert, on the other hand, that 'Sam *is* a pig', I do not only intend to say that Sam is like a pig in being a gluttonous, dirty person. What I mean is what I say, viz. that Sam *is* a pig. Only such an analysis can account for the intuitive feeling that metaphors are a stronger means of expression than is simile.

A certain ambiguity, however, arises within this scheme of analysis. The question is, namely, at which level metaphors are class-inclusion statements? In Brown's analysis – an analysis that Glucksberg and Keysar acknowledge as preceding their own – metaphors are analyzed as class-inclusion statements at a subordinate level. Brown's analysis of the now-dead metaphor, 'the foot of the mountain', exemplifies his thesis. Once the term, 'foot' only applied to a human's foot. The metaphorical extension of 'foot', denoting the mountain's base, thus creates a new category. These two categories, the human foot and the mountain base, share a relational attribute that places them in a superordinate category (here, the support or base of something). Brown's analysis of 'the mountain's foot' may thus be represented as:



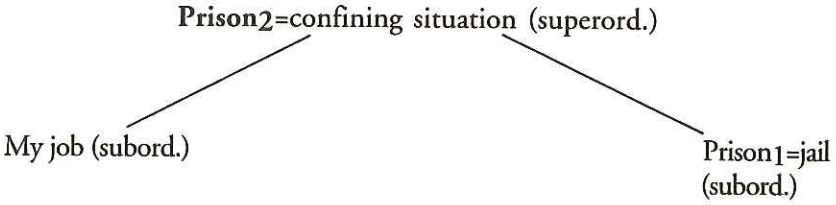
and it is the subordinate 'a mountain's base' which is named. Brown concludes: 'Metaphor differs from other superordinate-subordinate relations in that the superordinate is not given a name of its own.' (1958b:140).

Glucksberg & Keysar, on the other hand, analyze metaphors as class-inclusion statements at the superordinate level. They argue that names for prototypical members of the superordinate category can be used to name the superordinate category. As an illustration we are offered the following example: 'A newspaper headline that states "Cambodia has become Vietnam's Vietnam" also uses a single referring expression, "Vietnam", in two distinct ways, to allude to the entity itself (the country of Vietnam), and to refer to the category of situation that this entity has come to exemplify.' (1993:411). In this example we do, of course, have two subordinates, viz. Cambodia and Vietnam (the country of Vietnam), and it is therefore clear that 'Vietnam' metaphorically used as a class-inclusion statement operates at the superordinate level, i.e. it is now the superordinate category which is named in 'Cambodia has become Vietnam's Vietnam':



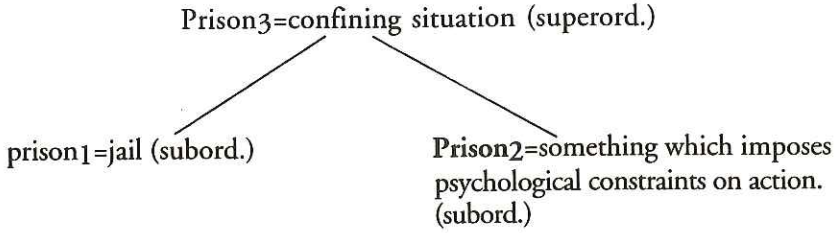
At first, it might seem that the incommensurable claims of Brown and Glucksberg & Keysar can be made compatible by means of a simple emendation. We may pose the hypothesis that metaphor is a superordinate-subordinate relation, where the category named is the one that does not previously have a name of its own. This solution, however, does not work. It is namely not always clear whether the subordinate category has a name of its own.

Consider Glucksberg and Keysar's famous example: 'My job is a prison'. According to their analysis, the superordinate category 'confining situation' is named by the prototypical member 'prison'. We thus have the two subordinate categories, 'my job' and 'a prison', included in the superordinate 'confining situation':



But consider now Lakoff's analysis of the very same example. According to Lakoff, no less than three metaphors are involved in the interpretation (Lakoff, 1993:236). The GENERIC IS SPECIFIC factors out the specific details of prisoner and jail, while preserving the generic structure of our knowledge scheme for prisons, i.e. we infer a generic level where something imposes extreme physical constraints on someone's movements. If we now apply the metaphors, ACTIONS ARE SELF-PROPELLED MOVEMENTS, and PSYCHOLOGICAL FORCE IS PHYSICAL FORCE, we reach, by a simple mapping, the interpretation: 'my job imposes extreme psychological constraints on my actions'.[2]

Lakoff's analysis can, however, be placed in a scheme which analyzes metaphor as a superordinate-subordinate relation. But in that case, the two subordinate categories will be 'jail' and 'something which imposes extreme psychological constraints on action', and it is the latter subordinate category that now is named, viz. 'something which imposes extreme psychological constraints on action':



What this adds up to is that Glucksberg & Keysar's claim that metaphors are class-inclusion statements implicitly entails an ambiguity as to what level of categories are named. I think, therefore, that Lakoff is right when he suggests that: '... to get the appropriate categories in their categorization theory of metaphor he [Glucksberg] needs an account of metaphor.' (1993:236). But it does not follow from this critique, as Lakoff (1993) claims, that: 'given such an account of metaphor, the metaphor-as-categorization theory becomes unnecessary' (ibid.). As far as the question of categorization goes, it might still be that Glucksberg & Keysar are right. The problem is that their analysis is insufficient to demonstrate which categories are at issue.

Let us therefore now turn directly to the question of whether or not the interpretation of certain metaphorical expressions may imply a superordinate category, as argued by Glucskberg & Keysar. We have already shown that an affirmative answer may with some initial plausibility be given, insofar as we think of the superordinate 'Vietnam' implied in the interpretation of 'Cambodia has become Vietnam's Vietnam'. But what about the more ordinary superordinate categories in our everyday language such as 'furniture', 'vehicle', and 'musical instrument'? Within Glucksberg & Keysar's scheme, it is easily seen that these superordinate categories can hardly be implied by a metaphorical expression. Take as an example 'furniture'. According to their analysis, this superordinate should be named by a prototypical member (and thus a basic-level category), say

'chair'. Furthermore, the metaphorical expression is a superordinate-subordinate relation that must contain two subordinate categories. Now, if we want to use 'chair' as a prototypical member naming the ordinary category of furniture, we have to predicate 'chair' of some object which is in fact a piece of furniture, say a table. The expression thus obtained would be 'tables are chairs'; but obviously this candidate will not do. Furthermore, in order to speak of class-inclusion, we have to include a new member, and this cannot be a very well-known exemplar. For this reason, too, the example will not do. Now, we might try something like 'the professor is a chair', implying that the professor has become so much part of the university that he has become part of its inventory or 'furniture'. But here, we are obviously giving a reading of the superordinate furniture which is not the ordinary reading. (In fact, it is an extended reading, which requires that the interpreter already possess the ordinary category of furniture). Thus, Glucksberg & Keysar's theory cannot be used as a suggestion as to how ordinary superordinate categories are learned. These observations, of course, point back to Lakoff's criticism that category inclusion is not a necessary step at all in the metaphoric process.

Lakoff and his associates should, however, not be taken as implying that metaphor is irrelevant for the question of the structure of superordinate and subordinate categories; rather, the critique concerns the mechanism suggested by Glucksberg and Keysar. Thus, according to cognitive semantics, metaphor provides a means of structuring concepts (Lakoff & Johnson 1980, Lakoff 1987, 1993, Johnson 1987, Lakoff & Turner 1989, Sweetser 1990). With respect to the more comprehensive claim that metaphor is used for learning superordinate or subordinate categories, it is less clear what answer is given. On the one hand, Lakoff does suggest that the use of metonymy is required for the formation of superordinate and subordinate categories (Lakoff 1987:268, 288). On the other hand, it is nowhere discussed in detail whether the use of metaphor also is required. It seems, however, given the view of metaphor as a mapping from a source domain onto a target domain, that metaphor proper only can be relevant for the formation of subordinates. In a mapping, a structure from the source domain will be mapped on the target domain. Metaphor, therefore, causes a further organization of the target domain than there was prior to metaphorization. If this is the case, the resultant level of

organization after a metaphoric mapping will be more specific.[3] It should be noted, however, that the more specific structure of the target domain following a metaphorical process does not preclude that we maintain other perspectives (metaphoric or non-metaphoric) of the target-domain. Indeed, it may be argued that the metaphoric process is bound to a limited time and context. If this is so, we do not get a sufficiently permanent reorganization (and specification) of the target domain, as required for the introduction (and subsequent acquisition) of a subordinate category. Before this can be achieved, something along the line of a conventionalization is required. (I shall return to this point below, where I argue that conventionalization in form of definition seems to be required).

To summarize, Glucksberg & Keysar's theory initially seemed to offer a suggestion as to how superordinate categories may be implied by metaphor; on closer inspection, however, their schema of analysis can hardly be used when considering ordinary superordinate categories. Lakoff's cognitive approach, on the other hand, offers some suggestion as to how subordinate categories may be structured; however, a critical examination suggests that there remain considerable problems, due to the fact that natural categories are not subject to time or context. Nevertheless, I shall now show how elements of each approach offer mechanisms which can be used in the acquisition of super- and subordinate categories. However, it should be noted that if one only uses certain elements, it will no longer be obvious that these mechanisms are strictly metaphoric.

3. Superordinate categories.

I shall now suggest how ordinary superordinate categories such as 'furniture' may be learned by figurative means. In order to do so, I will, as an instructive example, consider how reference to 'furniture' is achieved in American Sign Language (ASL). The sign for 'furniture' in ASL is formed as a coordinate compound of signs for prototypical (and basic-level) members such as 'chair', 'table', and 'lamp', followed optionally by the sign glossed as 'etc'. There are no specific constraints as to which, or, how many, prototypical members may be used for forming the compound for 'furniture'. Some more general constraints such as rhythmic properties and length of the sign, however, constrain how the compound sign is formed.[4]

In ASL, the statement corresponding to the English utterance:

(1) 'I lost all my furniture in the house fire but one thing was left: the bed'

can thus be formed by a sign sequence literally meaning:

(2) 'House fire [+] lose all chair-table, but one left, bed'.[5]

An ASL user, I suspect, does in fact have the categorial knowledge implied by the paraphrase in (1). The ASL user is, however, able to use the ASL sequence as a means for expressing that meaning, i.e. s/he is implicitly accepting 'chair-table' as a way to express the superordinate 'furniture', even though it strictly speaking is an inadequate expression.

It is important to emphasize that I do not claim that just because ASL users presumably understand (and express) the superordinate 'furniture' via statements like (2), this also (necessarily) reflects how the ASL users have come to acquire the superordinate 'furniture'. Indeed, there is an important distinction between ways that language speakers understand (and may express in flexible ways) a known category, and the way(s) in which the category has been learned. However, with this caveat in mind, it does seem reasonable to suggest that a *non-competent* speaker's acquisition of a category is closely connected to the (flexible) ways in which *competent* speakers express such categories – after all, languages are 'passed on' from generation to generation. The proof of such an hypothesis, however, is in the eating of the pudding: can a mechanism (on the basis of competent speakers' flexible ways of expression) be suggested which would enable the non-competent speaker to acquire a categorization?

Thus, assume that a language user is confronted with statement (2). Assume also that s/he does not know the superordinate category, 'furniture'. The circumstances of a house-fire provide a background where we (and the hearer) would assume that many of the speaker's possessions have been lost. The speaker is therefore too specific when s/he asserts that he has lost his chairs and tables – which is what one, all other things being equal, expects to happen in a house-fire. Within a Gricean scheme of analysis, the speaker thus violates the conversational maxim of not being more informative than required, and an interpreter can on this background assume that a con-

versational implicature has been intended. Given this background, it seems reasonable to suggest that the speaker implies that a certain class of possessions has been lost.[6]

The hearer is thus left to consider which category of objects (including chairs and tables) the speaker implies that s/he has lost (except the bed). The only criteria that the hearer can rely on as grounds for this inference are those that are part of the hearer's actual knowledge. The hearer knows, prior to the speaker's utterance, that chairs and tables are placed in distinct categories, i.e. s/he knows that chairs and tables are sufficiently dissimilar as to constitute separate realms. S/he has by now the further information that there also is a sufficient likeness between chairs and tables as to place them in a common category. S/he is led in other words to consider the similarity in dissimilar objects.

Let now the term 'the-grounds-for-similarity-between-chairs-and-tables' represent the reasons that the hearer at present has for considering chairs and tables similar, and let the terms 'the-grounds-for-dissimilarity-between-chairs-and-tables' and 'the-grounds-for-dissimilarity-between-tables-and-chairs' represent the reasons that the hearer has for considering chairs as dissimilar from tables (and tables as dissimilar from chairs). Note that whereas the notion 'grounds of similarity between object A and B' is symmetric, the notion 'grounds of dissimilarity between object A and B' is asymmetric, since it is on different grounds that A is dissimilar from B, as compared to what makes B dissimilar from A. We therefore need two terms representing the dissimilarities between chairs and tables. I shall now propose that the following compound expression can be used for inferring the category that the speaker implies:

(3) The-grounds-for-similarity-between-chairs-and-tables: The-grounds-for-dissimilarity-between-chairs-and-tables@the-grounds-for-dissimilarity-between-tables-and-chairs.

(3) is a linguistic construction that allows us to analyze the cognitive process which the hearer is going through. It does not represent a factual linguistic product, such as we would find in normal discourse. The point is, rather, that the constructed linguistic expression represents the logical features of the cognitive process that the hearer is going through.[7] It consists of a modifying term for the similarities and two terms connected by the operator, @. The operator @ is

defined as an oxymoric operator, which as arguments takes contradictory terms, and as its value has a term (in accordance with the classical rhetorical definition of oxymoron) that consists of seemingly contradictory terms. The terms for similarities and dissimilarities are also connected in some way. In one of the possible readings for the embedded oxymoron (given by the terms for dissimilarities), I shall argue that this connection will be the oxymoric operator. Thus, I shall show that (3) is an oxymoron with an underlying embedded oxymoron (given by the juxtaposition of the grounds for dissimilarities). It is important to note, however, that considerations or perceptions of similarity in dissimilarity not always result in an oxymoric process. We might, for example, think of a literal comparison where the dissimilarities, say, between dictionaries and encyclopaedias are 'suspended' by noting their analogical function as sources of information. Thus, I shall argue that what makes (3) a case of oxymoron is the explicit semantic representation of the grounds of similarities and dissimilarities.

In the next section, I will discuss how oxymora work. These considerations will in the subsequent section be applied to (3), demonstrating that 'furniture' is a possible interpretation of that expression.

4. An interlude: The Interpretation of Oxymora

Following Shen, we may divide oxymora into two classes (Shen 1987). In direct oxymora, the terms constituting the expression are antonyms, or terms that in their lexical representation differ in their lowest distinctive feature by a plus or minus sign. All other features are common. Here, we find examples such as: 'feminine masculinity'; 'sound of silence', 'guest host' etc. Using the oxymoric operator, we may represent 'feminine masculinity' as:

feminine: [[+human] [+female] [-male]]@masculinity: [[+human] [-female] [+male]]

In indirect oxymora, one term is the hyponym of the other term's antonym, for example 'cold fire', 'a cruel kindness', 'eloquent silence' etc. Take 'cold fire': here 'hot' would be the antonym of 'cold', but instead we have the hyponym, 'fire', which has the same list of

features as 'hot' with some additional feature (say, [+flame]). This oxymoron may, using the oxymoric operator, be represented as:

cold: [[+qualitative temperature] [+cold] [-hot]]@fire:
[[+qualitative temperature] [-cold] [+hot][+flame]]

Based on his empirical research, Gibbs has suggested that indirect oxymora are not more difficult to process than direct oxymora (1993:270). If so, indirect oxymora should not in principle work differently than direct ones, but rather entail a more specific subject matter. Two constraints on how oxymora work seem to be reasonably evident, viz. that directionality must be preserved ('sick health', for example, does not mean the same as 'healthy sign of sickness') and, second, that it must be accounted for in some way how some of the contradictory elements are to be suspended if an oxymoron is to be a possibly true description. (If none of the contradictory elements are suspended in the interpretation of an oxymoron, it would simply be interpreted as a necessarily false statement).

It follows fairly easily that the interpretation of oxymora cannot always be purely semantic, given the lexical representation for the examples above. In 'cold fire', for example, a commonplace associated with the semantic feature [+cold] is generated by the underlying conventional metaphor EMOTIONAL STATES ARE QUALITATIVE TEMPERATURES and the metaphorical knowledge that disaffection is cold. This information is now transferred to the subject 'fire', and we get a subsequent metaphor: 'disaffectionate fire', which may be interpreted as a fire that causes emotional distress in some person.

I shall now suggest that the transferred features or commonplace(s) contained in the knowledge-schema for the modifying term may be conjoined or disjoined in the semantic representation of the modified term. Consider 'cruel kindness' which may be represented as something like:

cruel: [[+manner of behavior] [+malicious] [-kind][+unkind]]
nested knowledge-scheme: [unhappy consequences,..]@kindness:
[[+manner of behavior] [+kind] [-unkind]]

which in a conjunctive reading can result in:

cruel kindness: [[+manner of behavior] [+malicious] suspended [-kind] suspended [+unkind] [+unhappy consequences]].

and in a disjunctive reading in:

cruel kindness: [[+manner of behavior] [+malicious] suspended [-kind] suspended [+unkind] v [+unhappy consequences]].

The conjunctive reading would be relevant if, say, some kindness was so overwhelming as to create a cruel obligation for the beneficiary,[8] in which case the feature [+kind] obtains.

Imagine, however, the case of an unhappily married couple, where the husband maliciously, but with the pretense of being kind, turns on the television to let his wife watch her favorite program, knowing that she has an attack of migraine and cannot stand any noise. Here, the disjunctive reading seems more appropriate, since the feature [+kind] does not really obtain.

In summary, I suggest that oxymora be interpreted – i.e. that the oxymoric operator @ be understood – in the following manner, consistent with the constraints and factual examples of interpretation given above: The modified term's lowest distinctive feature causes suspension of one or more of the modifying term's lowest distinctive features. This suspension leads to a transference of lexical features, or part of the knowledge scheme associated with the modifying term, to the modified term, where it either may be conjoined or disjoined in the semantic representation. (The knowledge scheme may contain non-literal information that requires further interpretation).[9]

I shall not take any definitive stand with respect to whether or not this proposal posits oxymora as a species of metaphor. On the one hand, according to an analysis like Levin's (1977) – which has been a source of inspiration for this proposal – the employment of transference and suspension (deletion) of semantic features is typical for metaphor. On the other hand, if one subscribes to Lakoff and his associates' view, only the interpretation of 'cold fire' involves a metaphoric aspect.

5. The category of furniture.

Let us now apply the above analysis of oxymora to (3). Recall that the terms comprising (3) represent the hearer's present knowledge. The lexical representation of these terms can therefore only consist of the hearer's present lexical knowledge, which will be the semantic elements for the terms already possessed by the hearer, viz. 'chair' and 'table'. For 'chair', something like [+fabricated to sit on] will be a feature, while [+fabricated to sit at] will be a feature for 'table'. Further, I shall use the notions of 'grounds for similarity' and 'grounds for dissimilarity' in a manner which is non-committal with respect to the ontological problems connected. The grounds for similarity are thus to be taken as common properties of, or common labels applicable to, the objects compared. The grounds for dissimilarity between A and B, on the other hand, will be properties or labels that A has, but not B, since an object A is dissimilar to an object B by having some property (or falling under some label) which B does not possess (or which does not apply to B).

Given these remarks, it is seen that the hearer may combine the feature [+fabricated to sit on] from 'chair' and the feature [+fabricated to sit at] from 'table' and form the feature [+fabricated to sit at or on] for 'the-grounds-for-similarity-between-chairs-and-tables'. The term 'the-grounds-for-dissimilarity-between-chairs-and-tables', on the other hand, will lead to the positive feature [+fabricated to sit on], since it is a property (label) which chairs have but not tables, and to the negative feature [-fabricated to sit at], since chairs, unlike tables, are not fabricated to sit at. Likewise [+fabricated to sit at] and [-fabricated to sit on] will be features for 'the-grounds-for-dissimilarity-between-tables-and-chairs'.

There will be no higher and common lexically realizable features, since all the elements have to be drawn from the hearer's present lexical knowledge. The latter consists solely of distinctive features for chairs and tables, whereas a common feature, such as [+furniture-hood], cannot be lexically realized, since it entails a superordinate category which, ex hypothesi, is not possessed by the hearer. It may, however, be part of the hearer's extra-semantic knowledge as a set of commonplaces contained in the knowledge scheme associated with 'the-grounds-for-similarity-between-chairs-and-tables'. Note that the relevant commonplaces entailing furniturehood, strictly speaking, have not yet been conjoined. Rather, they will be conjoined in the

process of interpreting (3). We shall for simplicity assume the commonplace 'furniturehood' as emerging from this process. The following constructions – though somewhat more complex – follow the notation for the interpretation of the more simple cases of oxymora given above.

We may now represent (3) as:

> The-grounds-for-similarity-between-chairs-and-tables: [[+fabricated to sit at or on]] nested knowledge-scheme: [furniturehood,...] The-grounds-for-dissimilarity-between-chairs-and-tables: [[+fabricated to sit on] [-fabricated to sit at]]@the-grounds-for-dissimilarity-between-tables-and-chairs: [[+fabricated to sit at] [-fabricated to sit on]]

As is seen, the two terms for dissimilarities do comprise an oxymoric expression. One possible interpretation of this oxymoron will be to suspend the feature [+fabricated to sit on] and transfer the feature [-fabricated to sit on] in a conjunctive reading. This will result in the following interpretation:

> The-grounds-for-dissimilarity-between-chairs-and-tables@ the-grounds-for-dissimilarity-between-tables-and-chairs: [suspended [+fabricated to sit on] [-fabricated to sit at] [-fabricated to sit on]]

which is equivalent to:

> the-grounds-for-dissimilarity-between-chairs-and-tables@ the-grounds-for-dissimilarity-between-tables-and-chairs: [suspended [+fabricated to sit at] [-fabricated to sit at or on]].

Given this interpretation, the resultant expression in (3) will be the oxymoron:

> the-grounds-for-similarity-between-chairs-and-tables: [[+fabricated to sit at or on]] nested knowledge-scheme: [furniturehood,...]@ the-grounds-for-dissimilarity-between-chairs-and-tables@ the-grounds-for-dissimilarity-between-tables-and-chairs: [suspended [+fabricated to sit at] [-fabricated to sit at or on]].

In a conjunctive reading we get:

> The-grounds-for-similarity-between-chairs-and-tables: the-grounds-for-dissimilarity-between-chairs-and-tables@ the-grounds-for-dissimilarity-between-tables-and-chairs: [suspended [+fabricated to sit on or at] [-fabricated to sit at or on] [+furniturehood]]

and in a disjunctive reading:

> the-grounds-for-similarity-between-chairs-and-tables: the-grounds-for-dissimilarity-between-chairs-and-tables@ the-grounds-for-dissimilarity-between-tables-and-chairs: [suspended [+fabricated to sit on or at] [-fabricated to sit at or on] v [+furniturehood]].

The conjunctive reading will refer to those objects that are both furniture and are not fabricated to sit on or at, i.e. all furniture except chairs and tables. This interpretation can be said to reflect a stage in the interpretation where the hearer has identified (some) ground for similarity in the dissimilar (i.e. chairs and tables), but keeps the view that chairs and tables constitute distinct categories and therefore are not included. The disjunctive reading then represents the final stage of the interpretation, where the hearer has identified the category implied by the speaker: furniture.

Some might venture that the interpretation 'furniture' already is given by the term for the similarities between chairs and tables, and that the invocation of dissimilarity considerations is needless. Against this objection, however, it is important to realize that terms for similarities, in principle, contain all possible ways of construing a superordinate category (in this case, having as members chairs and tables). The least general superordinate would be the categorization only including chairs and tables, i.e. the category defined by the feature [+fabricated to sit on or at] – one might call this the category of a sitting-arrangement-object. But this interpretation is canceled in the process of interpretation, since the feature [+fabricated to sit on or at] is suspended, due to the feature [-fabricated to sit on or at] that is given by the term(s) for dissimilarities between chairs and tables. The proposed model, in other words, reduces the possible pitfalls of

undergeneralization; it does so by invoking considerations of dissimilarities.

On my proposal, the decision to categorize at the basic level can now more precisely be understood as a disposition to identify similarities at a certain level between different objects. In the case of basic-level categorization, our dispositions allow us to directly identify the relevant grounds of similarity. In the case of superordinate categorization, however, the grounds for similarities pertain at a too general level of abstraction. Rather, we are disposed to view objects falling under a superordinate category as dissimilar. The identification of the relevant grounds of similarity in the case of a superordinate category therefore involves, on my proposal, a cognitive process where the objects initially are considered dissimilar, while their juxtaposition triggers considerations of similarity. Further, the pre-semantical representation of the similar in the dissimilar results in an oxymoric process of acquisition. The proposed mechanism, hence, involves considerations of two subordinate categories (relative to the acquired superordinate category) just as was the case in the theory of Glucksberg & Keysar, referred to above. However, none of these two subordinates are used as a means of directly naming the superordinate, as claimed by Glucksberg & Keysar. I shall leave it open whether or not the proposed mechanism is a species of metaphor. What I have offered here is, therefore, one type of mechanism which may enable a speaker to acquire a superordinate category.

6. Subordinate Categories.

The proposed mechanism for learning superordinate categories through the use of oxymora cannot be directly extended to an analysis of subordinate categories. In the case of superordinate categories, we can pick out two basic-level categories (having names of their own) and form an expression that entails the superordinate. In the case of learning subordinates, we do not have such means, i.e. we do not have names for categories of a level lower than the subordinate.

Neither is Brown's analysis of metaphor as a class-inclusion statement at the subordinate level of any direct help. Brown's scheme can account for the cases where a name for one subordinate is

extended to name another subordinate, as was illustrated by 'the foot of the mountain'. The ground for this kind of transference is (as described above) a *common* relational attribute (viz., the support or base of something). The empirical and theoretical results concerning ordinary subordinate categories in ASL and in natural languages, however, rather suggest that subordinates, such as 'pippin apple', 'dining-room table', 'dress pants', etc. are structured via the identification of *distinctive* attributes.

In ASL, Newport and Bellugi (1978) found three typical ways of forming signs for subordinates. One way is to form non-coordinate compounds (e.g. a compound of the signs for 'food' and 'table' forming the compound sign 'food-table', signifying a dining-room table). Other ways are to form compounds of basic signs with size-and-shape specifiers, or with mimetic shape elaborations (1978:64). The first way is, as Newport and Bellugi note, also common in spoken languages.

The explanation of this way of constructing subordinates is reasonably simple: at the subordinate level, the members share most attributes of the basic level (subsuming the subordinate categories). Within each subordinate category, a few further attributes are shared, but these are shared by the members only.[10] Members of a subordinate category are, in other words, by and large cognized as basic-level members with a few distinctive features. A compound for a subordinate is, therefore, quite naturally a modification of a basic-level term by another term providing the distinctive feature. In ASL, for example, the term 'table' is modified by the term 'food', and 'food' provides the distinctive attribute: 'table used to eat at'.

The way in which we typically form subordinate categories is thus relatively clear. It is interesting to note, however, that the proposal of a figurative mechanism for learning superordinate categories applies without essential modification also to subordinate categories.

Consider how 'food-table', once coined, can be interpreted. The compound 'food-table' is incongruent, since food is nutritious, whereas tables are not. This incongruency, most likely, should be considered as obtaining between the lexically realized feature [+nutritious] for 'food' and the associated commonplace in the knowledge-scheme for 'table' [-nutritious]. Furthermore, it seems reasonable to suggest that [+activity of eating] is an associated commonplace in the knowledge-scheme for 'food'. We may, thus, represent 'food-table' as something like:

food: [[+nutritious]] nested knowledge-scheme: [+activity of eating].
table: [[+fabricated to sit at] nested knowledge-scheme: [-nutritious].

If we now suspend [+nutritious], due to the commonplace [-nutritious] for food, and conjoin the commonplace [+activity of eating] with the semantic representation of 'table' we get:

food-table: [suspended [+nutritious][+fabricated to sit at] [+activity of eating]]

which may be interpreted as 'dining-room table'.

The situation is different here from the one we had for superordinate categories. Given the dispositional premise that we initially will interpret a rule-practice as pertaining to the basic level, it follows that a subordinate hardly is learned via an enumeration of examples, since the rule praxis will be consistent with the interpretation as a rule praxis for a basic-level category. Thus, I may be shown any arbitrary number of dining-room tables, and still consistently interpret the rule I am being taught as a rule for how to use the basic-level category, 'table'. In fact, given the dispositional premise, I will be disposed to choose this interpretation.

In order to learn a subordinate, it therefore *seems* that an attribute only shared by a limited class of objects (i.e. the objects constituting the subordinate category) is identified by means of some term already available in the given language, i.e. I will learn the subordinate via a definition. If the compound of the basic-level term modified by the term that provides the distinctive attribute results in a non-deviant or congruent expression, then I will learn the subordinate in a literal way. An example would be the subordinate 'gold coin'. In cases where the resulting expression is incongruent, however, the process of learning may be figurative and reflect a cognitive and psychological reality, as illustrated in the example analyzed above.

More specifically, the dispositional explanation for the learning of subordinate categories is as follows: In the case of basic-level categorization, our dispositions allow us to directly identify the relevant grounds of similarity. For subordinate categories, the grounds for similarity pertain to a level of abstraction which is too specific. Thus, we are disposed to view objects falling under a

subordinate category as exemplifying a basic-level categorization. The identification of the relevant grounds for similarity in the case of a subordinate category involves, on my proposal, a cognitive process where an attributive feature is used to modify a term for a basic-level category, thus causing a more specific structuring of a basic level category. Furthermore, a definitorial move is involved. The proposed mechanism, hence, contains the aspect of further structuring a given domain, as discussed in the exposition of Lakoff & Johnson's theory of metaphor above. However, the mechanism does not involve any sort of mapping, as claimed to be characteristic of metaphor by Lakoff and his associates; I shall leave it open whether or not the proposed mechanism is a species of metaphor. Finally, it should also be noted that my proposal only suggests one possible mechanism which may overcome our dispositions of thinking at the intermediate level.

7. Perspective

In this paper, I have offered two kinds of mechanisms which may be used in explaining the acquisition of superordinate and subordinate categories. Basically, the acquisition of categories that may be extracted following these proposals presents the following picture: in the case of basic-level categorizations, these may be learned directly, since they 'match' our immediate dispositions. Thus, if directed ostensively to an object ('this is a dog') by a competent speaker, a learner should be likely to acquire the basic-level category, since he or she will be disposed to view the object as falling under the appropriate category on that level category. In the case of superordinate categories, the proposed mechanism involves giving examples of the superordinate. This, of course, matches the intuition that the best way to learn something abstract is to be offered examples. Finally, the mechanism proposed for subordinate categories involves definition. In fact, this reflects the possible ways we actually do learn a vocabulary: ostensively, by definition, or by way of example. As indicated above, my argument really only establishes possible mechanisms explaining how we may acquire superordinate and subordinate categories. Future research will therefore have to consider to what extent the taxonomic hierarchy of superordinate, basic-level, and subordinate categories in the acquisitional dimension

is matched by: learning a category by way of examples, learning a category ostensively, and learning a category by definition, and to what extent the figurative mechanisms, as suggested above, are employed when it comes to superordinate and subordinate categories.

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Notes

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1. In the following, unless otherwise indicated, I shall use the terms superordinate and subordinate implicitly as relative to the basic-level.
2. *ibid.*: 236. The metaphors symbolized in capital letters indicate what has been called a metaphor theme, or root metaphor. Within Lakoff & Johnson's theory, a root metaphor is more precisely viewed as primarily a conceptual matter.
3. Fauconnier and Turner's generalization of Lakoff and Johnson's 'two-domain' model – i.e. the model where one concept is mapped onto another – to the so called 'many-space' model supports that metaphor in the framework of cognitive semantics only can be relevant for the formation of subordinates. In the 'many-space' model, the target and source domain are viewed as two input-spaces which are integrated in a third, 'blended' space. Basically, the revision consists in that parts of the structure from both source-domain and target-domain are projected and integrated in a third, 'blended' domain. The process of integration, Fauconnier and Turner suggest, is twofold. First, partial structures from both domains are projected onto the blended domain. Second, a structure emerges which is neither given in the target-domain nor the source-domain. These elements are then integrated in the blended domain. On the one hand, the 'blended' domain cannot therefore denote a superordinate, since there is an emergent structure not contained in any of the two input-domains. On the other hand, this emergent structure may be the element which, in conjunction with the partial projection of a structure pertaining to one of the domains, causes a further structuring of one of the domains, thereby creating a subordinate. Fauconnier and Turner's

application of their 'many-space' model onto examples such as 'house boat' and 'land yacht' underscores this point (See Fauconnier and Turner 1995).

4. Newport & Bellugi (1978:62).
5. This example is a slight modification of one cited by Newport and Bellugi (1978). For the sake of simplicity, I have construed the statement as only making use of the two prototypical members *chair* and *table*; and I have further omitted *etc.* As indicated, this is an option in ASL.
6. Cf. Grice (1975, 1978).
7. This illustrates the importance of keeping the distinction between the processes and the products of linguistic understanding in mind, as Gibbs so forcefully has argued (Gibbs 1993).
8. I have taken this interpretation of the example from Miller (1993:392).
9. This analysis resembles Levin's Theory T, by virtue of the employment of transference, and the use of conjunctive or disjunctive realization of new features in the semantic representation for the modifying term (See Levin 1977). It differs, most importantly, by involving extra-semantic knowledge, whereas Levin's theory is strictly semantic.
10. Cf. Rosch et al. (1976).

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