Presuppositions, negation, and existence

Barbara Abbott
Michigan State University
abbottb@msu.edu

1. Introduction.

Last year (2005) marked the 100th anniversary of the publication of Russell’s classic ‘On denoting’. It should not cast any shadow on that great work to note that the problems it provided solutions to are still the subject of controversy. Two of those problems involved noun phrases (NPs) which fail to denote. Russell’s examples (1a) and (1b)

(1) a. The king of France is bald.
   b. The king of France is not bald.

are puzzling because they have the form of simple contradictories, and yet we are not inclined to say either one is true. Example (2)

(2) Pegasus does not exist.

is even more problematic; the lack of denotation for Pegasus, which makes the sentence true, also seems to rob it of a meaningful constituent.

Once the king of France is unpacked according to Russell’s analysis, (1b) is revealed to be ambiguous. It’s logical forms are given in (3).

(3) a. \(\exists x[Kx \land \forall y[Ky \leftrightarrow y=x] \land \neg Bx]\)
   b. \(\neg \exists x[Kx \land \forall y[Ky \leftrightarrow y=x] \land Bx]\)

(3a) says that there is a unique (French) king who is not bald (obviously false), but (3b), the logical contradictory of (1a) says that it is not the case that there is a unique king who is bald (which is true).

We can apply the analysis to sentence (2) once we recognize Pegasus as a concealed definite description, e.g. the winged horse of Greek mythology. (2) can then be unpacked as (4)

(4) \(\neg \exists x[Wx \land \forall y[Wy \leftrightarrow y=x]]\)

which seems both meaningful and true, as required. Problems solved.

Well, not quite. Strawson (1950) challenged the first solution above, arguing that neither (1a) nor (1b) could be used to assert the existence of a king of France. Rather, use of such sentences presupposes the existence of a king of France, and failing that existence, neither of (1a) or (1b) could be used to make either a true or a false statement – in Strawson’s words, “the question of whether it’s true or false simply doesn’t arise” (Strawson 1950, 330). ¹


¹ Strawson’s views here are highly reminiscent of those of Frege (1892), though Strawson did not mention that earlier work. For a long time I assumed that Strawson’s neglect of Frege’s work was the consequence of the two world wars in which Germany and England were on opposite sides. However, I have since learned that apparently almost everybody ignored Frege, Germans included (see Dummett 1967, 225; 1981, xliif), although the explanation seems to remain a mystery.
like (1b) (*The king of France is not bald*) can be used to express (at least) two thoughts – one of which predicates nonbaldness of an assumed-to-exist king of France, and the other of which is a blanket denial that the actual world (at present) is one which contains a unique male monarch of France with no hair on his head. These correspond to (3a) and (3b) respectively. However, contrary to Russell’s analysis, the sentence is not ambiguous. Atlas uses the term “sense general” to describe the sentence semantically, but does not mean that term to imply a proposition – something with truth conditions. The latter sort of thing only arises in particular contexts, associated with tokenings of (1b). In those tokenings, either the noun phrase (NP) *the king of France* can serve as a sentence topic, or it can serve as part of the sentence focus. In the former case, but not the latter, the existence of a king of France will be presupposed. Finally, in the statement made in the utterance of a sentence like (2) (*Pegasus does not exist*) the NP *Pegasus* does not serve as sentence topic. Hence such a statement will not presuppose the existence of Pegasus.

Atlas’s work has done a great deal to clarify our thinking about these troublesome issues, and he deserves praise for the methodical care he has taken with them. However there remain some aspects of his approach which deserve further examination, and that is the purpose of this paper. We’ll begin in §2 by looking in general at the nature of the different understandings of negative sentences. (“Understandings” is the useful general term from Zwicky & Sadock 1975, which we can take to include instances of ambiguity as well as generality, vagueness, pragmatic implication, and whatever else could conceivably be included.) As discussed at length in Horn 1989, two different kinds of ambiguity of negation have been proposed historically, and it makes a difference to Atlas’s claims which one he is concerned with. Following that, in §3 we will turn to the arguments Atlas gives for his ‘sense general’ theory of negative sentences like (1b), containing a definite description. In §4 we’ll look at a Gricean alternative to this view, and in §5 we turn to negative existence statements like (2). The final section contains concluding remarks.

2. Negation: scope vs. lexical ambiguity.

As we will see in this section, at least two different kinds of ambiguity of negation, or two different views of what such an ambiguity consists of, have been proposed. Russell’s analysis postulates a simple scope ambiguity – we’ll review this kind of thing in §2.1. But it has also been suggested that this ambiguity is of a different type, which might be viewed as an ambiguity in the word *not*, and we will look at this in §2.2.

2.1. Scope ambiguities. In the formal languages of logic, negation is a sentence operator – something which combines with a sentence to make a new sentence. As such it has a semantic scope which is determined by its syntactic scope – the sentence with which it combines. Other sentence operators are (a) the other sentence connectives (conjunction, disjunction, etc.); (b) the existential and universal quantifiers; (c) operators expressing necessity and possibility, in a modal logic; and (d) sentence-taking predicates like *believe* and *try* in an intensional logic like Montague’s (Montague 1973). Each of these operators has a semantic scope, determined by its syntactic scope.

In these formal languages, the scopes of any operators in a sentence are fixed by the syntactic structure and the result is the desirable property of univocality. It has been traditional to view natural languages as being different from formal languages in this regard. That is, a natural language sentence with more than one sentence operator may be ambiguous as a result of
having different ways to construe the semantic scope of the syntactically fixed operators. Typical examples, with paraphrases intended to suggest the commonly attributed understandings, are given in (5)-(10).

(5) Mary will win or Bill will win and Sue will discover an anomaly.
   a. Mary or Bill will win, and Sue will discover an anomaly.
   b. Mary will win, or alternatively Bill will win and Sue will discover an anomaly.

(6) Many of the arrows didn’t hit the target. [= Jackendoff 1972, ex. 7.46b]
   a. The arrows hitting the target were few in number.
   b. Lots of arrows missed the target.

(7) The current president might not have been a Republican.
   a. G.W. Bush might not have been a Republican.
   b. It might have been the case that a Democrat was elected in 2004.

(8) Ralph believes that someone is a spy. [from Quine 1956, 178]
   a. Ralph believes that there are spies.
   b. Someone is suspected by Ralph of being a spy.

(9) John would like to marry a girl his parents don’t approve of. [= Partee 1972, ex. 1]
   a. John wants to irritate his parents by marrying somebody they don’t approve of.
   b. The girl who John wants to marry isn’t approved of by his parents.

(10) Oedipus wanted to marry his mother.
    a. Oedipus wanted to commit incest.
    b. Oedipus wanted to marry a woman who, unbeknownst to him, was his mother.

Thus it is not uncommon for natural language sentences with two (or more) sentence operators to show these scope ambiguities.

Natural language sentences with more than one sentence operator are not necessarily ambiguous. It can happen that potentially different understandings turn out to be equivalent, as in the case of (11):

(11) Someone likes someone.

Or for other reasons an operator can be prevented from taking a bigger scope than another operator within whose syntactic scope it lies, as in example (12):

(12) Not many arrows hit the target.

where many cannot escape from the clutches of not. But in general we have been led traditionally to expect scope ambiguities in sentences containing more than one sentence operator, and usually we have not been disappointed.

2.2. A different kind of ambiguity of negation? The phenomenon just scouted should be distinguished from another possibility. As discussed in Horn 1989, Aristotle proposed that a sentence like (13):

(13) Socrates is ill.

has two negative counterparts. The contradictory (or EXCLUSION) negation of (13) results in a proposition that is true if (13) is not true, regardless of whether there is anybody named Socrates. This might be roughly paraphrased as in (14a) (though see the provisos in Atlas 1989, 71 and elsewhere):

(14) a. It is not the case that Socrates is ill.

However negation can also function to deny a term, in this case the predicate, giving the understanding in (14b) (also called the “choice” negation):

(14) b. Socrates has the property of not being ill – i.e. Socrates is well.
This distinction was apparently expressed in Greek with two distinct word orders (see the discussion in Horn 1989, §1.1.1), but it has been claimed that both interpretations are expressible with the one negative sentence in English given in (14c)

(14) c. Socrates is not ill.

Viewed in this way, the distinction would constitute a kind of ambiguity of negation for English.²

Possibly the difference could be represented as one of sentence scope, were Socrates taken to be a sentence operator. Of course that is what Russell in essence proposed, by analyzing proper names as standing for definite descriptions, which he in turn had analyzed as quantificational expressions. Nevertheless it seems useful in principle to distinguish the two sorts of potential ambiguity.

Atlas is, of course, very well aware of the difference between the two sorts of potential ambiguity. Nevertheless it seems that he views the difference as of no significance for his project, since he is arguing against either version. So sometimes he seems to blur the two together, as in the following quote:

It was Russell’s, and is presently the standard, view that the sentence:

[(15)] The king of France is not wise.

is ambiguous, having two senses and two logical forms, one the narrow-scope predicate-negation, usually represented in English by:

[(16)] The king of France is “non-wise”.

and the other the wide-scope sentence-negation usually represented in English by:

[(17)] It is not {true/the case} that the king of France is wise.  (Atlas 1977, 323.)

In this passage we seem to have an identification between narrow scope negation and predicate negation, on the one hand, and wide scope negation and sentence negation, on the other. However, as noted above, in general scope ambiguities involve sentence operators, and not a variation in an operator taking a sentence vs. a predicate as its argument.

2.3. Why the difference matters. The difference between the two types of ambiguity becomes relevant when we inquire as to the intended extent of the claims about sense generality. If Atlas’s arguments are aimed at negation qua predicate or sentence level operator, they would seem to have no implications for other sentence operators and the scope ambiguities they seem to be involved in. However if his arguments are aimed at negation simply as a sentence operator, then they can be expected to have much wider repercussions. And the author himself is uncharacteristically indecisive on this point. In Atlas 1977, which was an early introduction of his thoughts about the ambiguity of negation, example (15) above was contrasted with an example involving an explicit quantifier. (The examples in (18) are from Atlas 1977 and Atlas 1989, exx. 1-3 in both cases.)

(18) a. Everyone didn’t show up.
   b. No one showed up.
   c. Not everyone showed up.

Concerning these sentences he remarks in the earlier work: “This is a genuine ambiguity accountable for by a difference in scope” (Atlas 1977, 323). However, by the time of Atlas

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² This suggests that the distinction is between sentence negation and predicate negation, and that is assumed in the quote to be given below from Atlas. However, according to Horn, Aristotle held that neither was a case of sentence negation. Instead, the contradictory reading is a general type of predicate negation which Horn calls “predicate denial”, while “predicate negation” is a term negation of the predicate. Compare Horn 1989, 15.
1989, his views had apparently shifted, for there this comment is missing. Instead, in the later work (18) is used as an apparent example of his sense generality view. Thus, in the later work, the text preceding (18) begins: “The paradigm cases of scope ambiguity involving negation have led to a mistaken semantic description of negative sentences standardly thought to possess presuppositions. These mistaken descriptions assign to a single surface structure two distinct underlying forms” (Atlas 1989, 69; boldface added). Example (18) is then introduced as an illustration of this mistake.

I would be more certain that the author of Atlas 1989 intended his remarks to hold for all scope ambiguities, and not just the traditional interaction between negation and definite descriptions, were it not for the fact that he does not return to example (18), or others like it, until the very end of the book, and there he seems to have retreated to a less confident position. The example in question at that point is a sentence from one of Abraham Lincoln’s classic remarks—example (19) below:

(19) You can fool all of the people some of the time.

Concerning this example he says that “if the quantifiers were scope-non-specific in the semantic representation of the sentence [my claim] would be...that there are no distinct ‘readings’...” (Atlas 1989, 148; italics in original, boldface added); and his discussion continues briefly in this hypothetical mode before the final summary paragraph of the book. Thus it remains unclear how broadly the concept of sense generality is intended to apply.

This makes a difference, because it is much easier to argue against an ambiguity of the negative morpheme (sentence vs. predicate operator) that it would be to argue against negation participating in scope ambiguities. That is because the latter sort of phenomenon is quite common, as noted above in connection with examples (5) – (10).

3. Negative sentences with definite descriptions.

We turn now to the arguments that sentences like (1b), repeated here as (20),

(20) The king of France is not bald.

are not ambiguous – do not get assigned two (or more) different logical forms by the grammar of English. Instead, the claim is, (20) is sense general, and can be used to express different propositions and make different statements in different contexts, only some of which will presuppose that there is a king of France. Atlas puts forward a number of arguments toward this conclusion. Most of them are based on the seminal discussion of ambiguity in Zwicky & Sadock 1975. However the first one we consider below is new.

3.1. Phonetics vs. grammar? The first kind of argument we’ll consider rests on the fact that the very same sequence of words can be associated with different intonational contours, with different results for what is taken to be the sentence topic, and what is taken to be the new information being conveyed. Compare the following (here I follow Atlas in using italics for what are to be taken as statements rather than sentences):

(21) a. The king of France isn’t bald.
    b. The king of France isn’t bald.
    c. The king of France isn’t bald.

Atlas holds that (21a) actually has two “unmarked” uses, both of which I have represented as (21b). These are the two understandings corresponding to (15) and (16), repeated here as (22a, b), respectively.
(22) a. The king of France is “non-wise”.
   b. It is not {true/the case} that the king of France is wise.

These are the ones that we are primarily concerned with. The first of these is described as failing “to be a semantically referential, singular assertion”, due to the absence of a king of France, while the other is the “true, non-singular assertion that is the external negation of the proposition that the king of France is bald” (Atlas 1989, 90). On the other hand (21c) is a “true [assertion] about the bald” (90). “All of these statements employ the same sentence, whose meaning is unspecified for, rather than ambiguous between, predicate and sentence negation or between object-language negation and metalanguage denial” (90). He continues (p. 91): “Our interpretations depend not on the syntactic and semantic but on the possible phonetic representations of the sentence uttered. The range of interpretation includes statements that are choice [i.e. predicate term] negations, exclusion [i.e. sentence] negations, and metalinguistic predications.”

The strange part about this claim is the apparent assumption that phonetic form is not part of sentence form. For a linguist this assumption goes against the grain; spoken language, as we are taught early on, is the primary form of language. Furthermore it has become standard in linguistic analyses these days to include some indication of topic-focus structure in representations of sentences, and to assume that such structure is semantically relevant. As Gundel & Fretheim (2004) note: “It is not surprising…that most accounts of topic and focus have built these concepts into the grammar, as part of the syntax and/or semantics…or as a separate information structural component” (191). Thus for most linguists nowadays sentences (21b) and (21c) are different, because their prosodic structures, which reflects their informational structures, are different. That being the case, it would seem that we don’t really have an argument for the sense generality view yet.

3.2. Argument types from Zwicky & Sadock. The remaining arguments have rather a different character. For these we assume the association of distinct statements with a given sentence, and apply tests found in Zwicky & Sadock 1975 and elsewhere to determine whether these statements count as different readings, or whether they are encompassed within a single, general sense. Even if the evidence points to the latter conclusion (as Atlas believes), it would seem that it does not point specifically to a conclusion that this general sense is not one that could be grammatically encoded in the sentence. We will turn to that issue below, in §4.

3.2.1. Privative ambiguity. As Atlas notes, there is a potential complication in the application of Zwicky & Sadock’s tests. If we consider just the two “unmarked” understandings of (21a) – the one that presupposes the existence of a king and says he isn’t bald, and the one that is the blanket denial – we can see that the former understanding entails the latter. Thus we have the kind of situation Zwicky & Sadock call “privative”.

Zwicky & Sadock’s example of an expression with a privative ambiguity is the word dog, which they take to be ambiguous on whether it’s specified for the sex of the animal. I have to confess that this word is not ambiguous for me – I don’t have the +male reading. Ignoring that, the test for privative ambiguity, as opposed to generality, is whether the same expression can be both asserted and denied of the same object or situation. Were dog ambiguous in the way Zwicky & Sadock assume, (23) should be o.k.

(23) It’s a dog, but it isn’t a dog. [I.e. it’s a bitch.]
I find (23) completely impossible, but, as I say, I don’t have the reading in question. The only potential example I’ve been able to think of that might work for me is the word *drink*, which I think people agree is ambiguous depending on whether the drink is taken to be alcoholic or not. Still, (24) is far from being completely natural:

(24) I’d like a drink, but not a drink, please.

The reason is not far to seek – any speaker of (24) would be being unnecessarily obscure. What some obnoxiously coy person might say is (25):

(25) I’d like a drink, but not a drink drink [wink wink].

using what Horn (to appear) describes as a “value added” type of lexical clone, to specify the R-narrowed, +alcoholic reading.

In any case, Atlas accepts the test, and applies it to (26):

(26) The king of France is not wise.

The two commonly assumed (following Russell) understandings of (26) are paraphrased unambiguously in (27a) and (27b):

(27) a. It’s not the case both that there is a unique king of France and that he is wise.

b. There is a unique king of France, but he is not wise.

(27a) is of the form *not (p and q)*, while the more specific (27b) is of the form *(p and not q)*. These are shown in (27a′) and (27b′) respectively.

(27) a′. not (p and q)

b′. (p and not q)

If (26) is ambiguous in this way, it should be possible to assert it on the (27a) reading, but deny it on the (27b) reading. Given the equivalence in (28):

(28) not (p and q) and not (p and not q) ≡ not p

this should yield a net assertion that there is no king of France.

Atlas’s applications of this test are given in (29) (= Atlas 1977/1989, 72, ex. 7):

(29) {?The king of France is not wise/?It's not {true/the case} that the king of France is wise}, but {he/the king of France} is (not non- wise).

None of the variants in (29) is very good; Atlas remarks that they are “semantically out of bounds” (p. 72). However, in addition to the already expected obscurity problem for this test, noted with respect to example (24) above, the applications in (29) have another difficulty. That difficulty comes from Atlas’s assumption that the denial of (26) on the (27b) reading must be a predicate denial rather than a sentence denial. (Observe the parentheses around “not non-“ in (29).) If we conjoin an assertion of (27a) with a predicate denial of (27b), we are left with a contradictory statement – something of the form (30a), or equivalently, (30b):

(30) a. not (p and q) and (p and not not q)

b. not (p and q) and (p and q)

Definitely out of bounds for those who like logical consistency, but not the right structure for what we want to test.

A better example to use for the application of Zwicky & Sadock’s test for privative ambiguity would be (31):

(31) The king of France isn’t wise but the king of France isn’t not wise.

Now admittedly (31) isn’t great, but (23) and (24) weren’t that great either. Furthermore I have been assured by a number of informants that there are circumstances in which (31) could be felicitously used to deny the existence of a king of France (though see below, §4). Compare also the discussion by Strawson (1952, 18) of the example in (32):

(32) A: Does he care about it?
3.2.2. **Tests of transformational potential.** The next test is one which involves “employing a transformation whose application to underlying structure requires identity of sense of constituents” (1977, 326; 1989, 73). This test uses examples like (33) (cf. Atlas 1989, 73, ex. 8):

(33) The king of France is not wise, and the same goes for the Queen of England.

The crucial understanding for (33) would be the one on which the first clause is understood with sentence negation (i.e. not presupposing the existence of a king of France), while the second clause does presuppose the existence of a Queen of England. This is the so-called “crossed” understanding. If we can understand (33) in this way, it is supposed to be evidence against an ambiguity for (26) (*The king of France is not wise*) and in favor of its generality. However, it’s not clear to me that the results of the identity of sense test will be any more conclusive than one’s intuitions concerning (26) itself. That is, I don’t know why people who find (26) ambiguous won’t find it difficult to get the crossed reading for (33), and vice versa.

The identity of sense test is a subcase of Zwicky & Sadock’s tests of “transformational potential”. The idea behind them is that “If the semantic representations for certain sentences lack specification of some piece of meaning, then the applicability of transformations to them cannot possibly depend on whether or not this piece of meaning is present” (Zwicky & Sadock 1975, 14). Atlas leaves other applications of this test as an exercise for the reader, but assures us that the results will confirm that the sentences in question are not ambiguous. However a couple of constructions that were assumed to be derived by transformational rule at the time Zwicky & Sadock were writing – the cleft and pseudocleft constructions – do seem to “disambiguate” e.g. (26) in favor of a nonpresuppositional interpretation. Compare the examples in (34):

(34) a. It isn’t the king of France who is wise.

b. The one who is wise isn’t the king of France.

Both of these sentences move the NP *the king of France* into predicate position, where it tends to lose its presuppositionality. I am not sure what the response would be to this – perhaps that these constructions should not be considered transformationally related to the canonical sentence form counterpart. Of course the whole basis for this kind of test lies in a model of grammar which is no longer assumed as the default.

3.2.3. **Semantic differentiae.** The last test we’ll consider is what Atlas, following Zwicky and Sadock, calls “semantic differentia”.

His discussion of this test is on pp. 72f (in 1989; cf. also 1977, 324f). He says first: “When a sentence has relatively similar understandings” as is true in this case, “but these differ only by one’s being sense-specified and the other sense-unspecified for some particular semantic feature, e.g. [+/- FACT], the feature must be such that the lexicons of natural languages can plausibly fail to use it” (1989, 72). Note the suggestion here that we are not dealing with a scope ambiguity, but instead with a lexical ambiguity. The discussion continues to talk about the degree of difference between the putative readings of an ambiguous expression: “If the difference in understanding were very great it would point to ambiguity rather than sense-generality” (1989, 72). The implication is that small differences in understanding are more likely to be a reflection of generality rather than ambiguity. (This idea is one for which

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3 There seems to be a small disagreement between Atlas and Zwicky & Sadock over the declension of *differentia* – which is a plural for Atlas, but a singular for Zwicky & Sadock. (The plural for them is *differentiae*; cf. Zwicky & Sadock 1975, 4.)
Zwicky & Sadock cite Richman 1959. However this criterion is certainly not absolute. Indeed, we have Jerry Morgan’s example (35):

(35) Someone is renting the house.
(cited by Atlas elsewhere in the book (1989, 33)) where it is clear that there is an ambiguity, but where the two readings are mutually entailing. As Zwicky & Sadock note:

…from the facts that a particular semantic differentia is simple and that it is formally marked in some language we can conclude nothing about the status of this distinction for any particular example in any language; both lack of specification and systematic ambiguity are consistent with these facts. (Zwicky & Sadock 1975, 5.)

Against this background, the systematic scope ambiguities illustrated in (5)-(10) above provide evidence in favor of ambiguity for the sentences we have been considering.

4. The Gricean alternative.

Let us for the moment ignore the evidence reviewed so far, which is not that conclusive anyway, and assume that Atlas’s arguments go through. It still seems possible to hold the view that sentences like (1b), (21a), and (26), repeated here as (36a-c):

(36) a. The king of France is not bald.
   b. The king of France isn’t bald.
   c. The king of France is not wise.

do have a logical form, which is that of the more general, sentence level negation, and that an understanding which presupposes or entails the existence of a king of France is the result of a conversational implicature (Grice 1975). The idea would be that, if the speaker knew that there was no king of France, it would be more informative for them to have said that. Given that the king does not exist, the issue of his baldness or wisdom doesn’t even arise. It would be being unnecessarily obscure in almost any context to assert any of (36) knowing that there is no king. The only exception might seem to be when someone else, ignorant of the king’s nonexistence, has for some reason made the corresponding positive assertion, although even then the simple denial of existence would be more informative. Given the generality of this line of reasoning, the implicature in question would be a generalized one, neutralized only in very special contexts, or with an explicit cancellation, as in (37):

(37) The king of France isn’t bald (or wise) – there isn’t any!
(I have to say that I find (37) somewhat strained. We’ll return to this below.)

Something like this is the view of Kempson 1975, whom Atlas frequently cites approvingly, and it seems to have been Atlas’s original thought as well. However he argues against this view in Atlas 1979, and toward the end of his book (Atlas 1989). The arguments given there against the Gricean view are highly theoretical; indeed, they verge on the aesthetic. The situation is summarized as in (38) (Atlas 1989, 144):

(38) a. \( \text{Prag} (K^*, L^-) = L^+ \)

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4 There is a pernicious typo in Zwicky & Sadock’s reproduction of Richman’s conclusion. They quote him (unfortunately under the name “Richmond” rather than “Richman”) thus (where \( \phi \) and \( \psi \) represent two properties expressed by some term T): “The question is this, are \( \phi \) and \( \psi \) sufficiently alike (in some unspecifiable way)? If they are, T is ambiguous; if not, not [p. 91f]” (Zwicky & Sadock 1975, 5, n. 12; italics in original). What’s missing is the “un-” prefix for “ambiguous”; cf. Richman 1959, 92.

5 This alternative is “Gricean” rather than “Grice’s” because Grice’s own views on this particular issue were somewhat more complicated. See Grice 1981.
b. $\text{PRAG}(K^{**}, L^-) = L^-$

where “PRAG” represents “the Gricean inference”, the $K$s are different kinds of contexts, “$L^-$” represents the understanding which assumes the existence of the king and “$L^+$” the understanding which doesn’t.

For Atlas, the problem with (38) seems to be its asymmetry: “In the second case the pragmatics adds nothing to the semantic interpretation; in the first case it obviously does” (1989, 144). But this claim can be questioned, since the contextual features which give rise to the neutralization or cancellation of a generalized implicature are certainly affecting the interpretation, and therefore in that sense adding something to it.

Atlas schematizes his own view of the situation as in (39):

(39) a. $\text{PRAG}(K^*, L) = L^+$
   b. $\text{PRAG}(K^{**}, L) = L^-$

Here $L$ stands for “the sense-general semantic representation of ‘the $F$ is not $G$’” (1989, 145). The idea is that we have a single semantic representation, and pragmatic factors determine which of the two propositions associated with sentences of the type we’ve been discussing is actually expressed on any occasion of utterance. Thus, “the pragmatic theory does theoretical work in both cases” (1989, 145; small caps in original). The problem of asymmetry is removed.

An important assumption throughout the discussion here is that the two understandings represented with $L^+$ and $L^-$ are equally natural. This is reflected in Atlas’s assertion that, in effect, both are ‘unmarked’ uses of sentences like those in (36); and it is made explicit when he says the following:

“Taking a negative sentence in isolation competent speakers know that it has (at least) two uses or understandings. Independently of context, the understandings are phenomenologically of equal status, neither judged less a function of the meaning of the sentence than the other. (Atlas 1989, 142; boldface added.) And he describes the advantage of his (39) over the Gricean competitor in (38) as follows: “Understandings that phenomenologically are of equal status are now represented by the theory of being as equal status, produced in the same way by the same mechanism” (1989, 145).

However, I do not believe that the two understandings represented with $L^+$ and $L^-$ are symmetrical. I want to claim instead that these understandings are not phenomenologically equivalent; rather, it is the $L^+$ understanding of sentences like those in (36) that is overwhelmingly the favorite. That is why the examples in (36) seem so strange. In fact it is very difficult for me to get the $L^-$ understanding of these sentences at all; I find it very hard to make (37) sound anything but contradictory.  

It might be thought that one factor promoting the prominence of the presuppositional understanding is the fact that syntactically, negation occurs with the verb of the sentence, as though not became glued onto the verb making it more difficult to become semantically unstuck and go flying to the front of the sentence. On the other hand modals don’t seem to have this problem. Examples like (7) above, repeated here as (40):

(40) a. The current president might not have been a Republican.
   b. G.W. Bush might not have been a Republican.

are common in the literature. And indefinite descriptions can vary their scope with respect to negation pretty easily. It seems pretty easy to get examples like those in (41)

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6 Note that Horn 1985 argues that (37) is an example of metalinguistic negation. I regret that space has prevented inclusion of discussion of this phenomenon with the other varieties of negation being considered here.
(41) a. Someone didn’t call me up today.
with the indefinite subject possibly understood as being inside the scope of the negation.
Compare also example (18), repeated here as (42),
(42) Everyone didn’t show up.
   a. No one showed up.
   b. Not everyone showed up.
where the interpretation in (42b), with wide scope negation, is perhaps easier to get than (42a). That being the case, it is something of a mystery as to why the nonpresuppositional understanding of sentences like those in (36) is not more robust.

In any case, leaving this puzzle aside, the Gricean account seems to match the data better than Atlas’s alternative. Given that the implicature (if that’s what it is) of the existence of a referent for a definite description occurring in a negated sentence is a generalized implicature, we expect that interpretation to predominate. Note, though, that we could have a similarly Gricean account were these sentences actually ambiguous; the same line of reasoning would tell us why one interpretation was more plausible and prominent than the other. (Cf. the discussion in Sadock 1978.)

5. Negative existence statements.

We turn now to the last group of issues, those concerning negative existence statements like (2), repeated here as (43).

(43) Pegasus does not exist.
Let’s quickly review the traditional problem such sentences present. Given his assumptions of compositionality of both sense and reference, Frege (1892) would potentially have problems at both levels. If proper names do not have a sense (as suggested by intuition and argued by Mill 1851), then the sense of the whole sentence should be defective or nonexistent. At the level of reference, the truth of a sentence like (43) would mean that the subject term, Pegasus, lacks a referent, and so the whole sentence should lack a referent, which in Frege’s view is its truth value; in brief, the truth of (43) implies its being neither true nor false. These are the problems.

Frege solved the problem at the level of sense by postulating senses for proper names, senses equivalent to those expressed by definite descriptions. Russell completed the solution by analyzing definite descriptions into referential parts (plus quantifiers and so forth). However, as noted at the outset, Strawson (1950) raised objections for Russell’s quantificational analysis of definite descriptions, and Kripke (1972) has argued very convincingly for a return to Mill’s position, that proper names are not equivalent to definite descriptions anyway. What to do?

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7 I regret that this paper was originally written without the benefit of the discussion in Burton-Roberts (1989, 1991). Burton-Roberts makes a number of the same points as those in this section. However he does not approve of the Gricean approach. Rather, his own view is something which he schematizes as in (i) (Burton-Roberts 1991, 171ff):
   (i) a. \[ \text{PRAG}(K^*, L'') = L' \]
   b. \[ \text{PRAG}(K**', L') = L' \]
where the more specific, presupposing understanding is the semantically assigned reading, and the other is derived pragmatically.
8 See also the careful critique of Atlas’s views in Burton-Roberts 1991.
9 Curiously, Atlas remarks that the truth of (43) will imply its falsity rather than its truth-valuelessness on the traditional view: “a statement like Pegasus doesn’t exist will be predicted to be false if true…” (Atlas 1988, 382; 1989, 106). Possibly this is a typo. Or I’m missing something.
Atlas’s idea is that the problem stems from an improper informational analysis of sentences like (43). More specifically, he argues that (43), or a statement made with (43), does not have Pegasus as a topic NP, and thus that the NP Pegasus is not presuppositional. Instead, the topic of (43) is existence.

Atlas gives three main criteria for an NP to be considered a topic. (Each of these is given as a necessary, but not a sufficient condition.) They are (a) ability of the containing statement to be an answer to the question What about NP?; (b) the acceptability and equivalence of a statement with an as-for-NP prefix; and (c) lack of primary stress on the NP in question. A fourth, but somewhat more contentious criterion is given as a sufficient condition for topichood: that the existence of a referent of the NP is presupposed (1989, 111f).

Atlas first considers criteria (a) and (c). “With normal intonation and stress, to what question is the statement of John exists a felicitous answer? I think it is Who/What exists? (and more generally, What about what exists?). The topic is: what exists….” (Atlas 1989, 112). And notice that the unmarked pronunciation of John exists is with main sentence stress on John rather than exists. Subsequently the reader is given the following pairs (= Atlas 1989, (52) & (53); Atlas 2004 gives a similar set (p. 352)):

(44) a. John exists.
b. As for what exists, John does.

(45) a. John exists.
b. As for John, he exists.

The pairing in (44) is asserted to be correct – i.e. they are paraphrases. However the pairing in (45) is not correct. Instead, (46) is given as an appropriate paraphrase for (45b).

(46) John exists. (e.g. John doesn’t live, John exists.) [= Atlas 1989, 113, ex. 53a’] Again the conclusion is that the subject NP is not a topic NP in the unmarked case of an existence statement. Instead, “the topic is: what exists” (1989, 113). And if the subject NP is not the topic, then, according to his fourth criterion, the existence of a referent is not presupposed, but is instead asserted.

It is significant that these criteria are examined primarily with respect to positive, rather than negative, existence statements. When Atlas comes to consider the case of negative existence statements he says: “Parallel arguments support the same conclusion for explicit negative existence statements. A quick argument to this effect is easily formulated: presuppositions are invariant under main-verb negation” (Atlas 1989, 114; also Atlas 2004, 352). This claim might be seen to conflict with the assumption that negative sentences like those in (36) above have, as one of their uses, a “true, non-singular assertion that is the external negation of the proposition that the king of France is bald” (Atlas 1989, 90). On this use, the presupposition of existence of a king of France is not maintained. Unless the positive sentence also has a nonpresuppositional use, we can’t be certain that negative sentences maintain the presuppositions of their positive counterparts. But possibly by “main-verb negation” Atlas means to exclude the sentence level negation interpretation.

In any case there is a more pressing reason not to assume that positive and negative existence statements have the same topic-comment structure, and that is that typically the nonexistence of something is more interesting and newsworthy than its existence. Almost all the time in our ordinary daily lives, the things we are talking about are things of whose existence we are confident, and that being the case, the fact that these things exist is almost always not worth noting. So Atlas may be right about positive existence statements typically being about what exists instead of about the referents of their subject NPs. (It may also be true that 99.99% of the
tokenings of such sentences occur in philosophical discussions.) However this is not true of nonexistence. Thus, given the general correlation between topichood and old information, we might expect existence to be topical in the case of positive existence statements without holding the same expectation for nonexistence in negative existence statements. Atlas, however, insists that both positive and negative existence statements are about existence. Thus he suggests that

(47) As for what exists, Pegasus doesn’t. [= Atlas 1989, 115, ex. 59]

is a natural paraphrase of (43). However I find this suggestion hard to accept (and some remarks in Atlas 2004, 353, indicate that I am not alone in this). To my ear (47) has something of the jarring sensation felt with (48):

(48) As for Bill, Jane smokes.

On the other hand I find (49)

As for Pegasus, he doesn’t exist.

to be perfectly natural.

Of course another factor playing a role in the determination of sentence topics is what the surrounding discourse concerns. And it would seem that, outside the philosophical discussions of existence alluded to above, the question of something’s not existing would typically most naturally arise in the case that one had assumed that that thing did exist, and when that thing was the subject of discussion. Consider a typical child’s disabusements concerning Santa Claus and other nonexistent notables; these seem much more likely to occur during a conversation about the putative entity in question, rather than one about existence. The scenario in (50) strikes me as more likely than the one in (51).

(50) A: Mommy, is Santa Claus a real person?
B: No dear, Santa Claus doesn’t exist.
A: What about the tooth fairy?
B: Sorry dear, the tooth fairy doesn’t exist either.

(51) A: Mommy, what exists?
B: Well, as for what exists, Santa Claus doesn’t. And while we’re on the topic of existence, the tooth fairy doesn’t either.

Of course (51) may be a little unfair to Atlas, but on the other hand, he has to admit that (50) is a perfectly natural discourse. This raises the question of the extent to which the problem of negative existence statements has been solved. Even assuming he were right that the unmarked case of a negative existence statement has existence for its topic, Atlas cannot deny that there are natural conversations like (50), where it would seem that a nonexistent entity is topic. It would seem that he would have to say that such conversations are illformed, that Mother B in (50) can’t be making the statements she seems to be making because of the lack of a referent for the topical, hence presupposed, NPs. But that is hard to accept.

I think Atlas has made an interesting and correct point about the intonational structure of existence statements; it does seem that the subject typically receives the main sentence stress, and this seems to be true equally for both negative and positive existence statements. However it is clear that, at least in the case of negative existence statements (which are the troublesome ones, after all) this criterion for topichood can come apart from the others, as in example (50).

Even if Atlas’s claims were right about all negative existence statements, would that solve the problem? I don’t think it’s clear that it does. It seems that we would still have the fundamental problem associated with any statements involving proper names of nonexistent entities, and that is the question of what such proper names contribute semantically to the
sentences (or statements) in which they occur. If we accept Russellian direct reference, then we
have only one level of meaning (in a medium sized sense of the word “meaning”, i.e. one not
including pragmatics) to worry about, but if we also accept Kripke’s (1972) arguments for the
nondescriptionality of proper names then we still seem to have a problem on that one level—
namely, that proper names of nonexistent entities have nothing to contribute semantically. It
seems that that problem remains, and that it continues to be particularly pressing with the
negative existence statements that we want to say are true, and outside of any fiction.


In this paper I’ve tried to counter arguments for the “sense generality” of negative sentences, and
to provide some support for the alternative Gricean view that negative sentences literally express
a simple sentence negation and only conversationally implicate the existence of referents for any
singular terms involved. I should make it clear that I’m not ready to adopt this Gricean view—I
have to confess that I really don’t know what to think about definite descriptions in negative
sentences! I’ve pointed out what seem to me to be clear examples of negative existence
statements where existence itself is not the topic of the statement, and also tried to suggest that
serious problems remain for these kinds of statements no matter how the issues of topicality are
ultimately resolved. (I should note that I have not questioned the assumption that changing the
topic-focus structure of a statement affects the presuppositions of its singular terms, but see von
Fintel 2004 for arguments that this is not the case.)

This paper was originally written as a birthday present for Jay Atlas, and it may not seem
like a very nice one, since I’ve tried to call into question a number of his important contributions
to the philosophy of language. Still, someone has said that there’s no such thing as bad publicity,
so perhaps ultimately I’ve only added to Jay’s renown. And possibly he’ll find some amusement
in pointing out where I’ve gone wrong in all this. And finally I should emphasize how much
I’ve enjoyed puzzling through this work—it has given me a lot to think about.¹⁰

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