Descriptive Atomism and Foundational Holism: Semantics between the Old Testament and the New

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Abstract

While holism and atomism are often treated as mutually exclusive approaches to semantic theory, the apparent tension between the two usually results from running together distinct levels of semantic explanation. In particular, there is no reason why one can't combine an atomistic conception of what the semantic values of our words are (one's "descriptive semantics"), with a holistic explanation of why they have those values (one's "foundational semantics"). Most objections to holism can be shown to apply only to holistic version of descriptive semantics, and do not tell against any sorts of holistic foundational semantics. As Davidson's work will be used to illustrate, by clearly distinguishing foundational and descriptive semantics, one can capture the most appealing features of both holism and atomism.

Semantic holism and semantic atomism are typically viewed as mutually exclusive options when thinking about the nature of concepts and semantic content. Nevertheless, the apparent tension between atomistic and holistic theories often results from running together distinct levels of semantic explanation. For instance, in what follows, it will be argued that Davidson can justly be characterized as *both* an atomist and a holist about meaning. There is no contradiction in Davidson's position because he combines an atomistic story about *what* the semantic values of our words are, with a holistic explanation of *why* they have those values. When discussing how our individual words hook on to the world, he presents a holistic theory, and when explaining how we understand sentences and complex expressions in terms of their parts, he gives an atomistic theory. The problems of intentionality and productivity are distinct, and different sorts of theories can be used to respond to them. Many assume that if you are a holist or atomist at one level, you must be so at both, but as Davidson's work illustrates, one can easily combine these perspectives that might otherwise seem incompatible.

Compositionality and Conceptual Role

To see how one could be both a holist and an atomist, we should first consider how the contrast between the two positions is laid out by the authors who are probably the most prominent defenders of the atomistic approach, Jerry Fodor and Ernest Lepore (hereafter "F&L"). F&L frame the holism/atomism dispute in terms of a distinction between "Old Testament" and "New Testament" Semantics (hereafter "OTS" & "NTS").[1] OTS takes meaning to be a type of "symbol-world relation", so, say, 'dog' means *dog* "because of some (nonsemantic) relation that holds between the symbol and the animal".[2] By contrast, according to NTS, "the meaning of an expression is at least partially constituted by the expression's inferential relations."[3] For NTS, the meaning of, say, "dog" in my language is partially constituted by the fact that I'm disposed to infer "*x* is a mammal" or "*x* is not a cat" from "*x* is a dog", and will also infer "*x* is a dog" from "*x* is a Poodle", etc.. According to F&L, NTS slides inevitably into holism (because there is no principled way to make a distinction between those inferential connections which are meaning constitutive and those which are not)[4] while OTS tends to be atomistic.[5]

F&L have many objections to holism and NTS, most of which relate to the purported fact that NTS makes meaning so unstable and idiosyncratic that there is no room left for any constancy of meaning over change of belief, since any time we change a belief, the inferential roles of *all* of our terms change. For instance, if Peter infers "*x* tends to like cheese" from "*x* is a dog", and Roger doesn't, then the two don't mean the same thing by "dog". However, this means that they are making *different* inferences when they conclude, say, "*x* is not a dog" from "*x* is a building" so they must mean something different by "building" as well, and so on throughout the language. Because of this seeming instability, there can be no objective disagreement over matters of fact (since any two people who disagree about a sentence will have different

inferential roles for it, and thus mean something different by it), or communication in the sense of grasping the content of what another says (since no two people – or even no two stages of a single person – ever have precisely the same beliefs, no two people ever mean the same thing by any of their terms).[6] Nevertheless, unattractive as F&L (quite justly) find such apparent consequence of NTS to be, they also recognize that these are all bullets that philosophers enamored of NTS could bite (indeed, have bitten). Consequently, they take the most decisive objection to NTS to be that it is incompatible with the compositionality of meaning, and so compositionality requires that we be atomists. F&L summarize this argument against NTS as follows:

  (1)   meanings are compositional,
  (2)   but inferential roles are not compositional
  (3)   so meanings can't be inferential roles.[7]

To use their example, the meaning of "brown cow" is composed from the meaning of "brown" and the meaning of "cow", but it doesn't seem as if the inferential role of "brow cow" is composed by the inferential role of "brown" and the inferential role of "cow".[8] There are inferences that we would make about brown cows that we would not make about either cows in general or brown things in general. For instance, we might endorse the inference: [*brown cow -> dangerous*], even if we don't endorse [*brown -> dangerous*] or [*cow -> dangerous*].[9] As F&L put it:

> *prima facie*, the inferential role of 'brown cow' depends not only on the inferential role of 'brown' and the inferential role of 'cow', but also on what you happen to believe about brown cows. So, unlike meaning, inferential role is, in the general case, not compositional.[10]

If such criticisms are on the right track,[11] then it is simply a mistake to identify

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1   See especially their paper "Why meaning (probably) isn't conceptual role" (Fodor & Lepore 1991).
2   F&L 1991 p. 11. Popular candidates for such a relation being resemblance, association, and (Fodor's favorite) asymmetric causal dependence. (Margolis takes atomism itself to be characterized in this way, claiming that atomism is simply the position that concepts are identified by their extension (Margolis 1998, p.549).
3   F&L 1991, p. 23.
4   See F&L 1992, 2002.
5   F&L 1991, p. 25.

6   See F&L 1992. I respond to such objections in Jackman 1999, 2003a.
7   F&L 1991, p. 16.
8   F&L 1991, p. 16. Similar arguments apply to those attempts to identify meaning with prototypes. (The prototype for 'pet fish' (small, gold, lives in small glass bowl, etc.), doesn't come from the prototypes of 'pet' and 'fish'. (See Fodor & Lepore 1996.)
9   Fodor & Lepore 1991, p. 21.
10 F&L 1991, p. 16.
11 Of course, one might argue that the inferential role of "brown cow" can be erived from the inferential roles of "brown" and "cow" in that it is part of the inferential role of "brown" that "brown -> (cow -> dangerous)" and part of the inferential role of "cow" that "cow -> (brown

a term's meaning with its inferential role.

However, such criticisms of inferential role semantics need not force us to give up holism. In particular, while it may be the case that the 'compositionality argument' shows that a term's meaning cannot be *identified with* its inferential role, it does not prevent one from claiming that facts about what a term means at least partially *supervene upon* such inferential roles. In other words, concepts need not be *individuated* in terms of the (possibly non-semantic) facts that they supervene upon.[12] F&L assume that unless we renounce holism completely, we must identify meaning with conceptual role, and this commitment can be avoided by the holist who distinguishes: (1) the idea that meaning can supervene upon inferential relations (where claims about inferential relations helping to 'constitute' meaning are understood as claims about what *determines* meaning), and (2) the idea that meanings be *identified with* inferential relations (where the claim about what helps 'constitute' meaning is understood as a claim about what meanings are *composed of*).

After all, Philosophers who stress the relation between meaning and conceptual role could be viewed as having one (or more) of the following five positions in mind.

> CR1: A term has the meaning it does *because* it has a certain conceptual
>   role.
> CR2: A term's meaning *supervenes upon* its conceptual role.
> CR3: A term's meaning is *determined by* its conceptual role.
> CR4: A term's meaning is *constituted by* its conceptual role.
> CR5: A term's meaning *is* its conceptual role.

While F&L often treat these positions as interchangeable,[13] they are all diffe-

rent, and strictly speaking, the compositionality argument only tells against CR5.[14] Some sorts of holistic theories, for instance those that individuate concepts in terms of their 'narrow' conceptual roles, or the sort of 'state-space' semantics associate with Paul Churchland, may indeed be committed to something like CR5,[15] but the sort of holistic semantics associated with Davidson's work is more plausibly tied to weaker supervenience claims like CR 1-3.

Supervenience requires only that there can't be a difference of meaning without there being a difference in conceptual role. The function between conceptual role and meaning can thus be *many to one* rather than the one-to-one function associated with CR5.[16] Further, if we think that meaning supervenes only *partially* on conceptual role (which seems compatible with F&L's characterization of NTS),[17] then the relation between meaning and conceptual role need not be a function at all, and there could be differences of meaning that didn't have any associated differences of conceptual role.[18]

If one distinguishes between inferential roles helping to determine meaning and their being identified with meanings, one can see how a roughly Davidsonian theory can give a holistic explanation of the semantic relations between symbols and the world without abandoning the OTS claim that meanings should be individuated in terms of such symbol/world relations rather than their holistic supervenience base.

Indeed, it is noteworthy that when one reads Davidson's writings on semantic theory, he seems like he is engaged in traditional OTS, and his theory seems to have the satisfaction of the compositionality constraint as one of its primary desiderata.[19] On the other hand, when his writings focus on radical interpretation (how we come up with the semantic theory for a particular speaker) he

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-> dangerous)". However, this just shows that, for the inferential role theorist, the meaning of, say, "brown", is partially determined by the meaning of "brown cow", and so there is not a one-directional flow of meaning from the simple terms to the complex ones. This is enough to show that for the inferential role theorist, meaning is not compositional in any traditional sense.

12 For a related distinction, see Brigandt 2004, p.2. I have also recently discovered (much to my dismay) that this point has also been persuasively presented with respect to the compositionality problem in Pagin 1997.

13 For CR1, see F&L 1991, pp 11, 12; for CR2, see F&L 1991, pp. 10, 12, 20, 22, 24; for CR4, see F&L 1991, pp. 12, 21, 23, 25 (p. 23 being the definition of NTS); for CR5, see F&L 2002, pp. 3, 4, 1991, pp. 9, 12, 13, 14, 17, 18, 19, 21 (p. 9 being the title). For the claim that F&L's argu-

ment runs against the rocks because it conflates CR2 and CR5, see Warfield 1993.

14 It might also tell against CR4 if CR4 is interpreted as being equivalent to CR5 (an interpretive claim I take to be characteristic of NTS), but CR4 can also quite naturally be interpreted as standing for CR2 or CR3, in which case the objection doesn't hold.

15 See, for instance, Churchland 1989.

16 This is partially why the holism involved with Davidsonian radical interpretation is 'moderate' rather than 'radical'. (For a discussion of this distinction, see Jackman 1999, 2003a.) (For an earlier discussion of the importance of the one-to-one/many-to-one distinction for presenting a plausible account of holism, see Pagin 1997, pp. 24-25 and the works cited therein.)

17 F&L 1991, p.23.

18 Something like this line would have to be taken by the Davidsonian unless 'conceptual role' is taken in its 'widest' possible sense.

19 See, for instance, Davidson 1965, 1967.

sounds more like someone doing NTS.[20] This may make it hard to answer the question of whether Davidson is an atomist or holist *tout court*, but it represents no inconsistency on Davidson's part. There is nothing wrong with combining what is, in essence, an atomistic semantic theory with a holistic theory of interpretation.[21] (Even when one adds that constraints on interpretation are partially 'constitutive' of the meaning-facts under investigation.)

One can usefully characterize all of this in terms of Robert Stalnaker's distinction between "descriptive" and "foundational" semantics. Stalnaker presents the distinction as follows:

> First, there are questions of what I will call "descriptive semantics". A descriptive-semantic theory is a theory that says what the semantics for the language is, without saying what it is about the practice of using that language that explains why that semantics is the right one. A descriptive semantic theory assigns semantic values to the expressions of the language, and explains how the semantic values of complex expressions are a function of the semantic values of their parts … Second, there are questions, which I will call questions of 'foundational semantics', about what the facts are that give expressions their semantic values, or more generally, about what makes it the case that the language spoken by a particular individual or community has a particular descriptive semantics.[22]

Stalnaker notes that many run these two sorts of semantic projects together, assuming that the constraints on one must also be in play for the other. For instance, Stalnaker argues that Searle and Dummett reject Millian approaches to descriptive semantics because they implicitly assume that an answer to the descriptive question must provide an answer for the foundational question as well.[23] In much the same way, one can understand F&L as rejecting holistic answers to the foundational question because they implicitly take them to also be answers to the descriptive semantic question. Indeed, both OTS and NTS, as understood by F&L, can be understood as working within this sort of 'methodologically monistic' framework where one's descriptive and foundational semantics must either be both atomistic or both holistic. However, once this sort of methodological monism is given up, the constraints on each level will

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20 See, for instance, Davidson 1973, 1974, 1975,1977, 1979,1986. It thus isn't surprising that he is one of the primary targets of F&L 1992.
21 See, once again, Pagin 1997, pp. 17-18.
22 Stalnaker 1997, p. 535.
23 Stalnaker 1997, 542-3. He refers here to Searle 1969 and Dummett 1973.

open up considerably. Davidson provides, as mentioned above, an example of this sort of methodological pluralism.

To put things very roughly, on the Davidsonian view of descriptive semantics, we can understand the meaning of a term in terms of its satisfaction conditions, with, say, "cow" being satisfied by members of the set of *cows* and "brown" being satisfied by members of the set of *brown things.* In this respect, Davidson is no different from atomists like Fodor. Since semantic values of basic concepts are individuated extensionally, compositionality can be accounted for by allowing that complex concepts are constructed classically, with "brown cow" getting the semantic value it does by picking out the set of objects that satisfy both "brown" and "cow".[24]

Nevertheless, the story will be very different at the level of foundational semantics. The Davidsonian understands the satisfaction conditions of any word in a speaker's language as determined by the set of assignments that would maximize the truth of *all* of that speaker's commitments.[25] Many of these commitments would be associated with inferential roles such as the transition from "cow" to "animal" or "cow" to "member of a natural kind", but others (such as those commitments manifested in one's past applications of a term to *particular* objects) may not. Whether a commitment relating to a term is made true by a candidate extension for that term obviously depends upon the semantic values of the other words in the sentence held true, so the assignment of values that maximizes the truth of the speaker's commitments will have to be determined holistically rather than on a word-by-word basis. For instance, if we decide to individuate a biological kind term, say "cow", in terms of the genetic make-up of its members rather than their evolutionary history, this will affect the extension of the other biological kind concepts in the language,

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24 Further, it seems clear that compositionality is only a constraint on one's *descriptive* semantics, and, for instance, Fodor makes no effort to show that compositionality is satisfied at the foundational level. Asymmetric causal dependencies, for instance, don't compose in the way that meanings do, since our causal relation to "brown cow" is not a simple combination of our causal history with "brown" and our causal history with "cow" (see Margolis & Laurence 1999b, p. 67). It is only by presupposing methodological monism that would lead one to think that adopting an atomistic foundational semantics like Fodor's would be required to satisfy the compositionality constraint.
25 This is usually explained in terms of the Davidsonian's commitment to the 'Principle of Charity'. For a more complete discussion of this (and explanation of why this account of Charity sometimes can be attributed more comfortably to the "Davidsonian" than it can to Davidson himself), see Jackman 1999, 2003a.

which will then be individuated in the same way. The extension we settle on for "cow" will thus affect the extension of a term like "horse". In much the same way, the extension of "brown" will be partially determined by the extension assigned to, say, "ochre" if the speaker is committed to the belief that nothing is both brown and ochre.

The Davidsonian thus gives a holistic foundational semantics for how "cow" comes to be satisfied by members of the set of cows and how "brown" comes to be satisfied by the set of brown things. Consequently, it looks as if F&L's claim that "the plausible candidates for the semantically relevant symbol to world relations all look to be *atomistic*" [26] may rest on conflating descriptive and foundational semantics. The question of what the semantically relevant symbol world relations are is clearly one for one's *foundational* semantics, but all of the reasons F&L give for preferring atomic theories to holistic ones apply at the level of one's *descriptive* semantics.

Indeed, holistic accounts of the mind/world relation, such as Davidson's, have a number of advantages over rival atomistic foundational semantic theories such as the sort of 'asymmetric dependence' account that Fodor prefers. According to such asymmetric dependence theories, "cow" means *cow* because:

(1) The concept COW stands in a lawful relation, L, to the property of being a *cow*,

(2) Other lawful relations involving COW, L_1-L_n, are asymmetrically dependent on the lawful relation between COW and *cow*. That is, L_1-L_n wouldn't hold unless L did, and not the other way around. [27]

I will not rehearse in any detail all of the problems commonly perceived to afflict this sort of theory, but will merely suggest that many of them can be understood as arising from its atomistic presuppositions rather than its particular details. For instance, such theories seem ill-suited for dealing with parts of the language like "big", "of", "quickly", or "unless" all of which seem to relate to other concepts rather than being intelligible on their own. [28] The suggestion that one could have say, these three concepts without any others seems much

less credible than the idea that there could be a creature whose only concepts were "red" "cold" and "sweet". The atomist might seem to require a *different* foundational semantics for these others parts of speech, while the holist can allow that, in spite of their occasionally having different sorts of semantic values, the foundational story about how every word acquires its value is the same throughout the language.

Further, atomism at the foundational level commits one to a story about what concepts supervene upon that pushes one towards endorsing either a strong form of innateness about concepts, an unusually robust type of metaphysical realism, or both. [29] Similar problems arise with other atomistic foundational theories, such as the crudest version of the causal theory of reference that emerged in the wake of Kripke's work and quickly ran afoul of the problem that the objects we are causally related to can be grouped in all sorts of ways. [30] Holistic foundational semantic theories, then, are much less likely to leave one with unintuitive psychological and metaphysical commitments than their atomistic rivals, and while they were typically viewed as carrying some serious baggage of their own, most of this has been shown to come only from being a holist at the descriptive level as well. [31]

Holistic Atomism?

Once one clearly distinguishes descriptive and foundational semantic issues, it is possible to create a theory that incorporates the most appealing features of both OTS & NTS, and the Davidsonian position arguably does just this. [32] It

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26 F&L 1991, p.25.

27 See Fodor 1987, 1990, 1991. For a version of this formulation see, Margolis & Lawrence 1999b, p.60.

28 For a discussion for how such cases cause problems for asymmetric dependence theories, see Margolis & Laurence p. 68.

29 Though some versions of the asymmetric dependence account (such as Margolis 1998) seem to avoid the commitment to innateness.

30 For a discussion of this problem and metaphysically committed response to this, see Lewis 1983, 1984.

31 I might also add that, the holistic accounts are better placed to explain apparent fact that the semantic values of our terms are context sensitive (see, for instance, Jackman 2004). Of course, F&L may not see this as an advantage of the Davidsonian theory given Lepore's recent criticisms of contextualism (Capellan & Lepore, 2005).

32 Of course, F&L might not count the Davidsonian picture outline here capturing what they take to be important about OTS, since for Davidson the 'taking true' relation upon which the theory is built arguably fails to be 'non-semantic', and so the Davidsonian account may seem less well suited for any sort of naturalistic reduction hoping to break out of the so called "intentional circle" (Fodor 1991, p. 513, though see Jackman 2003b). Indeed, Davidson has seemed unenthusiastic about the prospects of this sort of project (see, for instance, Davidson

shares important characteristics of OTS because the semantic values of many of our terms are individuated in terms of mind/world relations between words/concepts and their extensions, but it shares important characteristics of NTS because it tells a story about how words/concepts come to have their extensions that allows for a term's semantic value to be at least partially constituted by its inferential relations.

Given the properties it shares with OTS, Davidson's view might thus, in spite of its commitment to holism, count as an atomistic theory as well. Of course, he will not count as an atomist in F&L's sense since they characterize atomism in terms of something like:

(A1)   The possession of a concept does not require the possession of any *other* concepts.[33]

In particular, they claim that "[a] property is *anatomic* just in case if anything has it, then at least one other thing has it," and a property is atomistic otherwise.[34] The claim that semantic properties are atomic thus amounts to the claim that a single word or brain state could have semantic properties even if no others did. However, there are good reasons to deny that atomism should understood this way because (A1) could just as easily be a claim about either one of one's descriptive or foundational semantics. In particular, (A1) could be denied (i) because one thought that any given concept will always have relations to other concepts as *part of its content* (i.e., (A1) is incompatible with one's *descriptive semantics*), or (ii) because one thought that *the story about how any concept acquires its content* will always involve other concepts acquiring their contents as well (i.e., (A1) is incompatible with one's *foundational semantics*). Davidson seems committed to denying (A1), but his reasons for doing so all relate to his foundational rather than his

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1970). However, there is reason to doubt that the requirement that the mind/world relation be non-semantic is an essential part of OTS. F&L, after all, literally bracket this requirement. It seems as if the *basic* idea behind old-testament semantics, which, as F&L put it, was the standard view until this century, lies in its representational account of meaning, not in its commitment to any sort of naturalistic reduction.

33   The assumption here is that we are talking about 'basic' concepts (i.e.: concepts like *brown* or *cow* rather than, say, *brown cow*). Fodor takes the asymmetric dependence account to apply only to basic concepts, with the more complex concepts composed classically, and there is no reason why the holist cannot adopt the same approach.

34   F&L 1992, pp. 1-3.

descriptive semantics. On the Davidsonian story, the difference between how a term is actually applied and what's its semantic value is rests on the fact that the assignment of semantic values that maximizes the truth of all of one's commitments may have to treat some *particular* applications of a term as mistaken. Consequently, if a creature had just one concept, the Davidsonian account has no resources to explain how its application of that concept could ever be mistaken. If one takes at least the *possibility* of error to be essential to concept use, then a Davidsonian foundational semantics will be incompatible with (A1).[35]

Another sense of atomism that straddles both descriptive and foundational semantic questions is:

(A2)   The possession of a concept does not require the possession of any *other particular* concepts.

(A2) follows from (A1) and underwrites F&L's pessimism about the prospects of 'lexical semantics', and it might seem that at the descriptive level, a Davidsonian semantics will be compatible with (A2). However, while his descriptive semantics is atomistic in this sense, it is less clear whether foundational semantics is compatible with (A2). A simple holistic foundational semantics would be compatible with (A2) since different sets of commitments might lead to the assignment of the same semantic value to the concept in question, but one might argue that Davidson's own foundational semantics is incompatible with (A2) since it requires that the possession of any basic concept presupposes the possession of the concepts of *truth* and *belief*.[36]

One would like, then, characterizations of atomism that make it clear which level of semantic theory the view is supposed to be about, and there are characterizations of atomism that are more explicitly directed to either foundational or descriptive semantics, such as:

(A3)   Concepts are identified by how they relate to the world, not to other concepts.[37]

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35   For a discussion of this sort of holistic response to the 'disjunction problem' and the possibility of distinguishing actual and correct usage, see Jackman 1996 (chapter 1), Jackman 2003b.

36   See, for instance, Davidson 1974, 1975, 1992.

37   See, for instance, Margolis 1998, p. 549. One might, of course, wonder whether logical concepts can be characterized as atomistic in this way.

(A4)   Concepts are assigned to particular words independently of what other concepts are associated with other words.

(A3) deals explicitly with how concepts are individuated, so it clearly relates one's descriptive semantics, and on such an understanding, Davidson is an atomist. On the other hand, (A4) deals more explicitly with foundational semantics, and it seems clear that on the Davidsonian view, (A4) must be rejected. If reference is determined holistically, then changing the extension of one term *can* have effects on the extensions of others (even if it *need* not).

Finally, there are many desiderata for a theory of concepts that atomistic theories seem unable to satisfy, but which are not a problem if atomism is merely characteristic of one's descriptive semantics. For instance, an atomistic and extensional story of concepts is typically viewed as incapable of explaining (1) aspects of our classificatory behavior (why we find robins, say to be "better" examples of birds than penguins), (2) our inferential behavior (why we will almost always conclude that something has wheels if we know it is a car), or (3) our 'analytic' intuitions (such as that we seem to know *a priori* that if something is known, then it is true). Defenders of atomistic theories often try to accommodate these phenomena by incorporating their view into a 'dual' theory in which concepts include not only their extension, but also the prototypes, beliefs, and other psychological factors by which the concepts reference is 'presented' to us.[38] However, unlike the more traditional Fregean account where the mode of presentation is expected to *determine* reference, dual theorists "tend to suppose that a concept's identification procedure has nothing to do with its reference."[39] Such psychological factors are "merely associated" with a concept rather than being constitutive of it.[40] Such 'two-factor' accounts of concepts leave them without the unity that they intuitively have.[41]

However, these phenomena are only problematic if one assumes, once again, that just because one has an atomistic descriptive semantics one's foundational semantics must be atomistic as well. If phenomena like our classificatory and inferential behavior can be accounted for by one's foundational semantics, then

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the inability of one's descriptive semantics to explain them is not a problem. If one has a holistic foundational semantics, then such holistic structures can explain these aspects of our behavior even if the descriptive content of their semantics is atomistic. Behavior is explained by the concept's supervenience base, not by the concept's content itself.

Unlike the defenders of the sorts of 'dual' theories mentioned above, the Davidsonian can understand the relation between reference and its 'mode of presentation' in a more traditional way. In particular, since reference is determined by what semantic values satisfy most of the agent's commitments, there is a good sense in which reference is determined by mode of presentation (i.e. it is the job of the foundational semantics to determine the descriptive semantics).[42] The psychological phenomena associated with a concept are partially constitutive of its content, and are not merely associated with it. It is methodological monism about holism and atomism that forces the two-factor conception of content upon us, and without it, concepts are allowed to maintain their pretheoretic unity.

In conclusion, then, it seems as if, by clearly distinguishing foundational and descriptive semantics, one can explain the appeal of both holism and atomism. Further, by giving each type of account a distinct explanatory task, one provides the basis for a synthesis of the Old Testament and the New.
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38   See, for instance, Margolis & Lawrence 1999b, pp. 71-75.
39   Margolis & Lawrence 1999b, p. 72. Though this might seem less so for Margolis 1998.
40   Margolis & Lawrence 1999b, p. 64.
41   As F&L themselves put it, such accounts face Fodor suggests that they face "the nasty question: *What keeps the two notions of content stuck together*?" (F&L 1992, p. 170). For a discussion of the undesirability of such 'bifurcationist' accounts, see Bilgrami 1992.

42   Such modes of presentation do not compose, but since they are not part of the descriptive semantics, there is no need for them to do so.

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