Book Reviews

**Plastic Glasses and Church Fathers: Semantic Extension from the Ethno-
science Tradition.** DAVID B. KRONENFELD. Oxford Studies in Anthropological Lin-
guistics. New York: Oxford University Press, 1996. Pp. xii + 273. $49.95 (cloth),
$24.95 (paper).

Reviewed by Nick Enfield, *Research School for Pacific and Asian Studies, Australian
National University*

Kronenfeld presents a "semantic theory," seated squarely within the cognitive anthro-
pology tradition, as exemplified by the work of his teachers and colleagues Brent Berlin,
Roy G. D'Andrade, Charles O. Frake, Paul Kay, and Floyd G. Lounsbury, among others.
He points to the extreme flexibility of language, on the one hand, but finds unacceptable
the position (e.g., of Wittgenstein) that meaning cannot be nailed down at all, on the
other. Essentially, Kronenfeld argues for a theory of word meaning that distinguishes
"core" from "extended" reference: "Core referents are tied to their words," while "ex-
tended referents/things are free to be represented by whatever words do the job best in
the context at hand" (p. 9). For him, words are ultimately to be described in terms of com-
ponential analyses of core (i.e., prototypical) reference, with accompanying principles for
extension accounting for usage denoting "non-core" or "extended" referents. The expo-
sition is based mostly on Berlin and Kay's (1969) putative findings regarding color se-
mantics, various work within cognitive anthropology on kinship terminology and cul-
tural categories (cups, pots, etc), as well as data from cultural models of ethnic identity
and division of labor.

There are a number of substantial problems with the book, the most general of
which is that it fails to deliver on its promise of a "theory of the semantics of words" (pp.
109, 232). For one thing, Kronenfeld places little value on definitions, and in general
does not provide any definitions of the words he discusses. Instead, he ultimately envi-
sions definitions in terms of componential analysis, but he does not explicitly show how
componential analysis could really be useful in semantic explication much beyond tradi-
tional cases like kinship terminology. As he recognizes, the "need for a prioris" entailed
by a componential-analytic approach has restricted its use (p. 53), and I think that re-
striction should remain. Consider Kronenfeld's hints at what a componential paradigm
for *book* (as opposed to *pamphlet*) might look like, with features that seem rather ad hoc,
including "sewn vs. stapled . . . hard vs. soft . . . thick vs. thin . . . enduring vs. ephemeral"
(p. 179). Other aspects of his treatment of *book* are similarly problematic, such as the
putative "core function" of, simply, "preserving important words in a permanent and
authoritative form" (p. 177). This is too broad and does not exclude, say, memorial
plaques. There are many more essential attributes of a book that must appear in a defi-
nition, such as, for example, its portability, and its being able to be held easily in two
hands. In general, if a semantic theory should do anything at all, it should provide a way
to state exhaustively the meanings of words and other linguistic expressions in a clear
way.

Perhaps more serious is Kronenfeld's almost exclusive attention to concrete vocabu-
lary, particularly nouns that denote entities in the world, such as *book, drinking vessel,
pickup truck, horse,* kinship terms such as *father* or *mother,* and ethnic or religious
terms, such as *full-/half-blood,* or *Catholic* or *Protestant.* Kronenfeld does not discuss
how his theory could apply to other major areas of semantic structure, to more abstract
"things," to the predication of events, to terms for emotions, to the semantics of gram-

matical categories and logical relations, and so on. His claim of a general "theory of semantics" is thus somewhat overstated, or at least premature.

More specifically, Kronenfeld maintains no clear distinction between sense and reference, although he is clearly aware one must be made. The main problem is separating "referents" that are real things in the world from "referents" that are (signified) **concepts** of real things in the world. Even though Kronenfeld expresses the view that "words are conceptual entities" (p. 232) and that "the sign" is "a totally mental or conceptual entity" (p. 33), this is not always clear from his presentation. Indeed, he acknowledges that he speaks "about the referents of words as if they were simply things," but he also wants to allow that verbal categories may be "based on cognitive schemes rather than on precise, physically defined features of their referents" (p. 171). However, he crucially relies on denotational facts (such as the "arithmetical" properties of color, or geometrically specified proportional features of drinking vessels) in his semantic exposition. (For further comment on this point, see below.)

There are other ways in which Kronenfeld's notion of semantics seems loose. In certain places, semantic conclusions are drawn from pragmatic facts (i.e., facts about the **use** of words, not necessarily about their signification), as for example in his discussion of *chair*. He observes that *Grab a chair* and *Let's buy a chair* may differ significantly, in that an orange crate, say, "will serve" in the first case, but not in the second (p. 3). But no logic suggests that an orange crate is therefore "an instance" of *chair*, as Kronenfeld claims (p. 9), or that *chair* here therefore "refers" to an orange crate. *Chair* here "refers" to an orange crate in essentially the same way that *whats-its-name* does when I say *Pass me that whats-its-name*. Similarly, if I say *Get John to help us*, but only Mary is around, and it turns out that she does the job just as well (just as the orange crate "serves as" a chair), this does not mean that Mary is therefore an instance of *John*, or that *John* "refers" to Mary.

If Kronenfeld were to recognize a speaker-meaning/utterance-meaning distinction (Levinson 1983:17), this would enable him to distinguish the actual designation of a sign from various pragmatic effects of that sign in actual usage. Typically, a speaker who says *Grab a chair* means "grab something to sit on," hence the indefinite article ("something, anything") with *chair*, the prototypical "thing to sit on." But this is only true of the **typical** "Grab a chair" context. For the same utterance in another context, it would **not** do to grab anything but a chair. (Suppose John is trying to explain to someone what a chair is and asks Mary to get one in order to exemplify.) Further, in the case of *Grab the chair* (i.e., not just any "chair"), an orange crate would certainly **not** serve. All of these interesting facts concerning the use of *chair* are not about the **signification** of the word itself, but are about effects of its usage and possible inferences by speakers in various contexts as to their interlocutors' communicative intent.

Elsewhere in the book, claims about linguistic semantics are made on the basis of evidence from cultural models, complex concepts not necessarily related to any specific lexical meaning. For example, Kronenfeld's discussion of "house-buying decisions" (pp. 136–37) is less about any specific linguistic category, or the definition of any word, than it is about house buyers' folk theories of how to find the best house to buy. The same problem emerges in the discussion (one of Kronenfeld's "extended applications" of the theory) of sexual division of labor in urban Los Angeles households (pp. 218–24). Is Kronenfeld talking about the meaning of the expressions *men's work* and *women's work*, or is he simply talking about folk theories, or "cultural models," once again? While Kronenfeld says of these cases of cultural categorization, "we are speaking of concepts" (p. 223), it is not clear that these concepts are related at all to lexical semantics.

Turning to his often crucial reliance on the notion of "extension," we find that Kronenfeld pays little attention to distinguishing different kinds of "extension," or at least to being clear about what exactly his use of the term means. "Extension" may refer

to a real-time process of novel usage by which speakers apply a term to some situation for which it is not normally used (for example, by metaphor, or in describing something atypical that does not match up well with the concept already encoded by the term). We may call this "novel extension." A different sense of "extension" refers to the static relationship between polysemes, i.e., to a conventional relationship between semantically related homophones. This may be called "conventionalized extension," since the "extension" here is part of the system and is not actually "made" by speakers. Rather, the extension is ready made for exploitation, being already conventionalized in the system. Crucially, novel extension is dynamic, involving a single conventional sign used unconventionally (presumably in combination with some pattern of inference arising in comprehension of its novel import), while conventionalized extension is a static relationship between **separate** signs, each established separately by convention (although probably having evolved in many cases out of the conventionalization of a habitual novel extension).

Kronenfeld's failure to make this important distinction obscures his discussion. In a passage relating to the title of the book, Kronenfeld attempts to account for the English "extension" of the term *father* to priests (pp. 181–83). Kronenfeld treats this as if it were a case of novel extension, an active process of "decision making" in which speakers' use of *father* to refer to a priest "asserts" facts about his relationship with them (related in various ways to "core" *father*ness). While this may be a fair analysis historically (perhaps the "extension" **was** novel, but it is now conventionalized and no longer actually "made" by speakers), it is hard to believe Kronenfeld is really claiming that the term *father* (with the core meaning "progenitor") is consciously and dynamically extended by a speaker to a priest every time it is applied to one. It seems to me quite clear that *father* is polysemous, a signifier in separate, conventionally established signs, each learned in their own right (and perhaps "extensionally" related to each other post hoc, as can just as well happen with noncognate homophones, such as *ear* [for hearing] and *ear* [of corn]). The two words have different formal properties (a fact Kronenfeld does not explore), such that the minimal pair *I saw the father today* and *I saw my father today* contain reference to 'priest' and 'progenitor', respectively, in mutual exclusion. Facts like this are crucial in distinguishing conventionalized extension (polysemy) from dynamic, or "real-time," novel extension.

A similar error occurs in Kronenfeld's discussion of *book*. He apparently considers "the scrolls of the Torah" an instance of *book*, along with "comic book," and even "book of matches" (pp. 175–78). But while various references to these things may contain the morpheme *book*, this does not mean they are books (just as a *shoe horn* is not a *horn*, and a *rolling pin* is not a *pin*). In a different sense, this similarly applies to Kronenfeld's example of a tape recording of a book (a confusion arising from the conduit metaphor, described by Reddy [1993], such that *book* may refer either to a text or to a physical representation that "contains" that text). The fact is, one cannot point to a book of matches or a cassette placed on a table beside a copy of *War and Peace* and say *There are two books on the table*.

Another area that suffers from the absence of certain crucial semantic distinctions is Kronenfeld's discussion of taxonomic relations. He describes the organization of taxonomic structure as essentially based on the "chunking" Miller (1956) describes in his famous "Magical Number Seven" article, where access to lower nodes is achieved by "working down" to a desired concept: "The sequence of information-processing decisions are [*sic*] arranged hierarchically so as to allow one to start with a broad, immediately recognized or known unit and gradually narrow down to the desired concept or information" (p. 130). For Kronenfeld, *lion* is subordinate to *cat* in this way, entailing that a lion is first recognized as a member of an inclusive higher-level class *cat*, and then more precisely located on a lower node *lion*, by "sequential search." This would not be so bad if

it were not for Kronenfeld's claim that the superordinate class *cat* is defined by the exemplary cat *Felis domesticus*. But if a lion is a "cat" in some sense, which it presumably is, then it is surely in a second, separate sense of *cat*: a kind of animal, a more "scientifically" defined class in which *cat* (i.e., *Felis domesticus*) is also included as a subordinate member (of course, as the unmarked member). It is inconceivable that we invariably evoke the concept of "Scratchy" the domestic cat (rather than the more general "catness" inclusive of everything from panthers to Persians) as a cognitive prelude to categorizing a lion as *lion*.

Another semantic problem that persists is Kronenfeld's distinction between "form" and "function," a distinction that does not always seem justified. For example, in discussing *pen* (pp. 174–75), he only hints at the (to me, crucial) notion that function determines form. Thus, he cites the need for an ink-supply mechanism, and for portability. But he does not mention the most obvious defining feature of pens, namely, their formal properties determined by interaction with the hand. The form of modern ink-supply mechanisms is surely constrained by this much more fundamental functional requirement. The anthropomorphism of concrete concepts (particularly the interactional-functional aspects of cultural categories) has been well documented by Wierzbicka (1985, 1996). Consider the "form" Kronenfeld attributes to *cup* and *glass*: "a mixture of continuous dimensions of height and breadth, categorical dimensions of shape, and an oppositional dimension of handle possession" (p. 9). But Wierzbicka (1985) argues persuasively that the right functional definitions can obviate the need for encyclopedic denotational information (like "eight ounces" volume) in a definition. In her definition of *mug*, Wierzbicka accounts for volume as follows: mugs "have to be big enough to be able to have not less liquid in than a person could be expected to want to drink of that kind of liquid at one time, and not too big for a person to be able to drink all the liquid before it ceases to be hot" (Wierzbicka 1985:36). The fact that mugs are not always exactly eight ounces in volume is accounted for nicely by this purely functional definition. Function here wholly determines form, and Wierzbicka has shown that a discrete definition of the right kind can account for the (apparently nondiscrete) flexibility of a term's denotation. Kronenfeld's failure to refer to Wierzbicka's (1985) work is a glaring omission, given that it represents such an extensive study (albeit from an alternative viewpoint) of precisely one of his main topics of research.

Kronenfeld adopts a strong Saussurean stance, but he surely goes too far in his commitment to the view that signs exist only in opposition to other signs: "*Tree* contrasts with *bush* and so, again as speakers and hearers, we decide, not what the ambiguous object in front of us is on its own, but rather only to which of the pre-existing opposed categories it is to be assigned" (p. 34). Thus, Kronenfeld excuses himself from having to provide substantial definitions of words. In considering the Western Apache "horse = pickup truck" metaphor, he claims that when the Apache "extend the word for a horse's eye to the headlight of a pickup truck, they are extending that word not in limbo but as part of a set that entails contrasts with the words for a horse's leg, mouth, back, and so forth" (p. 184). But this would imply a rather bizarre definition of 'eye', along the lines of 'part of (a horse), not its leg, mouth, back, and so forth'. To the contrary, it is a **positive** definition of 'eye' ('one of two parts of the face (one on either side) because of which one can see') that accounts for the Apache metaphor. Given the general functional basis for the "horse = pickup truck" metaphor (both are used for personal transport), a headlight is similarly 'one of two parts, at the front, because of which one can see'. Amazingly, Kronenfeld considers the Apache use of 'hoof' for 'tire' to be "fairly arbitrary," since the two things "look different, are made of different material, work differently, and so forth" (p. 165). One can only assume that he has simply not considered what is really entailed by the semantics of 'hoof' and 'tire'. In fact, good functional definitions of 'hoof' and 'tire' share a lot. Among other definitive qualities, they are both, with regard to 'horse' and

'truck', respectively, 'parts of something that people use to move (far, in a short time) from one place to another; without these parts, this thing cannot move; these are the parts that touch the ground when the thing is moving; one can see these parts moving when the thing is moving'. This is how speakers understand (i.e., define) concepts, not in terms of specific denotational facts, and certainly not primarily in terms of simple negative systematic oppositions.

Kronenfeld refers to work on color semantics in arguing that the "secondary assignment" of terms to noncore referents is "calculated" by speakers, "arithmetically" (p. 9); cf. similar "calculation," via "logical properties of genealogical space," in the case of kin terms, p. 157). But in the case of color, there is surely no arithmetic in the **concepts** behind colors, since color terms can be perfectly well understood with no reference to arithmetic whatsoever, let alone to the complexities of optics and visual perception. I am alluding to a contrast between the **meanings** of (i.e., concepts inherent in) color terms as they are used, on the one hand, and their physical denotation and perceptual qualities (in experimental conditions), on the other. Kronenfeld presents the theory of "color semantics," originating in the work of Berlin and Kay (1969), as an established theory (e.g., pp. 151–54), failing to even mention a robust body of recent counterevidence and counterargument against their claims (see Foley 1997:160–65). Wierzbicka (1996:chap. 10) provides especially compelling arguments against the Berlin and Kay (1969) view of color semantics, citing a dozen references where she says "so much counter-evidence to Berlin and Kay's theory has been presented that one could no longer say that they discovered 'universal prototypes for the definition of color categories' or 'a universal sequence for the emergence of a color lexicon'" (Wierzbicka 1996:290). These arguments are based in part on criticism of Berlin and Kay's (1969) methodology. For example, it is said that rather extreme "data attenuation" resulted in the elimination from their sample of some 95 percent of terms for color in the world's languages (Shweder and Bourne 1984:160; Van Brakel 1993:112; Wierzbicka 1996:290). Lucy (1996) argues that the methodology itself, and especially the inherent assumption of a direct relationship between "pre-given reality" and linguistic labels, was enough to ensure that Berlin and Kay (1969) reached the findings they did. Given Kronenfeld's crucial reliance on their claims about color semantics, it is notable that he does not address these important recent criticisms.

One of the quite positive features about the book is a large section (part 3, "Explanatory Principles") that presents very useful background and discussion of a range of relevant findings in cognitive anthropology and, especially, psychology. Kronenfeld thus provides an impressive and honest example of "cognitive linguistics," identifying the best explanations with those that are consistent with the (cognitively) easiest solution. For example, from work on kinship and other kinds of calculable classification (e.g., by Floyd G. Lounsbury, Jerome S. Bruner, A. Kimball Romney, and Roy G. D'Andrade), Kronenfeld presents arguments that conjunctivity in semantic structure is more plausible and preferable to disjunctivity, since the former is known to be cognitively easier to deal with (p. 74). He thus addresses Burling's (1964) "God's Truth or Hocus-Pocus" dilemma: "We want to take the conjunctivity requirement seriously as a psychological constraint and not leave it simply as a matter of mathematical elegance. . . . The underlying psychological consideration in accounting for the shape of linguistic categories (behind the conjunctivity constraint, among others) is one of cognitive ease" (p. 85). It is very nice, and perhaps somewhat unusual, even in these days of a burgeoning "cognitive linguistics" tradition, to see a linguistic study give such attention to explicating independent psychological bases for claims about semantic (and other linguistic) structures.

While this book aims to be a "careful and more or less self-contained explication of a particular theoretical argument" (p. 14), it ultimately does not measure up as such. Much of the above discussion has shown various ways in which Kronenfeld has in fact not been

particularly "careful" in his argumentation, particularly in dealing with semantic details. Stylistically, there is a general sense of discontinuity. While each chapter goes into considerable depth, they do not seem to pull together in the end as an integrated and "self-contained" whole. This view is probably prejudiced in part by some minor problems in style, including a distracting proliferation of lengthy endnotes.

A major conclusion one may draw from this book is that work on important areas of research in the cognitive anthropology tradition can be significantly improved with attention to treatment of the finer aspects of semantic description. This includes, in particular, the problem of giving adequate definitions, and the associated issue of polysemy (especially the related distinction between communicative import that is semantically encoded, versus communicative import that emerges from context and pragmatic inference). Semantic theory must assign priority to precise and careful semantic **description**, if it is to approach Kronenfeld's goal of "a better and fuller understanding than we now have of the semantics of natural language" (p. 236).

## References

Berlin, Brent, and Paul Kay
    1969    Basic Color Terms: Their Universality and Evolution. Berkeley and Los Angeles: University of California Press.
Burling, Robbins
    1964    Cognition and Componential Analysis: God's Truth or Hocus-Pocus? American Anthropologist 66:20–28.
Foley, William A.
    1997    Anthropological Linguistics. Oxford: Blackwell.
Levinson, Stephen C.
    1983    Pragmatics. Cambridge: Cambridge University Press.
Lucy, John A.
    1996    The Linguistics of "Color". In Color Categories in Thought and Language, edited by C. L. Hardin and Luisa Maffi, 320–46. Cambridge: Cambridge University Press.
Miller, George A.
    1956    The Magical Number Seven, Plus or Minus Two: Some Limits on Our Capacity for Processing Information. Psychological Review 63:81–97.
Reddy, Michael
    1993    The Conduit Metaphor. In Metaphor and Thought, 2d ed., edited by Andrew Ortony, 164–201. Cambridge: Cambridge University Press.
Shweder, Richard A., and Edmund J. Bourne
    1984    Does the Concept of the Person Vary Cross-culturally? In Culture Theory: Essays on Mind, Self, and Emotion, edited by Richard A. Shweder and Robert A. LeVine, 158–99. Cambridge: Cambridge University Press.
Van Brakel, J.
    1993    The Plasticity of Categories: The Case of Colour. British Journal for the Philosophy of Science 44:103–35.
Wierzbicka, Anna
    1985    Lexicography and Conceptual Analysis. Ann Arbor: Karoma.
    1996    Semantics: Primes and Universals. New York: Oxford University Press.