add that those with a 'social' bias, or interest in a descriptive discourse or conversation analysis approach, would be more receptive to much of what this book has to offer.

Eve Sweetser, *From Etymology to Pragmatics: Metaphorical and Cultural Aspects of Semantic Structure*. Cambridge: Cambridge University Press. (= Cambridge Studies in Linguistics, 54). xi + 174 pp. Hardback 1990, ISBN 0521 32406 8, £ 30.00; paperback 1991, ISBN 0521 42442 9, £ 10.95.
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This book is a revised version of Sweetser's 1984 Ph.D. dissertation (University of California at Berkeley) entitled 'Semantic structure and semantic change: A cognitive linguistic study of modality, perception, speech acts, logical relations'. I quote this lengthy title in full because it reflects the content of this study better than the, also lengthy, title of the now published version does. Etymology, which features so prominently in the present title, plays a minor role in the content of the book and the same can be said with respect to 'cultural aspects'. Pragmatics also plays at most a subsidiary role in the book. It is semantics and metaphorical processes that constitute the main focus of the book. This could have been expressed in the title more clearly than is done in the present one. I do not have the original dissertation text at my disposal so that I cannot tell how much the text has been changed before it appeared in print, but from some footnotes I have inferred that apart from updating references the body of the text has largely remained as it was.

In her book, Sweetser focuses on the well-known linguistic fact that often a linguistic form has more than one meaning and/or interpretation. In the literature, this phenomenon is varyingly referred to as ambiguity (in the case of content words) or polyfunctionality (in the case of function words). I take these terms as pre-theoretical, observational terms. Theories vary with respect to the way they account for this widespread 'one form–multiple senses' phenomenon. The choice a theory can make in this respect is basically a choice between homonymy, polysemy and monosemy/ vagueness (the latter often combined with pragmatic ambiguity). The actual choice a theory makes is in most cases dependent on its general outlook on language, in particular on its view on the semantics–pragmatics distinction. Structuralist and logic-oriented Gricean approaches prefer monosemous analyses, with a strong role for pragmatics to account for the interpretative variation, whereas cognitive semantics often has a predilection for analyses in terms of polysemy, thus giving semantics more space at the expense of pragmatics.

Sweetser's study stands firmly in the cognitive tradition, as one might expect from a Berkeley dissertation. In the introductory chapter 1, she argues that structuralist, generative and logical-semantic frameworks are not able to deal adequately with polysemy patterns and related semantic change. In Sweetser's view, those theories turn to a forced monosemy (one form–one meaning) or to a theoretically uninteresting solution in terms of homonymy, whereas cognitive semantics can explain polysemy (and pragmatic ambiguity) on the basis of the cognitive process of metaphor, which occupies a central place in the cognitive theoretical framework (cf. Lakoff and Johnson 1980).

Sweetser's own contribution to the cognitive theory is that she proposes a specific metaphorical connection between three domains or worlds, which she calls the sociophysical/content domain, the mental/epistemic domain and the speech act/ conversational domain. The sociophysical domain is seen as the concrete, basic, domain and the mental and speech act domains as relatively abstract, non-basic, domains. Sweetser's main thesis, presented in chapter 1, is that 'the domains of reasoning and speech exchange are metaphorically structured in terms of the same physical activities' (p. 19). This means that in English, and probably in other languages too, states and processes in the two abstract domains are referred to by words that have their primary meaning in the sociophysical domain. This metaphorical link between the three domains is, in her view, pervasive in language. It can account for the occurrence of multiple senses in many words, in different lexical fields and in different languages.

In each of the four central chapters of the book, Sweetser applies her basic idea to different semantic areas of English: perception verbs in chapter 2, modal auxiliaries in chapter 3, conjunctions in chapter 4 and conditionals in chapter 5. The concluding chapter 6 contains a short 'Retrospect and prospect'. The descriptive chapters 2 to 5 are each more or less self contained, but the idea of the metaphorical link between the three domains functions as a leitmotif, which gives the book its coherence. Whether the leitmotif really stays identical throughout the different topics of perception verbs, modality and conjunctions/conditionals is a question that we will return to later in this review. I will now discuss the four descriptive chapters in sequence.

In chapter 2 Sweetser shows that in English (and in other Indo-European languages) words for 'internal' – intellectual and emotional – states and processes are often diachronically taken from verbs that denote originally perceptual activity of the senses (*see, hear, feel, taste* and *smell*, etc.). This diachronic metaphorical process is in many cases reflected in synchronic polysemy. *To feel*, for example, can be used both for the purely physical, tactile, impression that occurs on touching something and for emotional state. Sweetser not only shows that such metaphorical links occur with many perception verbs but also makes the stronger claim that these links are in fact embedded in what Lakoff and Johnson (1980: 4) call a 'conceptual metaphor', which encompasses the individual metaphors. The relevant conceptual metaphor in the case of perception verbs is the 'Mind-as-Body metaphor'.

The observed link between physical perception verbs and verbs for reasoning and emotion is, in my view, uncontroversial. In fact, Sweetser herself refers to Kurath (1921), who, still in the historical-philological tradition, analyzed similar examples. This reference could easily be amplified with other references to studies in that tradition; see for example Dornseiff (1966: 159–165), an adaptation of Waag (1900). This historical link fits in the more general point, made by Geeraerts (1988), that cognitive semantics can be seen as a modern, more sophisticated, continuation of historical-philological semantics.

Sweetser (p. 29) points out that Kurath (1921) was inclined to attribute the semantic development of emotion words to the link that the emotions have in reality with the body. In the same vein it can be argued that vision is the main physical source for knowledge so that verbs for visual perception are the best candidates for talking about knowledge and mental vision (e.g. *I see*). These links account for the non-arbitrary mappings that the individual verbs in this conceptual field show. One could argue against Sweetser that such physical-mental links in reality support an analysis of the polysemies in terms of metonymy, rather than in terms of metaphor. Sweetser reports that Kurath (1921) indeed tended to a metonymy type of analysis. In her view, however, psychosomatic correlations can never explain the pervasive use of so many perceptual expressions for intellectual and emotional states and processes. Moreover, the directional aspect (from body to mind and not the reverse) can only be explained with the help of metaphor. In my view, a further discussion on the respective role of metonymy and metaphor as explaining factors in the observed polysemies of perception verbs is needed. A useful framework for such further discussion could be found in the metonymic-metaphorical model that has recently been developed in Heine et al. (1991: 114).

Although it cannot be denied that the lexical field of perception verbs is a real source domain for expressions for intellectual and emotional states and activities, it should be pointed out here that there seems to be a more important source domain, namely the field of object manipulation (*grasp, presume,* etc.). This source domain has been discussed in the literature more than once, and Sweetser in fact discusses it extensively in Sweetser (1987). In the book, this source domain is only marginally mentioned (cf. diagram on p. 38), where she points out that some verbs for visual perception seem to have their origin in this, apparently more basic, field of object manipulation. In her 1987 article, Sweetser shows moreover that many verbs for conversational exchange (*promise, propose, suggest,* etc.) go back to this same field of object manipulation or object exchange. The metaphorical links in this area would thus have fitted better in the leitmotif of the book (the three-domains model) than the perception verbs, which only seem to have application in the mental domain, and not in the speech act/conversational domain.

Chapter 3 is devoted to a synchronic semantic analysis of the English modal verbs. There is a considerable amount of structuralist, generative and logical-semantic literature available that tries to account for the multiple senses (deontic, epistemic,

alethic) of modal verbs in English and other languages. As Sweetser shows, these studies have often opted for a monosemy analysis, reducing the observed senses to one, abstract, meaning and letting pragmatics account for the different interpretations. This line of analysis continues up till now, cf. for example Groefsema (1991), Meyer (1991), Walton (1991). In opposition to such approaches, Sweetser argues for a polysemy analysis of the English modal verbs.

Sweetser concentrates her analysis on the relation between the deontic, 'root' sense of a modal verb (*You must be home by ten*) and the epistemic sense (*Peter must be home, I see the light on*). In addition, Sweetser distinguishes an up till now neglected 'speech act use' of modal verbs, thus bringing her third, speech act/conversational, domain into play. An example for a conversational use of *may* would be *He may be a university professor, but he sure is dumb*, which is paraphrased as 'I do not bar from our (joint) conversational world the statement that he is a university professor, but ...' (p. 70).

Sweetser's analysis of the meaning of modal verbs takes the 'real world' root sense as the point of departure. The still more basic historical source of physical (*can, may*) or volitional (*will*) meanings is thus not taken into discussion. With 'root' senses Sweetser means rights (*may*) and duties (*must*), which she considers to belong to the domain of the real, sociophysical or content world. The central part of the meaning of root modal verbs is analyzed by Sweetser in terms of force dynamics, in line with Talmy (1988). The image-schematic structure of *may*, for example, is analyzed as 'absent potential barrier'. This force-dynamic structure is abstracted from the root sense and metaphorically projected onto the epistemic and speech act domains ('There is no potential barrier in my concluding that ...; I do not bar from our conversational world ...'). Not all modal verbs take part in this mapping ('Positive *can* is almost unusable in an epistemic sense', p. 62), which is, for Sweetser, an extra argument for a semantic polysemy analysis instead of a monosemy analysis. A theory that sees the multiple senses as only pragmatic ambiguities cannot easily account for such restrictions in the applicability of some of the modal verbs.

This does not mean, however, that pragmatics does not play a role at all in Sweetser's analysis. She shows that the identity of the imposer and imposee (of the obligation or permission) in the root senses can be left unspecified on the semantic level. Pragmatic interpretation accounts for that (pp. 65–68). And in the following chapters on conjunctions and conditionals pragmatics is brought into play as well to account for some of the interpretative aspects of the analysis. This moderate use of pragmatics is, in my view, a positive feature of Sweetser's study. There is a tendency in cognitive semantics to ignore pragmatics and to instead extend semantics to every possible interpretational aspect that can be distinguished in relation to a linguistic expression. This has also been pointed out by Kirsner (1991: 156), who, in his review of Rudzka-Ostyn (ed.) (1988), remarked from his sign-based structuralist point of view that 'there is no definable cut-off point, no principled way of determining where (...) an analysis is to stop. The network can just go on and on. If the sign-based grammarians

are too abstract, the cognitivists might very well get too concrete, and drown in an infinity of detail'. In contrast to this semantic maximalism of cognitive semantics, structuralist and Gricean (including Relevance theory) analyses, tend to shift too many of the interpretational aspects to the pragmatic component. Against this background of often extreme positions, Sweetser seems to have found a balanced, modular, standpoint with respect to the semantics–pragmatics distinction.

However, there is, in my opinion, a problem hidden in this chapter on modal verbs that needs some discussion here. Although Sweetser suggests that the three metaphorically linked domains that she distinguishes in relation to modal verbs (content, epistemic and conversational world) are the same domains that are introduced in the general chapter 1 and used in chapter 2 in relation to perception verbs, I am afraid that an implicit shift in perspective is involved here. This shift is reflected, probably unintentionally, in her use of terminology. In chapter 2 the domains or worlds are called sociophysical and mental (or inner) world; in chapter 3 the terminology changes to content and epistemic domain, with the speech act or conversational domain added to it. The problem is that when a root modal is (diachronically) used for epistemic purposes, there is not only an application of a root meaning to a mental state but also, at the same time, a shift from the use of the verb as part of the propositional content of an utterance to the use as a 'function word', now having the function of expressing a speaker's attitude to the propositional content. An utterance can, from a functional point of view, be seen as a structured object in which at least three levels are to be distinguished: the propositional content, the attitude of the speaker to this content and the speech act function that this proposition has in a conversation or text. These three levels constitute a continuum of three domains that is qualitatively different from the three domains in Sweetser's model. In my view, this distinction is not explicated clearly enough in Sweetser's analysis of the modal verbs.

Metaphorical developments in terms of Sweetser's three-worlds model can take place without shifts along the other continuum. The metaphorical meaning extension from a physical perception verb to a verb of intellectual or emotional state or process stays – considered from the perspective of the propositional, attitudinal, textual continuum – within the propositional domain. In the case of modal verbs, however, both dimensions are involved at the same time: from sociophysical to mental domain (as with the perception verbs) and from propositional to the epistemic/attitudinal and conversational/textual level. Sweetser unfortunately takes this second perspective more clearly into consideration in her 1988 BLS paper than she does in the book under discussion.

As Bybee and Pagliuca (1985) have shown, shifts along the propositional, epistemic/attitudinal and textual/conversational dimension often lead to grammaticalization effects. They show, for example, that epistemic modals tend to become inflectional affixes. Such formal grammatical effects are not observable for the English modals. Nevertheless, there is a semantic difference in scope for the root and epistemic modal verbs, cf. Bybee (1988: 259): 'The type of change involved (...) accomplishes a change

in the scope for the modal from verb phrase scope to propositional scope'. This could be seen as a first step towards a grammaticalization process. Without adding this grammaticalization perspective, a clear understanding of what is going on with the modal verbs, is, in my opinion, not possible.

For a complete understanding of the multiple senses of modal verbs, a third perspective should probably be added, namely the metonymy perspective. As was the case with perception verbs, the metaphor and metonymy perspectives should not be seen as mutually exclusive. If it is true, as Bybee (1988: 259) says, that in the history of English in many situations 'the root reading implies the epistemic one', then an approach in the line of Traugott and König (1991) is relevant for modal verbs. In this approach the conventionalization of conversational implicatures (the implied epistemic meaning, in the case of modal verbs) is seen as a case of metonymy. We are back, then, at the question of the interaction between metaphor and metonymy and again a reference could be made to the proposal on this point in Heine et al. (1991), which is, by the way, strongly inspired by ideas in Traugott and König (1991).

Chapter 4 consists of two parts. The first part is devoted to subordinating causal (*since, therefore, so*) and concessive, or, as Sweetser calls them, adversative (*although, despite*) conjunctions. The second part treats coordinating conjunctions (*and, or,* and *but*). Again Sweetser applies her model of three metaphorically linked domains, with the content domain as the source domain and the epistemic and speech act domain as the more abstract target domains. But, in my opinion, there is here again, as with the modals, an implicit change of perspective involved. The conjunctions discussed are now seen as textual operators from the beginning. This means that from the perspective of the propositional, attitudinal, textual continuum they belong in all their uses to the third level. As textual/conversational operators, they link a proposition to another proposition. These propositions, for their part, can be seen under three perspectives: as representations of a state of affairs in the world, as mental representations which can be involved in mental reasoning processes and, thirdly, as propositions presented in a discourse, with a certain purpose, thus functioning under a speech act perspective. It is these three perspectives that are at stake when Sweetser says that conjunctions can be applied in the content, epistemic and speech act domain. In my view, this situation differs from both the perception verbs case and from the picture of the modal verbs that I have tried to elucidate above. In those cases we have expressions that are basically expressions which take part in the expression of the propositional content. Perception verbs keep that function in their metaphorical use; modal verbs lose it in their epistemic and speech act use. But conjunctions do not participate in the expression of propositional content at all, in none of their uses. In so far as it makes sense to distinguish three domains of application here, these domains have a different status from the domains as they are distinguished in relation to perception and modal verbs. The leitmotif changes its character once again.

The examples that Sweetser gives in chapter 4 to illustrate the three-way use of the conjunctions are of the following type:

(1a) John came back because he loved her.
(1b) John loved her, because he came back.
(1c) What are you doing tonight, because there's a good movie on.

'In the first example, real-world causality connects the two clauses: that is to say, his love was the real-world cause of his coming back. (...) (1b) is normally understood as meaning that the speaker's *knowledge* of John's return (as a premise) causes the *conclusion* that John loved her. (...) [In (1c)] the *because*-clause gives the cause of the *speech act* embodied by the main clause' (p. 77). Analogous examples and paraphrases are given for the other conjunctions that are analysed in this chapter. For *or* the following examples are illustrative:

(2a) Mary will go to the grocery store this evening, or John will go tomorrow morning.
(2b) A.: Yesterday was the day you were supposed to get the decision about that job you applied for.
         B.: Yeah, well, (evidently) the mail delayed it, or they got held up making their decision, or there was some problem ...
(2c) Happy birthday! Or did I get the date wrong?

The polysemy view that Sweetser applied in the preceding chapters to perception and modal verbs, is in chapter 4 continued and applied to the causal and adversative subordinating conjunctions. But, surprisingly, she abandons this analysis in the case of the coordinating conjunctions. The latter are, in her view, monosemous. The application of the coordinating conjunctions in the content, epistemic and speech act domain is now analysed as a case of pragmatic ambiguity (cf. for this term Horn's 1985 and 1989 analysis of the different uses of negation).

In principle, it is to be applauded that the polysemy model is not dogmatically applied to all cases were multiple senses or uses are observed. But what is it that distinguishes the coordinating conjunctions from the subordinating conjunctions that justifies a different analysis? Sweetser (1986) has tried to explicate the criteria that can help decide between a polysemy and monosemy analysis. Abstractness of the surface senses and cross-linguistic universal predictability of the polyfunctionality are among the criteria that are considered as favoring a monosemy view, whereas presence of a directional (diachronic) metaphor would support a polysemy analysis. It is a pity that Sweetser did not integrate the discussion on these criteria of her 1986 paper more extensively in the book.

Taking the criteria of abstractness of the surface senses and absence of metaphor as a point of orientation, one could use them as arguments in favor of a monosemy analysis for all the conjunctions, both coordinating and subordinating ones. Why does Sweetser nevertheless preserve a polysemy analysis for the *because* and *although* group? It seems that a cross-linguistic argument plays a significant role in her

decision: 'Fr. *parce que* "because" is used specifically for content conjunction, while *puisque* is the correct causal conjunction at the epistemic or speech act level. This shows that English did not *have* to use the same vocabulary for real-world causation and epistemic causation' (p. 82). By analogy, the whole group of causal and adversative subordinating conjunctions is declared polysemous.

I find this cross-linguistic argument at least questionable. German *Fleisch* is translated into English with *flesh* or *meat*, depending on the feature [+ or − ready for human consumption]. Should we say, then, that German *Fleisch* is polysemous? One could, in my opinion, as well say that in *Fleisch* the 'consumption' feature is neutralized. In the same way one could decide to analyze *because* as a monosemous operator, in spite of the fact that French has lexicalized certain distinctions that, in English, are left to pragmatic interpretation.

The semantic analysis of *and, or,* and *but* has some tradition in the Gricean framework. Sweetser explicitly rejects the logical orientation that is taken in those analyses. Natural language *and* means, in her view, something like 'putting things side-by-side' and is thus not identical to the truth-functional definition of logical ∧. 'Perhaps the closest we can get to stating the relation between *and* and ∧ is to say that ∧ is a mathematical crystallization of one of the most salient uses of *and*' (p. 93). This way, Sweetser 'liberates' Gricean pragmatics from its logical bonds, which, in my view, is a useful step towards a productive use of the Gricean pragmatic mechanisms in linguistic semantic analysis.

Rejection of the logical orientation does not prevent Sweetser from using the Gricean principles in this chapter to account for certain context-induced interpretations. The asymmetric use of *and* in *John took off his shoes and jumped in the pool,* which leads to an *and then* implicature, is analyzed as a pragmatic phenomenon, and not as a semantic distinction (symmetric vs. asymmetric *and*), as Lakoff (1971) had proposed.

The most problematic part of chapter 4 is, in my view, Sweetser's analysis of *but.* Her discussion of *but* leans heavily on the classical paper by Robin Lakoff (1971), who distinguished two *buts*: 'semantic opposition'-*but* and 'denial of expectation'-*but*. It is not clear to me what exactly the monosemic semantic unification of these two meanings shoud look like in Sweetser's view; she is not explicit enough on this point. Later analyses of adversative coordinating conjunctions like those in Lang (1984) or Blakemore (1987, 1989) are not taken into consideration. The fact that *but* has two translations in German (*aber* and *sondern*), which could (in line with the *puisque–parce que* argument in the case of *because*) be used as an argument for a polysemy analysis of English *but,* is not even mentioned.

The remarkable fact about *but* is, according to Sweetser, that it is only applied at the epistemic and the speech act level. *John is rich but dumb* and *George likes mu shu pork, but so do all linguists* would be respective examples for these two uses. Why is there no content use of *but*? Because, according to Sweetser, using *but* always involves a reasoning process. But if that is true, shouldn't we say, then, that the speech act use

of *but* also involves a reasoning process, so that this use participates at the same time in the conversational and the epistemic domain? I am afraid that the leitmotif, which forces each use of a linguistic item to be located exclusively in one of the three domains, breaks down here.

I have no clear idea how an appropriate analysis of *but* in Sweetser's model should look. There is the extra problem that I found it in general difficult to decide for the coordinating conjunction examples in the book to which domain their use should be allocated in each case. I am thus not really convinced that real world use of *but* does not exist. The following example set for *but* does not seem necessarily worse than those that Sweetser gives for *and* and *or*:

(3a) John is small, but he does play basketball (real world).
(3b) John normally comes home at six. But today I don't see him. So something must be wrong (contrasting premisses in a reasoning process).
(3c) John likes Peking duck, but so do all linguists (conversational).

Chapter 5 is devoted to one conjunction only, namely the conditional *if-(then)*. The monosemous analysis of the coordinating conjunctions *and, or* and *but*, as proposed in chapter 4, is continued here. Again Sweetser rejects a logical analysis of the natural language conditional. Natural language *if* means that the state of affairs in the conjunct that it introduces is a sufficient condition for the occurrence of the state of affairs, reasoning, or speech act in the conjunct in the *then*-part of the utterance. *If-then* can be interpreted on each of the three levels:

(4a) If Mary goes, John will go.
(4b) If John went to the party, (then) she's been married.
(4c) If I may say so, that's a crazy idea.

A special section of chapter 5 (pp. 140–141) is devoted to 'metalinguistic conditionals', like in *OK, I'll have a tomahto, if that's how you pronounce it*. The term 'metalinguistic' is taken from Horn (1985), who applies it in relation to his analysis of the multiple uses of negation. Horn himself, in his 1989 book, has given several examples of metalinguistic use of several function words (*or, and, if*). Metalinguistic use is strongly related to speech act use; Horn does not distinguish between them, but it might indeed be useful to make a distinction between a speech act/conversational and a metalinguistic use of function words. That would expand Sweetser's three-level model into a four-level model. In the book, this possibility is only tentatively discussed, however

In chapter 5, pragmatics plays a useful role again in accounting for some interpretative variation in relation to conditionals. For example, the factuality or counterfactuality of the conjuncts involved is seen as a pragmatic aspect of conditionals. And the often topical status of the *if*-conjunct is also explained on the pragmatic level.

Whereas the literature that Sweetser took into consideration in chapter 4 was a little outdated, the literature that she discusses in chapter 5 is of a more recent date. This is mainly due to the fact that several of the papers that appeared in a volume on conditionals (Traugott et al. (eds.) 1986) are commented upon.

The most interesting, and, in my view, the most controversial, part of chapter 5 is Sweetser's analysis of concessive conditionals. In certain contexts, *if* can have a concessive *even if* reading, as in *I wouldn't marry you if you were the last man on earth*. According to Sweetser, this possible reading does not necessitate a polysemy analysis for *if*: '... while *if*-conditionals are not basically concessive, their semantics has inherent potential for a pragmatically conditioned concessive reading' (p. 135). Although this analysis seems correct from a diachronic perspective, in a synchronic analysis I would prefer a polysemy analysis. Translating *if* into Dutch leads to *als* if the reading is conditional and to *al* if it has a concessive reading. This cross-linguistic argument is, in my view, not decisive, but it should have some force for Sweetser (cf. her *parce que* and *puisque* argument). My option in favor of a polysemy analysis for the conditional-concessive distinction with respect to *if* fits, in my opinion, with the analysis in König (1985), who argues that the concessive is a semantic category in its own right. The expressive means for concession are cross-linguistically recruited from different sources. As König shows, the conditional is only one of these sources.

I found Sweetser's book as a whole a rich book, with some nice observations, dealing with such diverse linguistic topics as perception verbs, modal verbs and conjunctions. In my opinion, the way Sweetser used the semantics-pragmatics distinction in her analyses is profitable. I also like her non-logical orientation in the analysis of natural language modals and conjunctions. Her three-level leitmotif is helpful in analyzing the different uses of the verbs and conjunctions under discussion. At the same time, I found the model misleading in that it suggests sameness between phenomena that are in fact very different. The book would have won depth if Sweetser had integrated her BLS papers (1986, 1987 and 1988) in the present text.

Of course, in a book of 174 pages it is impossible to treat such divergent topics as perception verbs, modals and conjunctions in any deep way. Many aspects are only touched upon. I found many proposals to agree with, many to disagree with and still more that give reason for further study.

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