

In Defense of Privative Ambiguity

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IN DEFENSE OF PRIVATIVE AMBIGUITY*

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1. In a series of recent papers, including Kempson (1979, 1980, 1982), Cormack (1980), Kempson & Cormack (1981, 1982), and Burton-Roberts (to appear), Ruth Kempson and her colleagues--henceforth the London School of Parsimony, or LSP--have advanced a major new theory of ambiguity and negation whose structure is as follows:

- (1) Russell's familiar ambiguity for negation, as in the stock example (1a), with its logical forms (1b) and (1c) distinguished by scope,
 - (1a) The King of France is not bald.
 - (1b) INTERNAL: 'The K. of F. is non-bald'
 $\exists x(Kx \ \& \ \forall y(Ky \rightarrow y=x) \ \& \ -Bx)$
 - (1c) EXTERNAL: 'It is not the case that the K. of F. is bald'
 $-\exists x(Kx \ \& \ \forall y(Ky \rightarrow y=x) \ \& \ Bx)$
 is a privative opposition in that one understanding (the internal negation (1b)) entails the other (the external negation (1c)) but not vice versa.¹
- (2) Privative oppositions cannot be demonstrated by linguistic tests to involve a true semantic ambiguity.²
- (3) Ceteris paribus, an analysis which posits ambiguity is to be rejected in favor of one which does not. (This is Grice's (1978: 118) Modified Occam's Razor Principle, or Ziff's (1960: 44) Occam's Eraser: senses, like other abstract entities, are not to be multiplied beyond necessity.)
- (4) Hence, privative ambiguities do not exist; or, if they do,
 - (4') The only privative ambiguities which exist are predictable by rule, i.e. those involving marked/unmarked lexical oppositions.
 - (4'') The putative ambiguity of negation is not predictable in this way.
- (5) Hence (from (1) and either (4) or (4'')) negation is not ambiguous; (1a) does not have separate senses corresponding to the two understandings (1b) and (1c). Negative statements are semantically unspecified, vague, or general as between internal and external understandings.

The last step in the argument leads to a further, highly controversial claim by LSP proponents: if negation is an unambiguous truth-functional operator, the noncontradictory status of sentences like those in (6)

- (6)a. Justin didn't eat 3 carrots--he ate 4. (Cormack 1980)
- b. You didn't eat some of the cookies--you ate all of them.
- c. It's not possible that mammals suckle their young, you ignoramus, it's downright necessary. (Burton-Roberts)
- d. Maggie isn't patriotic or quixotic--she's both patriotic and quixotic. (adapted from Gazdar 1979)

- e. I'm not happy: I'm ecstatic. (Wilson 1975)
 f. It isn't warm--it's (downright) hot.

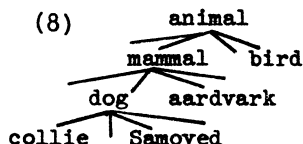
implies that weak scalar predications like those in (7),

- (7)a. Justin ate 3 carrots $\left\langle \begin{array}{l} \text{1-sided: 'at least 3'} \\ \text{2-sided: 'exactly 3'} \end{array} \right.$
 b. You ate some of the cookies $\left\langle \begin{array}{l} \text{1-sided: 'some if not all'} \\ \text{2-sided: 'some but not all'} \end{array} \right.$
 c. It's possible mammals suckle $\left\langle \begin{array}{l} \text{1-sided: 'at least } \diamond \text{' } \\ \text{2-sided: ' } \diamond \text{ but not } \square \text{' } \end{array} \right.$
 d. Maggie is patriotic or quixotic $\left\langle \begin{array}{l} \text{1-sided = inclusive or} \\ \text{2-sided = exclusive or} \end{array} \right.$
 e. I'm happy $\left\langle \begin{array}{l} \text{1-sided: 'happy if not ecstatic'} \\ \text{2-sided: 'happy but not ecstatic'} \end{array} \right.$
 f. It's warm $\left\langle \begin{array}{l} \text{1-sided: 'at least warm'} \\ \text{2-sided: 'warm but not hot'} \end{array} \right.$

involving cardinals, some, possible, or, and so on, are all logically ambiguous between lower-bounded (or-in Aristotle's term--one-sided) readings and lower- and upper-bounded, two-sided readings--contrary to the position defended elsewhere by Mill (1867), De Morgan (1847), Grice (1975), Ducrot (1972), Horn (1972, 1973) and Gazdar (1979), whereby the two-sided 'exactly' understandings are derived from the one-sided 'at least' logical forms through conversational implicatures derived from the Maxim of Quantity. For the LSP, there will then be at least as many logically ambiguous operators as there are natural numbers: that is, infinitely many. Razor, where is thy sting? Parsimony, where is thy victory? But this unparsimonious conclusion is only as valid as the argument for parsimony in (1)-(5) on which it is premised, and I shall try to show that this argument, hinging on the rejection of privative ambiguity, is in fact over-Occamistic and empirically flawed.

2. The general constraint on ambiguity Kempson et al. seek to maintain is that it not be invoked when one of the available understandings entails ("is logically dependent on") the other. The most detailed account within the LSP of the weakened (4') version of the anti-privative-ambiguity position is presented in Kempson (1980); my arguments against this account hold a fortiori against the more absolutist line (4) defended in other LSP manifestos.

Potential counterexamples to the LSP thesis arise from what I shall dub 'autohyponymy'. Following Lyons (1977: 9.4), A is a hyponym of B iff the extension of A is (properly) included in that of B. Hyponymy is thus the lexical counterpart of (unilateral) semantic entailment: in upward entailing contexts (Ladusaw 1979a, Barwise & Cooper 1981), any proposition involving A entails the corresponding proposition involving B, but not necessarily vice versa. Thus, in (8), collie is a hyponym of dog, dog of mammal, mammal of animal, and so on; the proposition that Fido is a collie unilaterally entails the proposition that Fido is a dog.



But some words seem to be autohyponyms--hyponyms of themselves. Dog is the classic example, with two sex-differentiated hyponyms, dog and bitch. If dog represents a true case of polysemy or lexical ambiguity, it provides a prima facie counterexample to the strong form of the claim in (4), since a sentence like (9)

- (9) Fido is a dog.
 (i) Fido is a male canis familiaris.
 (ii) Fido is a canis familiaris.

will allow two understandings, (i) and (ii), with the former unilaterally entailing the latter. The noncontradictory status of

- (10) That's not a dog, it's a bitch.

--combined with her monogust line on negation--leads Kempson to conclude that dog is indeed polysemous and (9) thus a true instance of privative ambiguity.

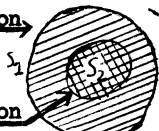

Kempson takes dog/bitch and similar pairs as constituting a limiting case of (or principled exception to) her general stance against both privative and nonprivative polysemy:

- (11)a. The only cases of polysemy which arise in natural language are those which can be predicted by general rule...Polysemy is not characterized by disjunction in a single lexical item, but is only invoked in cases where the extension of meaning in question can be predicted by rule formulation from individual non-disjunctive lexical items. (Kempson 1980: 14)

She cites the concrete/abstract vacillation for nouns like book and thesis as a nonprivative instance of such rule-governed polysemy. The governing principle for the privative cases is formulated as follows:

- (11)b. If a lexical item L_1 has as its extension a set S_1 which includes the set S_2 which a second lexical item [L_2] has as its extension, and S_2 is the only lexically designated subset of the extension of L_1 along any one dimension of contrast, then the lexical item L_1 may be used to denote that subset of S_1 which excludes S_2 . (Ibid: 15)

This principle is depicted more graphically in (11c);

- (11)c. Given L_1 extension  } L_1 may be used 
 and L_2 extension (complement of S_2 wrt S_1)

Kempson observes that it can be characterized as

a restatement of the well-known semantic markedness problem: if for some general term, representing a lexical field, there is a gap in the sub-parts of that field...then the gap may be filled by a more specific use of the general term. (Ibid: 15-16)

This position seems plausible in itself, and indeed somewhat akin to functional analyses in recent work on productivity and the lexicon by Aronoff, McCawley, Kiparsky, and others, wherein the meaning, use, or very existence of a given form is affected by the existence and range of a related and more basic or specific entry in the lexicon. Some examples of this mechanism are given in (12),

- (12) fury furious *furiosity
 *cury curious curiosity

where the existence of a simple abstract nominal "blocks" the formation of the corresponding -ity nominal from the -ous adjective (Aronoff 1976: 43ff), and in (13),

- (13) pale red vs. pale green, pale blue, pale yellow (cf. pink)
She made the plate move vs. She moved the plate
He caused the sheriff to die vs. He killed the sheriff

where the appropriate use of the more productive collocation is restricted by the existence of a more "lexicalized" alternative (McCawley 1978; cf. Horn 1978 for discussion).

Using the test frame of (10)--That's not an L_1 , it's an L_2 --Kempson provides additional cases of licensed polysemy, e.g.

- | | | |
|------|-------------------------|-------------------------|
| (14) | <u>L_1</u> | <u>L_2</u> |
| | dog | bitch |
| | cow | bull |
| | cow | calf |
| | square | rectangle |
| | line | curve |

Thus, the superordinate L_1 item cow has one sex lexically specified in its L_2 hyponym bull, so it is (correctly) predicted to have a use denoting solely female cows. Similarly, the existence of its L_2 hyponym calf, specified for age, serves to limit the domain of application of cow in other contexts to adult bovines. In fact, another well-behaved entry from the same kingdom is animal itself. As Blackburn notes (1983: 495), "If I were talking to a biologist I would probably mean it to include human beings; if I were to use it in talking to a child (or a minister) I would probably not mean it to include human beings."

In fact, though, the phenomenon of autohyponymy proves on closer examination to be less tractable or homogeneous than Kempson's paradigm in (11) allows. In the first place, not all the examples of the class in (14) pattern alike. Zwicky & Sadock (1975: 7-8) point out that while dog may indeed conflate two distinct (if related) lexical items, lion--despite its opposition with lioness--does not. Thus, (15a,b) constitute a minimal pair:

- (15)a. That (dog) isn't a dog, it's a bitch.
 b. ?That (lion) isn't a lion, it's a lioness.

Lexicographers are apparently sensitive to this distinction, since they provide separate headings for dog but not for lion. In addition, as Lyons notes (1977: 309), cow is "less unmarked" than

dog: (16a) is distinctly odd if the occupants of the field are all known to be bulls, while (16b) is fine if they are all bitches.

- (16)a. Those cows over there...
 b. Those dogs over there...

And while female dog (like female lion) is an unexceptional collocation, male cow can only be a "metalinguistic gloss" for bull.

Within the human domain, some pairs work the way Kempson would predict, with the prior existence of an L_1 term restricting the domain of L_2 --cf. gay vs. lesbian in (17a).

(17)	L_1	L_2
a.	<u>gay</u>	<u>lesbian</u>
b.	<u>man</u>	<u>woman</u>
c.	<u>mankind</u>	<u>womankind</u>
d.	<u>chairman</u>	<u>chairwoman</u>
e.	<u>poet</u>	<u>poetess</u>

But while woman is in some generic contexts a 'marked man', these contexts are far more restricted (cf. Lyons 1977: 309). In the remaining oppositions, Kempson's explanation seems to assign the wrong direction of cause and effect even when she gets the right predictions. In (17c-e), it's the prior specialization of the general term L_1 that has created a perceived need for, and hence conscious innovation of, the corresponding "feminine" L_2 form. It's not the existence of sex-specific womankind, chairwoman, or poetess which led to the restriction on the extension of mankind, chairman, or poet.

Another crucial variable touched on above is the degree of conventionalization of the functional principle: is the restriction in the denotation of the L_1 term one of meaning or just use? For me, the rectangle/square example in (14) is a clear instance of use restriction only, if at all (as with lion vs. lioness). Thus, (18) is somewhat odd for me, and (19) hopeless (except, as Lyons would put it, as a metalinguistic gloss).

- (18) (?) That's not a rectangle, it's a square.
 (19) ?? That rectangle isn't a rectangle, it's a square.

Let me try to clarify the point by comparing this example with a true case of multiple autohyponymy. The ethnographic label Yankee is standardly (i.e. in lexicographic practice; cf. McCawley 1981: 9-10) assigned the related senses in (20), proceeding from the most specific to the most general.

- (20) Yankee: a. a native or inhabitant of New England,
 b. or, more widely, of the northern States;
 c. a native or inhabitant of the United States generally; an American.

(Note, incidentally, that the markedness criterion established in (11) is irrelevant here: there is no L_2 lexical item for a Northerner not from New England, nor any simple label for a noninhabitant of the United States.) Now, how many Yankees are pictured in (21)?

(21)



Daniel Webster



Kennedy



GRANT



ROBERT E. LEE

Depending on what question you take me to have asked, you might answer two (in accordance with (20a)), three (as in (20b)), or four (as in (20c)). Indeed, there is an even more restricted sense not acknowledged by the OED (from which (20) is adapted) or by McCawley (1981): the interpretation which yields the answer only one, given that JFK's Irish Catholic heritage disqualifies him as a real Yankee, i.e. one approximating the prototype WASP of the Pepperidge Farm commercials. (We may need to invoke a Rosch (1977)-style prototype theory in any case to explain why a Vermont farmer or a Maine lobsterman is more of a Yankee than is a Greenwich banker.)

But now, how many rectangles are there in (22)?

(22)



For me, the only possible correct answer is three: squares are rectangles, though we may not always call them so.

The autohyponymy of Yankee is reflected in other ethno- and geographic labels, including those of (23b-e):

- (23)a. Yankee: native or inhab. of (((N.E.)Northern US)US)
 b. North American: native or inhab. of ((USA+Canada)+Mex)
 (cf. nordamericano)
 c. American: native or inhab. of ((USA)Western Hemisphere)
 (cf. Org. of American States; American Indian)
 d. New Yorker: native or inhab. of
 (((Manhattan)New York City)New York State)
 e. Roman (or Lat. romanus): native or inhab. of
 ((city of Rome)Roman Empire)

In these cases, there is in general no relevant L_2 to restrict the application of L_1 , e.g. no label for 'an inhabitant of New York State and not of New York City' (or 'of one of the "outer" boroughs') which would suitably restrict the use or meaning of L_1 to the Gothamite.

While we can say that the strict sense of dog (or the strict use of rectangle) is the superordinate, including bitches (and squares), there is no unique strict sense of Yankee or New Yorker. For trade name labels which have effectively lost their capital letters and become generics (cf. Mason & Pimm 1982), the strict (or primary) sense is the hyponym, the derived sense the broader:

(24)	xerox	jello
	kleenex	vaseline
	Scotch tape	thermos
	good humor	hoover (Br. 'vacuum cleaner')

The same is true for the kinship terms of (25):

(25)	Fr. <u>parents</u> :	a. 'parents'	Lat. <u>parentes</u> :	a. 'parents'
		b. 'kin'		b. 'ancestors'
				c. 'kin'

Once again, there is no relevant L_2 to call on, e.g. no French (or Latin) word specifically designating 'nonparental relatives' which might have motivated the narrow sense of parent(e)s in (25a).

Even more problematical are the next few examples, where the restricted use of L_1 in fact duplicates the range of a previously existing L_2 form rather than complementing it.

(26)	L_1	L_2
	a. temperature	fever
	b. number	integer
	c. color	hue

The thesis in (11b) would predict that any restricted sense or use of temperature--as in Does the baby have a temperature?--should exclude the range of fever temperatures (for which an L_2 term is already available), yet it is exactly this range which is denoted. Number may be used so as to include or exclude the nonintegers (a class for which no simple label exists), but not so as to exclude the integers. And, given the existence of hue (and the more technical chroma), we might expect color to have a restricted use covering just the non-hues--blacks, whites, and grays--rather than one covering all others, as in "color TV", "in color", or the citation in (27):

(27)	She arrived on time, wearing a raincoat, a gray skirt, a white sweater. "Don't you have anything that's a color?" Roddy asked. (Laurie Colwin, "Animal Behavior")
------	---

So too, in many languages, the standard word for 'woman' does double duty for 'wife', as in the three languages of (28),

(28)	L_1	L_2
German:	Frau	Gattin
French:	femme	épouse, femme mariée
Spanish:	mujer	esposa

despite the existence of an L_2 term specifically designating 'wife' and the absence of simple lexical designators for women not wives.

Among the general predicates which have developed narrowed senses whose designated values are not carved out by the principle in (11) are the intransitive verbs drink and smell. The narrowed sense of drink in (29b) apparently evolved from the general meaning in (29a)

- (29) drink: a. 'to take liquid into the mouth for swallowing' (<1000)
 (OED) b. 'to partake of alcoholic beverages' (<1400)

through an implicature which is reasonably nondetachable, as seen in (30), but which has undergone varying degrees of conventionalization in the relevant languages, as partially shown in (31):

- (30) quaff, imbibe, wet one's whistle (orig., 'take a drink');
 Ger. trinken, Fr. boire, Lat. bibere, potare
 (31) he is (vs. has) drunk; drive...to drink; drink; bibulous
 (orig., 'inclined to drink'); liquor (cognate w. liquid);
 Fr. boisson (vs. breuvage); Ger. er ist (vs. hat) getrunken

Notice that the existence of innumerable entries in the sublexicon of booze and intoxication did not result in the development of a narrowed use (or sense) of drink designating 'to partake of non-alcoholic beverages', or in the restriction of liquor to the class of liquids not containing alcohol.

Similarly, the secondary senses acquired by smell and, even more strikingly, by its adjectival offshoot, as seen in (32) and (33),

- (32) smell: a. 'to give out, send forth, or exhale an odour;
 (OED) to have a smell' (+ PP or AP comp., <1175)
 b. 'spec., to give out an offensive odour;
 to stink' (often with no complement, <1375)
 (33) smelly: 'having a smell, esp.: malodorous' (W3)
 'emitting a bad smell or smells; stinking' (OED)

did not choose to seek out a peaceful coexistence with the L_2 forms stink and stinking (or stinky, or malodorous), but seem rather to have perversely duplicated their olfactory extensions.

Finally, euphemisms like sleep with and go to the bathroom also involve the evolution of a semantically designated narrowed reading from a more general expression, once again duplicating the previously existing multitude of expressions which they are euphemisms for. Given (11b), we might predict that (34a) should suggest platonic bed-sharing only,

- (34)a. John slept with Mary. (or, J & M slept together.)
 b. I have to go to the bathroom. (cf. Morgan 1978)

and (34b) perhaps inspection of plumbing.

We have then not the one well-behaved category of autohyponymy countenanced by Kempson and the LSP, viz. (35a),

- (35)a.
$$\begin{array}{c} L_1 \\ \swarrow \quad \searrow \\ L_1 \quad L_2 \end{array}$$
 dog/bitch
 gay/lesbian
 finger/thumb
 ?rectg./square
- b.
$$\begin{array}{c} L_1 \\ \swarrow \quad \searrow \\ L_1 \quad \text{---} \end{array}$$
 Yankee, etc. (23)
 xerox, etc. (24)
 Fr. parents (25)
 ?drink (29)-(30)
- c.
$$\begin{array}{c} L_1 \\ \swarrow \quad \searrow \\ \text{---} \quad \{L_1, L_2\} \end{array}$$
 temperature/fever (26)
 Frau/Gattin, etc. (28)
 liquor/alcohol (31)
 smell/stink (32)
 euphemisms (34)

but an ornery array of disparate cases, including those of (35b) in which there is no relevant L_2 term by which the use of L_1 could be restricted, and those of (35c) in which there is indeed a previously existing L_2 term--yet the autohyponym crowds into the semantic space already occupied by that term rather than discreetly slipping into the space left vacant. The markedness thesis of the LSP sometimes works for us, sometimes against us, and sometimes it just does no work at all.

3. Nor does the situation improve when we leave autohyponymy behind and venture into the realm of structural ambiguity. It is perhaps in the area of scope phenomena that the LSP attack on privative ambiguity makes the strongest claims--on the weakest evidence. Characteristically, the LSP approach (cf. especially Kempson 1979) seeks to solve an extremely intricate semantic issue--the representation of opaque or intensional contexts--by fiat, and without the crucial supporting argumentation. While a particular instantiation of the opaque/transparent opposition may well be privative--like (36a), where the transparent (i) unilaterally entails the opaque (ii)--related cases such as (36b,c) do not involve a privative opposition.

- (36)a. John is trying to find a unicorn.
 (i) $\exists x(\text{unicorn}(x) \ \& \ \text{try}(\text{John}, \text{find}(\text{John}, x)))$
 (ii) $\text{try}(\text{John}, \exists x(\text{unicorn}(x) \ \& \ \text{find}(\text{John}, x)))$
 b. John would like to marry a girl his parents don't approve of. (Partee 1970; Reeves 1975; Abbott 1980)
 c. Oedipus wanted to marry his mother.

Work by Partee (1970, 1974), Reeves (1975), Abbott (1980), Farkas (1981), Fodor & Sag (1982), and others (cf. the Heny 1981 anthology) has shown that neither the wide-scope, de re, transparent reading nor the narrow-scope, de dicto, opaque reading is consistently more general or weaker than the other, i.e. is unilaterally entailed by it. If we seek a unified treatment of intensional contexts, as Abbott and Farkas have stressed, the arbitrary elimination of dual representations for (36a) merely complicates our task.

Next up is the perennial any question: do the two occurrences of any in (37a,b) represent a difference between existential and universal quantifiers, or between different scope assignments for the same (presumably universal) quantifier?

- (37)a. I didn't see anything.
 b. Anything can happen.
 c. John can't marry anyone.
 (i) = 'There isn't anyone John can marry'
 $\forall x \text{-}\Diamond M(j, x) \equiv \text{-}\exists x \Diamond M(j, x)$
 (ii) = 'John can't marry just anyone'
 $\text{-}\forall x \Diamond M(j, x) \equiv \exists x \text{-}\Diamond M(j, x)$
 d. He won't date anybody.
 e. Can anyone lift that rock?
 f. If anyone can swim the Channel, I can.

Smith (1971), Lakoff (1970), Jackendoff (1972), Horn (1972), LeGrand (1974,1975), Fauconnier (1978), Hintikka (1977), McCawley (1977), Ladusaw (1979a,b), Carlson (1980, 1981), and Davison (1980) are among the almost transfinite number of linguists and philosophers who have wrestled with this question, and hence with the treatment of the ambiguous (37c-f), with what success I shall not attempt to evaluate. I myself have managed to defend both views within a single dissertation (Horn 1972: §2.35 vs. §3.1), coming to rest on the scopal analyses in (i) and (ii) for disambiguating (37c). Since the former unilaterally entails the latter, this is a privative ambiguity. Indeed, the ambiguity in (37c)--and that in (37d-f) as well--is privative whether or not any is itself a polysemous lexical item. But it's not clear what we have gained by thereby ruling it out, as the LSP requires us to do.

As a number of the aforementioned experts have observed (cf. also Kamp 1978), or manifests the same apparent ambiguity as any in DeMorgan contexts like (38a) and modal contexts like (38b).

- (38)a. He doesn't eat either meat or fish.
 (i)= He eats neither meat nor fish.
 (ii)= Either he doesn't eat meat or he doesn't eat fish--
 I have forgotten (or won't tell you) which.
- b. Sue or Lou can answer that question.
 (i)= for $x \in \{\text{Sue, Lou}\}$, x can answer that question.
 (i.e. they both can answer it)
 (ii)= Sue can answer it or Lou can answer it--
 I don't know (or won't tell you) which.

Assuming again that only the more general readings in (ii) are assigned by the semantics, it's again not clear what happens next.

The privative opposition displayed by conjunctions is of a different sort. For examples like (39),

- (39) Sam and Mary had a baby and (they) got married.
 (i) = ...and then... ("asymmetric" conjunction)
 (ii) = ...and also... ("symmetric" conjunction)

I have argued--with Grice (1975), Schmerling (1975), and Wilson (1975), and against Cohen (1971), Bar-Lev & Palacas (1980), and McCawley (1981)--that the asymmetric temporal understanding (i) is derived pragmatically from the symmetric understanding (ii) through a conversational implicature arising from the maxim Be Orderly. So far so good, unless Cohen et al. are right and the rest of us are wrong. But related examples like those in (40a),

- (40)a. I went to the store and bought some beer.
 b. The beer which I went to the store and bought...

as Ross (1967) and Schmerling(1975) have shown, are semantically and syntactically distinct from true conjunction--note the apparent coordinate structure constraint violation sanctioned in (40b). Yet an LSP-oriented syntax and semantics cannot assign the asymmetric reading directly, since it is unilaterally entailed by the symmetric reading. If my intuitions are correct, (41a) allows a symmetric

understanding (albeit a forced one), while (41b) does not.

- (41)a. I want you to go and buy yourself a new hat.
 b. I want you to try and find yourself a new hat.

This would result in an asymmetric reading directly assigned to the latter (as its only interpretation), but not to the former (where the relevant sense would instead be derived somehow from the nonsalient but forceable symmetric understanding). This again seems arbitrary and probably wrong.

But probably the most beloved syntactic ambiguity that would be struck down mercilessly by the LSP approach is the structural ambiguity illustrated by the alternative bracketings of NPs like (42):

- (42) old men and women: (a) [old men] and women
 (b) old [men and women]

Note that every member of the set defined in (42b) is a member of the set corresponding to (42a), but not vice versa. Consider now (43), (44), and (45), representing (in order) an upward entailing context with a monotone increasing quantifier, a downward entailing context with a monotone decreasing quantifier, and a neutral context with a non-monotone quantifier (cf. Barwise & Cooper 1981 and Ladusaw 1979a for discussion of these terms).

- (43) There were at least 20 old men and women at the party.
 (44) There were at most 20 old men and women at the party.
 (45) There were exactly 20 old men and women at the party.

In (43), the reading assigned by the (42b) bracketing unilaterally entails that assigned by (42a). Thus, by general LSP criteria, only the weaker (a) bracketing is assigned semantically. In (44), the (a)-bracketed reading unilaterally entails the (b) reading, so only the latter is directly represented in logical form. Needed, in addition, are two mirror-image or complementary sets of pragmatic strengthening rules to derive the nonassigned understanding in each case. In (45), where neither reading entails the other, both bracketings must be given semantically, and no additional strengthening rules are operative. I suggest that this complication of an intrinsically simple ambiguity is solely an artifact of the LSP program and its unwarranted banishment of privative ambiguity.

A further potential problem for this program is that--given the central role played by entailment in determining the "logical dependence" between readings which results in the privative status of a given opposition--the assignment of logical form must endure the thousand unnatural shocks that semantic entailment is heir to. Given that a tautology is entailed by any proposition, while a contradiction entails all propositions, the putative (and well-established) ambiguities represented in (46)-(49) are privatively related and must therefore be eliminated.

- (46) You know what you know.
 (47) You don't know what you know.
 (48) If I went to the bank, I went to the bank.
 (49) Anyone who can bear children can bear children.

(46) will be directly assigned only its (weaker) tautologous (free relative) reading, and not the contingent (embedded question) understanding which unilaterally entails it. (47), on the other hand, will get only its embedded question interpretation ('You have tacit knowledge'), not its contradictory free relative understanding ('There's something you both know and don't know'). In (48) and (49), only the two tautologous readings will be generated in each case; the two contingent "crossed" versions must be somehow derived from them by unknown and otherwise unmotivated devices. Perhaps this embarrassment for the LSP can be handled by refining the notion of entailment; a more natural and general solution, however, would be to let the ambiguities arise, and to predict the privative nature of a given token of each ambiguity on the basis of the semantic and pragmatic context.

Perhaps the strongest potential counterexample to the LSP repudiation of privative ambiguity, ironically, involves not privative ambiguity per se, but rather oppositions between mutually entailing understandings of a single sentence. Kempson (1979: 291) has shown that one oft-cited candidate for this status, (50),

(50) They are visiting relatives.

does not in fact permit two mutually entailing readings, contra G. Lakoff, Morgan (1973), and Fodor & Sag (1980). But, as Abbott (1980) has observed, Kempson's ad hoc refutation does not affect the qualifications of other contenders. Thus, consider (51a-f):

- (51)a. A student in the syntax class cheated on the final exam.
- b. I told a story about John.
- c. Someone is renting the apartment.
- d. The baby is too sleepy to nurse.
- e. The wood is too wet to burn.
- f. Someone is interviewing for that position.

Fodor & Sag (1982: 355-6) argue that (51a) "must be assigned two distinct semantic analyses that are associated with the same truth conditions", based on what they take to be a referential/quantificational ambiguity for indefinite NPs. They defend this admittedly "Occam-defying analysis" by citing as a precedent (51b), standardly assigned two syntactically (and presumably semantically) distinct but truth-conditionally identical analyses.³ (51c), due to Morgan (1973), exhibits two mutually entailing interpretations which are distinguishable at the level of thematic relations: the subject can be lessor or lessee, with the party of the second part unspecified. In (51d), the infant subject can be understood as object of transitive nurse ('too sleepy for one to nurse it'; cf. The patient is too heavy to lift) or as subject of intransitive nurse ('too sleepy for it to nurse'; cf. The patient is too weak to live). The same split arises in other examples with "middle" or "ergative" verbs (cf. Keyser & Roeper 1983), e.g. (51e,f). In all these cases, of course, the appear to a more general reading (from which the specific understanding must be derived via strengthening rules) is ruled out, since each reading is logically dependent on the other.

4. We have seen that privative ambiguities cannot be eliminated by fiat (as in (4)), or confined to a limited lexical subdomain (as in (4')). The range of autohyponymous lexical items is wider and more heterogeneous than the LSP approach allows. On the sentential level, there may be no "more general understanding" to appeal to; when there is, otherwise cogent arguments for assigning two logical forms to a given construction must be rejected a priori when a given ambiguity is neutralized into a privative opposition. Readings vanish, and must be mysteriously reconstituted by ad hoc semantic or pragmatic rules of dubious character.

The real problem, I submit, is that the LSP confuses an epistemic question--can we develop operational criteria for determining whether p is the case?--with an ontological one--is p the case? Privative ambiguities may be methodologically undesirable and empirically elusive, but they are real.

But what if the attack on privative ambiguity is called off? What if we give up Kempson's "proposed restriction that no sentence be assigned two distinct semantic representations if one interpretation is logically dependent on the other" (1980: 16)? There remains, then, no metatheoretical argument for homogenizing negation. I have argued at length in a recent paper (Horn, to appear a) that negation cannot be treated as a unified truth-functional phenomenon. If I am right, the arguments I have given here provide additional support for the Gricean conversationalist line on scalar predicates, and against any ambiguity for the sentences in (7). Indeed, I would argue--contra the London School--that it is only along this line that true parsimony can be reached.

FOOTNOTES

¹"[Two understandings] U_1 and U_2 are PRIVATIVE OPPOSITES with respect to [some semantic feature] F if U_1 can be represented as being identical to U_2 except that U_1 includes some specification for F that is lacking in U_2 ." (Zwicky & Sadock 1975: 6, citing Trubetzkoy). As examples of privative oppositions, Zwicky & Sadock cite parent/mother and dog 'canine'/dog 'male canine', the latter representing for them a true privative ambiguity. Note that the technical term understanding is neutral as between 'sense' and '(mere) use', and that the establishment of a privative opposition between two understandings of a given item is a pretheoretical move with respect to the semantics/pragmatics borderline, whereas a claim of privative ambiguity between two senses of an item requires specific motivation (of a sort often hard to come by; cf. note 2).

²"The logic of privative opposites makes it difficult to distinguish ambiguity from lack of specification whenever a privative opposition is in question" (Zwicky & Sadock 1975: 7). In particular, evidence from the availability of "crossed readings" with identity-of-sense anaphora is irrelevant: "The existence of the more general understanding guarantees that we will get all possible understandings" (Ibid: 23). Atlas (1977: 326-30) challenges this conclusion, and indeed uses identity-of-sense tests to argue against the purported ambiguity of negation, but cf. Blackburn (1983) for a reply.

³The defense of such an unparsimonious analysis, Fodor & Sag point out, involves two steps. We must show

- (a) that the semantic principles needed to account for the meanings of these sentences will automatically (i.e., unless specifically constrained) assign two semantic representations to the sentence in question;
- (b) that the principles for associating truth conditions with sentences on the basis of their semantic representations will automatically (unless specifically constrained) derive identical truth condition specifications from both of the semantic representations assigned to the sentence.

Fodor & Sag's observation (1980: 3) is worth bearing in mind, since it applies (*mutatis mutandis*) to structural ambiguities involving one-way entailment (i.e. the privative cases discussed earlier) as well as to the mutual entailment cases illustrated in (52).

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*The present paper overlaps with Horn (to appear b), in which some of the issues broached here (particularly those involving the relations between privative ambiguity and negation) are treated more fully.