

WILEY

International Phenomenological Society
Philosophy and Phenomenological Research

Brandom's Burdens: Compositionality and Inferentialism

Author(s): Jerry Fodor and Ernie Lepore

Source: *Philosophy and Phenomenological Research*, Vol. 63, No. 2 (Sep., 2001), pp. 465-481

Published by: International Phenomenological Society

Stable URL: <http://www.jstor.org/stable/3071079>

Accessed: 21-09-2016 05:55 UTC

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at
<http://about.jstor.org/terms>



International Phenomenological Society, Wiley, Philosophy and Phenomenological Research are collaborating with JSTOR to digitize, preserve and extend access to *Philosophy and Phenomenological Research*

Brandom's Burdens: Compositionality and Inferentialism

JERRY FODOR AND ERNIE LEPORE
Center for Cognitive Science
Rutgers University

1. Introduction

Robert Brandom has it in mind to run a 'pragmatist' theory of content (/concept possession /linguistic competence).¹ That is, he wants to reconstruct notions like *saying such and such* or *believing such and such* (and, eventually, notions like *knowing what a word means* and *having a concept*) in terms of a distinctive kind of "knowing *how* or being able to *do* something" (17).

"So what?", you might reasonably inquire. "Isn't practically everybody a pragmatist these days by that criterion?" Well, it's true that lots of people think that 'knowing how' is at the bottom of the heap when questions about content arise. But, not every pragmatist is also what Brandom calls an inferentialist. Most semantic pragmatists hold one or another kind of 'dual aspect' theory about the kind of know-how that content supervenes on. Roughly, they think that grasping content is a matter both of knowing how a word/concept behaves in inferences, and also a matter of knowing how to apply the concept to things in its extension. Having the concept of DOG is being able (and disposed) to do a little inferring (e.g., from DOG to ANIMAL); and it's also being able to do a little applying (e.g., of DOG to dogs in conditions that are favorable for dog-spotting). What's striking about Brandom's inferentialist pragmatism is that the applying part more or less drops out in favor of the inferring part.

This, for Brandom, is part and parcel of a wish to emphasize the characteristically human and social character of content. All sorts of things might spot dogs: pre-linguistic infants or mere animals for two cases in point. Even thermostats spot changes in the ambient temperature. But mere differential responding achieves the status of conceptualization only when it becomes

¹ Often enough the subtext of pragmatism is some or other sort of idealism. We wouldn't be surprised if that turned out to be true in Brandom's case too; but we won't raise the issue here.

inferentially elaborated, thereby providing “reasons for making other moves in the language game, and as themselves potentially standing in need of reasons that could be provided by making still other moves” (17). Correspondingly, conceptualization is the typical concern of creatures that give their attitudes linguistic expression, since “expressing something is *conceptualizing* it... in general, addressing it in a form that can serve as and stand in need of reasons, making it *inferentially* significant” (16).

If there are any concepts for which a pure inferential role semantics seems intuitively appealing, it's the ones that correspond to the logical constants. In effect, Brandom's inferentialist program is to model concept possession at large on what he describes as a Gentzen-style account of logical vocabulary. “The content to which one is committed by using the concept or expression may be represented by the inference one implicitly endorses by such use, the inference, namely, from the circumstances of appropriate employment to the appropriate consequences of such employment... [This is] a generalization of a standard way of specifying the inferential roles of logical connectives” (62). If you find it *prima facie* not plausible that the semantics of, say, ‘bird’, ‘oxidization’, ‘xylophone’, ‘zeugma’ or ‘afternoon tea’ is interestingly illuminated by the semantics of ‘and’, you will not be sanguine that this program will succeed. That these qualms are well founded is the substance of much of what follows. First, however, a number of geographical remarks.

To begin with, Brandom's pragmatism, though it is reductive, isn't any sort of naturalism. Brandom wants to stand neutral on the question whether it's possible to replace semantic/intentional vocabulary with ‘purely physicalistic’ terms *salva veritate* (or anything else of interest (185–86)). An explication of content by reference to ‘knowing how’ clearly would not decide this issue since the latter is itself up to its ears in intentionality.² Rather, what Brandom proposes is something like a reduction of the representational to the intentional (or better: to the intentional and the normative): Concepts and the like are individuated by their content, and there's nothing more to having a concept than knowing how to use it. And, whatever exactly knowing how to use a concept may come to, no clauses about representation, satisfaction, truth, or denotation are ineliminably required in the analysis. Notice that this precisely reverses the order of explication that is endorsed by ‘representational’ theories of mind, according to which it's the vehicles of thought (Ideas, or mental representations, or whatever) that have the ‘underived’ intentionality from which the contents of propositional attitudes and the formulas of public languages are supposed to be inherited.

² Brandom is entirely alert to this. Cf. passages like “Forming an intention... to put a ball through a hoop requires knowing what it is to put a ball through a hoop—what must be *true* for that intention to *succeed*” (82).

But if representationalism is the explicit enemy, so implicitly is the Semantic Cartesianism (our term, not Brandom's) of which representational theories of mind are just one species. Anybody is a Semantic Cartesian who holds that *having the concept F is being able to think about F-ness (as such)* and, correspondingly, that *having an expression that means F is being able to express one's thoughts about F-ness (as such)*. According to this sort of theory, the appeal to semantic notions (like 'representation of', and 'thinking about') in accounts of linguistic and conceptual content is ineliminable, short of a naturalistic reduction. And the order of exposition, according to all versions of Semantic Cartesianism, is *from* the semantics of (mental) representation *to* the intentional contents of propositional attitudes, not the other way around. We're much inclined to think that the Cartesian has the right end of this stick. Brandom's arguments to the contrary haven't shaken us in this conviction.

One more preliminary point. Brandom often writes as though he takes his inferentialism to be continuous with theories of content that he associates with Kant, the young Frege, and Hegel. The idea is, roughly, this: If you're a Cartesian, you're likely to suppose that thinking *about* (e.g., thinking about *redness*) is what's basic to theories of content; thinking *that* (e.g., thinking that *this fire engine is red*) requires, though it does not reduce to, thinking *of* the fire engine and *of* being red. Since, in this order of analysis, *thinking about* is taken to be prior to *thinking that*, referring is likewise taken to be prior to judging. Whereas, if you're an inferentialist, you're likely to think that *judging* is what's primitive, since *judgments* (or their linguistic expressions) are, as it were, the smallest things that can enter into inferences. Recognizing the priority of judging to other kinds of mental acts is, according to Brandom, what inferentialism has in common with its Kantian, Hegelian and Fregean precursors.

Now, we don't know about Hegel and, life being short, we aren't expecting to find out. But we're pretty sure that neither Kant nor the young Frege was an inferentialist in anything like Brandom's sense. It's true that both of them thought that judgment plays a fundamental role in the theory of mind; and, correspondingly that the vehicles of judgment (sentences and thoughts) play a fundamental role in the theory of meaning. Primarily, this was a point against the empiricists who, according to Kant and Frege, had a theory of reference but no theory of predication. In effect, Kant and Frege argued, it is because *thinking about* isn't sufficient for *thinking that*, that empiricism is in principle unable to produce an adequate theory of cognition. This is, to be sure, a very important insight; somebody ought to call it to the attention of connectionists. But it doesn't make Kant or Frege an inferentialist because, simply, your holding that *thoughts are the units of inference* is entirely compatible with your holding that *concepts are the constituents of thoughts*, even if you deny that the content of either thoughts or concepts is constituted by

their inferential roles.³ Likewise for language. Strawson, for example, held that referring is a speech act and that it's prior to asserting in the order of analysis. Why isn't this a Kantian view? What Kant and Frege did for the theory of mental representation was to *add predication*, not to *subtract reference*.

Here's another way to put this point: Kant might well have, and Frege would have, agreed that identity of inferential role is sufficient for identity of content. (Frege does so explicitly in section 3 of his *Begriffsschrift*.) But that wouldn't, of course, imply that inferential role is primitive in semantic explanations. In fact, as we read them, Kant and Frege *couldn't* coherently have been inferentialists. This is because (unlike Brandom; see below) they had an answer to the question '*which inferences does content supervene on; which inferences constitute a concept's inferential role?*' Their answer was that content supervenes on *analytic* inferences; to know what 'dog' means is, *inter alia*, to know what inferences follow from '...is a dog' in virtue of the *meaning* of the predicate. (Likewise, *mutatis mutandis*, for having the concept DOG.) So, as we read them, though Kant and Frege held that the content of a concept supervenes on its inferential role, they also held that the inferential role of a concept supervenes on its analytical connections. Since analyticity is *truth* in virtue of *meaning*, this makes these semantic properties of a concept prior to its inferential role. Kant and Frege were good Semantic Cartesians after all. (To say nothing of their being good Semantic Platonists.⁴)

So much for the scholarship; now to the dialectics. There are two key questions that theories of content must answer, and which have generally been supposed to be hard for inferential role accounts of meaning. These are: *Which inferences are meaning-constitutive?* and *How do you explain the compositionality of meaning?* A semantics that fails to provide these questions with adequate answers is, we think, *ipso facto*, not tenable. Let's, then, see what Brandom's inferentialism has on offer.

2. Which Inferences?

Brandom's semantics says that the content of an expression (/thought) is (/supervenes on/ is "determined" by (29, 47)) its inferential role. This is, however, a darker doctrine than it may at first appear. Thus, *prima facie*,

³ The standard neo-Cartesian view being that the content of thoughts is constituted by the content of their conceptual constituents, and the content of concepts is determined by some such symbol-world connection as causation.

⁴ It would be much in the Kantian spirit to suppose that you can't *think of* something without having recourse to some category or other; this might be a generalization of the idea that there is 'no seeing without seeing as'. But that would be entirely compatible with the metaphysical thesis that what you're *thinking that* depends on what you're *thinking of* in the sense that the vehicles of reference are the constituents of the vehicles of inference. What's prior to what depends a lot on what kind of priority you have in mind.

inferentialists mustn't hold that *identity* of inferential role is a necessary condition for identity of content. For example, whereas it looks like the belief that P and the hope that P' have the same content (*viz.*, P), their causal-cum-inferential roles are surely radically distinct.⁵ But nor may inferentialists hold that the content of an expression supervenes on its role in *purely logical inferences* (i.e., on inferences that turn just on the meanings of the logical constants); for these do not, in general, distinguish between formulas of the same logico-syntactic type (for example, between 'that's a cat' and 'that's a mat'). The typical way of running a conceptual role semantics is therefore to distinguish a class of *analytic* inferences, and say that they, and only they, are constitutive of the concepts that they contain. Thus, if (but only if) it's analytic that cats are animals, then the inference CAT → ANIMAL is constitutive of one or the other (or both?) of the concepts.

But this conventional way of solving the 'which inferences?' problem isn't, of course, available to Brandom. As we remarked a few paragraphs back, analyticity is supposed to be *truth in virtue of meaning*. For the content of a concept to supervene on its role in *analytic* inferences is thus for the inferential role of that concept to supervene on its semantics. This is, to be sure, the order of dependence that a Cartesian assumes if he recognizes a notion of analyticity at all. Barring familiar Quinean scruples, it seems to us clearly the right way to proceed. Inferentialism, however, is prohibited from taking this route, since the inferentialist's point in a nutshell is that meaning is a construct from inferential role, not the other way around.

So, then, what *is* Brandom's answer to 'which inferences?' Well, actually, he doesn't say. The idea, as far as we can make out, is that conceptual

⁵ There are other reasons that are arguably more pressing. As Brandom rightly remarks "Inferentialism of any sort is committed to a certain kind of semantic *holism* as opposed to the *atomism* that often goes hand in hand with commitment to a representationalist order of semantic explanation.... Such holistic conceptual role approaches to semantics potentially face problems concerning both the *stability* of conceptual contents under change of belief and commitment to the propriety of various inferences, and the possibility of *communication* between individuals who endorse different claims and inferences" (29). We have elsewhere emphasized the dire consequences that semantic holism has for intentional explanation of any sort (See Fodor and Lepore, 1992) and we don't take back a word of it. But we won't dwell on that now, because Brandom has little to say about such concerns except that they "... are rendered much less urgent... if one thinks of concepts as *norms* determining the *correctness* of various moves" (*ibid.*). Actually, we don't understand that very well. Suppose you think that DOG implies ANIMAL, and I think that it doesn't. Surely, a difference in norms is *thereby* implied, since whereas you think it's *permissible* to argue from DOG to ANIMAL, I think that such inferences *ought not* to be countenanced. (You might say: 'Well, that kind of difference of norms doesn't count'; but that only replaces the 'which inferences?' problem with the 'which norms?' problem, for a total gain of no yardage.)

We won't press the holism worries in what follows; but we do urge you to keep them in mind in evaluating the inferentialist program.

mastery "...is not an all-or-none affair; the metallurgist understands the concept of *tellurium* better than I do, for training has made her master of the inferential intricacies of its employment in a way that I can only crudely approximate" (64). Or, as he puts it elsewhere, "Concepts... must come in packages (though it does not yet follow that they must come in just one great big one)" (16). Maybe all of this is so,⁶ but of course it begs such questions as what it is, in the situation imagined, that determines whether *the metallurgist's concept of tellurium is the very same one that I am struggling to grasp?* Since this seems to be just the 'which inferences?' question all over again, the example doesn't help with the problem at hand.⁷

In any event, as far as we can tell, Brandom is committed to holding that at least some of the *material* inferences in which an expression is implicated, are constitutive of its content. This emerges in passages like the following: "The kind of inference whose correctnesses [*sic*] determine the conceptual contents of its premises and conclusions may be called, following Sellars, *material* inferences. As examples, consider the inference from "Pittsburgh is to the west of Princeton" to "Princeton is to the east of Pittsburgh," and that from "Lightning is seen now" to "Thunder will be heard soon." It is the contents of the concepts *west* and *east* that make the first a good inference, and the contents of the concepts *lightning* and *thunder*...that make the second appropriate. Endorsing these inferences is part of grasping or mastering those concepts" (52). This commitment doesn't, of course, answer the 'which inferences?' question, because we still don't know which *material* inferences are crucial. But notice, in any case, the strain that invoking material inferences in this context puts on the idea that inferential role can reconstruct notions like concept possession.

It may be a matter of linguistic rule, or social convention, or whatever, that determines whether dogs have to be animals. But only God can determine that lightning is reliably followed by thunder. Whether thunder reliably follows lightning has *nothing to do* with which inferences I, or my society, or even the experts I defer to, take to be (in Brandom's term) 'appropriate'.⁸ Thunder follows lightning not because that's the way we play the language game but because of the laws of meteorology. Surely, what inferences are

⁶ But also maybe it's not. We would have thought that the relevant difference between us and the metallurgist is not that she has a better grasp on the concept TELLURIUM than we do, but that she *knows more about tellurium* than we do (come to think of it, who doesn't?). Semantic assent is a fine thing in its way but it does not, as one says in Australia, cure wooden legs.

⁷ Perhaps, in the case of 'tellurium' and the like, it has something to do with patterns of deference; but natural kind terms aren't the general case; and, anyhow, a pattern of deference isn't an inferential role.

⁸ Brandom says 'appropriate' where Semantic Cartesians would say 'true'. Embarrassing questions like 'are appropriate assertions *ipso facto* true?' and 'are false assertions *ipso facto* inappropriate?' never get raised; perhaps as a matter of principle.

materially good is a matter of how the world is; *and, surely, we are arbitrarily ignorant of how the world is.* All this being so, the more that the material inferences that a concept is involved in are supposed to constitute its inferential role—and hence, its content—the less grasping the concept can be identified with mastery of its inferential role. If, at the limit, it's supposed that grasping a concept requires mastery of *all* the corresponding material inferences, then only God has any concepts.⁹

The score so far: Like everybody else who thinks that content comes from inferential role, Brandom needs, but doesn't have, a story about which inferences are the ones that content comes from. What Brandom adds to the general perplexity is the idea that these include material inferences *inter alia*. That makes it hard to see how Brandom can acknowledge the truism that lots of people share lots of concepts. But, still worse, it precludes him distinguishing what the world contributes to the reliability of inferences from what the (putative) rules of language contribute.¹⁰ We don't, ourselves, think that languages are much like games. But, even if we did, we wouldn't want 'thunder after lightning' to be a linguistic rule. 'Analytic ethics' and 'analytic metaphysics' and the like were quite bad enough; the prospect of an analytic meteorology is really more than we can bear.

3. Compositionality

Here are some propositions that practically everybody agrees on, including Brandom as we read him (see ch. 4).

- i. Human linguistic and cognitive capacities are productive; and the explanation of this fact turns crucially on their being compositional.¹¹
- ii. As far as anyone knows, compositionality means that both the syntax and the semantics of 'long' linguistic expressions like sentences (and *mutatis mutandis*, 'long' mental representations like the ones that express thoughts) are determined entirely by the syntax and semantics of their primitive constituents.

⁹ Though he doesn't say so, it may be Brandom's view that, insofar as material inferences are supposed to be content-constitutive, the crucial semantic relation among concepts is *similarity* rather than *identity* of content. Many inferential role semanticists who are wary of appeals to analyticity have suggested this way of dealing with holism problems. But here the devil is in the details and, so far as we know, there aren't any. See Fodor and Lepore, 1999.

¹⁰ To be sure, this is a distinction of which Brandom is explicitly suspicious. So be it; but then he needs some argument that he can make sense of the notion of content without employing it. To say that he has no such argument on offer would be to put the case very mildly.

¹¹ Likewise, minds and natural language are invariably systematic. Brandom doesn't discuss systematicity, but the relevant considerations run parallel to the ones about productivity. See Fodor and Pylyshyn, 1988.

- iii. Compositionality is therefore ‘not negotiable’; a theory of content that can’t accommodate a notion of compositionality adequate to the explanation of productivity is *ipso facto* unacceptable.

We take these considerations very seriously; and we have argued elsewhere that they preclude not just inferentialism, but *any* theory according to which inferential role is content-constitutive. (See Fodor and Lepore, 1992.) This is because, according to us, inferential role is itself non-compositional: in general, the inferential role of a sentence/thought is not determined by the inferential roles of its constituents. Brandom doesn’t consider this objection at all. Since we have already made it frequently, loudly and in many places, we propose to waive it here and consider just those aspects of the compositionality problem that Brandom does discuss.

To begin with, we assume that it’s implicit in (ii) that sentences are constructs out of subsentential expressions and, *mutatis mutandis*, that thoughts are constructs out of constituent concepts. This is, in principle, something that a Cartesian is entirely comfortable taking for granted. No doubt Cartesians, like everybody else, are hard put actually to provide an account of how compositionality works. It is, indeed, possible to view the last fifty years of work on the syntax and ‘formal semantics’ of natural languages as propaedeutic to such an account. Our point is just that, since Cartesian Semantics takes reference to be prior to truth, and *thinking about* to be prior to *thinking that* (see above), there is no reason why it shouldn’t likewise take the semantics of sentences and thoughts to be derivative from the semantics of words and concepts.

The inferentialist’s situation is, however, very much different. Remember that he is committed to the metaphysical and explanatory priority of *judgments* to other mental acts. Since the typical linguistic vehicle for expressing a judgment is a sentence, it is thus sentences, rather than their constituents, over which content properties are defined in the first instance. So, before he can even start on the compositionality problem, Brandom has to make clear how the semantics of subsentential expressions might be determined by the inferential roles of their sentential hosts. “The linguistic community determines the correct use of some sentences, and thereby of the words they involve, and so determines the correct use of the rest of the sentences that can be expressed [*sic*; ‘constructed’?] by using those words” (128).

In fact, quite understandably, Brandom discusses only one aspect of this problem. He wants to show that, starting with the inferential role of sentences, and assuming no subsentential semantics or syntax, he can isolate and appropriately characterize the class of singular terms, either in linguistic or in mental representations. That would amount to less than an inferentialist account of compositionality, but we agree with Brandom that achieving it would greatly strengthen the case for inferentialism. So, it’s very important,

for our point of view, whether the project succeeds. Well, it doesn't; as we will now see in some detail.

In effect, Brandom has a two-step definition of 'singular term' and, as far as we can tell, neither step works. The first move is to use the Fregean notion of substitution to define a grammatical class of subsentential expressions that is, according to Brandom, guaranteed to be a (possibly improper) superset of the singular terms, thereby deriving their syntax from the underlying notion 'well-formedness-preserving inference.' Given the kind of grammar that Brandom has in mind, the notion of membership in a syntactic category is reasonably clear: "Two subsentential expressions belong to the same syntactic or grammatical category just in case no well-formed sentence...in which the one occurs can be turned into something that is not a sentence merely by substituting the other for it" (130). That is, the grammatical categories are conceived as a set of inter-substitutable segments of sentences (where a sentence is something that has a characteristic sort of speech act potential; in particular, a characteristic inferential potential in the case of declarative sentences.)¹²

We think we follow the argument so far, in that we're prepared to assume that a grammatical category is essentially a set of expressions that can substitute for one another in a sentence, *salva congruitate* (that is, without destructive effect upon the grammar of a sentence. Actually, we will take back this concession later on; but one thing at a time). Since, however, this is a perfectly *general* notion of grammatical category, we don't see how it helps with the problem of isolating the *particular* grammatical category to which singular terms belong. After all, substitution for an adjective, or an adverb, or a determiner, or a preposition... etc. will also generate a grammatical class. For example, you can think of the (English) adjective as the grammatical category generated by substituting for 'red' in 'John ate a red apple'. But, of course, the singular terms don't belong to that class. Rather, the category of singular terms is what you get by substituting in a sentence *for a singular term* (e.g., for 'John' in 'John ate a red apple'). On pain of circularity, however, that is of no use to Brandom, whose aim is a procedure for *introducing* 'singular term' into a theory where the only primitives are 'sentence' and 'well-formedness-preserving substitution.'

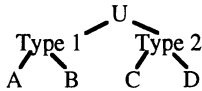
In effect, our point is just the obvious one that recursive definitions need starting axioms, and starting axioms need justifications. Suppose you think that NPs are the expressions that substitute in the frame '___ PRED' to produce sentences. You thereby assume not just the notion *sentence*, but also the notion *predicate*. To be sure, you can avoid this by just stipulating that

¹² Notice that, strictly speaking, Brandom allows himself two fundamental notions in the reconstruction of 'singular term'; viz., *inferential potential* and *substitution that preserves well formedness*. Presumably, neither of these reconstructs the other.

some expression *e* is a predicate; and you can then proceed, in the usual style of recursive definition, to identify the NPs as the set of expressions that substitute *salva* sentencehood in the frame ‘___ *e*’, and the predicates as the set of expressions that substitute *salva* sentencehood in the frame ‘NP ___’. This defines ‘PRED’ and ‘NP’ relative to ‘S’ *together with the assumption* that *e* is a predicate; so, if you were to pick as ‘*e*’ some expression that is *not* a predicate, (‘of’, as it might be) you will get misdefinitions of ‘NP’ and ‘PRED’. (For example, the NPs are not identifiable with the expressions that substitute *salva* sentencehood for ‘He is the man I showed you a picture’ in ‘He is the man I showed you a picture of’.) This is a point that Chomsky made with considerable effect against taxonomic linguists some four decades ago; they too had thought that appeals to substitution in sentences would ground a “discovery procedure” in terms of which ‘NP,’ ‘PRED,’ and the like could be defined. As far as we know, however, nobody in linguistics thinks that any more.

So much on the assumption, implicit in Brandom’s appeal to the substitution test, that grammatical classes form a hierarchy of sets of subsentential expressions. In fact, however, they don’t; ask any linguist (or see Chomsky, 1965). Consider, for example, the class of nouns (to which, presumably, singular terms *ipso facto* belong). You might suppose that they are a proper subset of the NPs; e.g., the ones that substitute for ‘John’ in, ‘John ate his own lunch’. But that doesn’t work because *‘Mary ate his own lunch’, and ‘Mary’ is surely a noun. You could try identifying the nouns with the NPs that substitute for ‘John’ in ‘John ate his or her own lunch’ since ‘Mary’ is among those. But notice *‘They ate his or her own lunch’. In fact, there is no way to represent the distinctions (‘masculine noun’/ ‘feminine noun’) and (‘singular noun’ / ‘plural noun’) as a hierarchy; *all* the arrangements of these categories are possible. The moral usually drawn is that the singular nouns aren’t a *subset* of the nouns; rather, they are the nouns that bear the feature ‘+ singular’. Patently, the taxonomies that feature assignments can generate are a superset of the hierarchical taxonomies.¹³ So, it’s a serious mistake to rest a

¹³ Consider a hierarchical account of the arrangement of a universe according to which individuals of types A or B are of Type 1 and individuals of types C or D are of Type 2, so:



Patently, this taxonomy is incorrect if there are (e.g.) As of Type 2 or Ds of Type 1. Compare the theory where +/- Type 1 and +/- Type 2 are construed as *features* of the individuals belonging to A, B, C or D. On the latter account, there are allowed to be individuals that are both +Type 1 and As, individuals that are +Type 2 and Bs, and so forth. The empirical claim in the text is that the relations between the linguistic categories Masculine/Feminine, on the one hand, and Singular/Plural, on the other, are patently of the second kind rather than the first.

theory of grammatical categories on a notion of well-formedness that permits only taxonomies of the latter kind.¹⁴

Pace Brandom, it's not possible to define 'Subsentential English wff' in terms of 'sentence' and 'substitution'. In effect, you have to go the other way around; start with the notion of a subsentential English wff, and define 'English sentence' in terms of it. Just as Cartesian accounts of compositionality have always thought, the units of syntactic analysis are subsentential; this is so even though it's whole sentences that express the units of *thought* (and inference).

Suppose, however, that we just *give* Brandom a syntax of English that specifies the well-formed subsentential expressions. Can he *then* proceed to identify the *semantically* singular terms without also presupposing notions like reference, denotation, and the like? That would be no small trick even if, having performed it, he is still in debt for a notion of syntax that his theory of compositionality is, *pro tem*, unable to reconstruct.

A Cartesian will bet that he can't. That's because Cartesians suppose that subsentential expressions are the units, not just of syntactic analysis, but of semantic analysis as well. In particular, Cartesians think that whether an expression is a singular term depends on the symbol-world relations it enters into, not (or not just) on the inferential roles of the symbols that contain it as a constituent. Well, we don't have a proof that you can't identify singular terms in a way that would satisfy inferentialist scruples; but we're pretty clear that Brandom's idea for doing so won't work.

Brandom's proposal is to use a substitution test: singular terms are all and only the ones for which the schema S_1 is valid:¹⁵

$$S_1: (Fx \rightarrow Fy) \text{ iff } (Fy \rightarrow Fx)$$

Thus, for Brandom, it is part and parcel of 'Mark Twain' and 'Samuel Clemens' being singular terms that, if you are prepared to infer from 'Mark Twain is the author of *Tom Sawyer*' to 'Samuel Clemens is the author of *Tom Sawyer*', then you should likewise be prepared to infer from 'Samuel Clemens is the author of *Tom Sawyer*' to 'Mark Twain is the author of *Tom Sawyer*'. Contrast 'This is red' with 'This is colored', an inference that is not, of course, valid if you substitute 'red' for 'colored' and *vice versa*. (For purposes of the discussion, we assume that definite descriptions are singular terms; many of the examples that Brandom gives to show how singular terms

¹⁴ Of course, there needn't be anything wrong with applying a hierarchical notion of grammatical category to some or other *regimented* language. It may be that Brandom is implicitly assuming that the syntax of English works like the syntax of typical formalizations of quantificational logic. But it doesn't.

¹⁵ Thus, as Brandom remarks, both the syntax and the semantics of singular terms are determined by their behavior in inferences that involve substitution; the difference is whether it's truth or well formedness that the substitutions preserve.

work are in fact definite descriptions. We're not at all clear that this is the right treatment of definite descriptions; perhaps they are quantifiers (Russell, 1905). But we won't argue the point here.)

It is, to put it mildly, not obvious why anyone should expect that the singular terms are identifiable with the ones for which S_1 is valid. It may be that Brandom is assuming that, whereas inferences that substitute singular terms depend fundamentally on *identity*, inferences that turn on predicates depend fundamentally on notions like set inclusion. The point would be that S_2 is valid (barring intensional contexts), but S_3 is not.

S_2 : $a = b$ iff $(Fa \text{ iff } Fb)$

S_3 : $a \in b$ iff $(Fa \text{ iff } Fb)$

Whether or not this diagnosis is correct, however, it seems clear that there are counter-examples to Brandom's account. Thus, for example, there are inferences involving singular terms that are valid in one direction but not in the other because they turn on part-whole relations. Consider 'John painted his whole arm red' \rightarrow 'John painted his wrist red', which is only valid in that direction. (To be sure, this example assumes that 'his whole arm' and 'his whole wrist' are singular terms, which is in the spirit of Brandom's assumption that definite descriptions are. But suppose that's wrong. Still, 'this' and 'that' are singular terms if anything is a singular term; but 'This is entirely red' \rightarrow 'That is entirely red' can be valid even if 'That is entirely red' \rightarrow 'This is entirely red' is not, as in the case where 'this' refers to my arm and 'that' refers to my wrist. Likewise, with paradigm cases of names. 'Father was at Magdalen' implies 'Father was at Oxford' but not *vice versa*.) Indeed, as far as we can see, there could be all sorts of inferences which (as a Cartesian would put it) involve relations among individuals but aren't biconditional. Here's a quickie that isn't about parts and wholes: A little glass in a big glass (right side up). If the big glass is filled with water, then the little glass is too; but not the other way around.

And so forth.

Having argued, to his own satisfaction, that the singular terms can be identified by reference to his substitution test, Brandom then goes on to argue that conditional reasoning and reasoning from negations both presuppose expressions that are singular terms by this criterion. If we're right about his test for singularity not working, however, then the most these arguments can show is that if a language can express conditionality and/or negation, then it must contain expressions for which S_1 is valid. This result is interesting if it's right, but clearly it can't underwrite the sorts of metaphysical conclusions that Brandom takes himself to have established; e.g., that rich languages

must acknowledge a notion of object; more generally that “The limits of [my] language... means the limits of the world” (155).

Summary so far: As far as we can see, inferentialism can’t answer the question ‘Which inferences are concept constitutive?’, and it likewise can’t answer the question ‘How does compositionality work?’ It may be, of course, that *no* theory of meaning can answer either of those questions, in which case we are all in deep trouble. But our point is that they are intractable for inferentialists *qua* inferentialists. In the first case, that’s because even if content supervenes on inferential role it doesn’t follow that inferential role is metaphysically prior to content. For that matter, even if you assume that its inferential role is an *essential property* of a concept, it patently doesn’t follow that concepts are, metaphysically speaking, constructions out of their inferential roles. (Presumably, it’s necessary that sisters are siblings. It doesn’t follow either that SISTER is a construct out of SIBLING or *vice versa*.) Likewise, even if ‘thinking that’ is metaphysically prior to ‘thinking about’, in the sense that you can’t do any thinking of unless you can also do some thinking that, it’s perfectly possible that the semantics of sentence length thoughts should be constructed from the semantics of their conceptual constituents.

It strikes us as plausible that a semantics that can’t do ‘which inferences?’ and can’t do compositionality is likely to get a lot else wrong too. We will conclude by discussing, relatively briefly, three subsidiary issues that Brandom raises: the *de re/de dicto* distinction, the status of reliabilism in epistemology and the role of normativity in the analysis of content.

4. De Re/De Dicto

Most people think that there is an important distinction between the belief-attributing sentences that are true *de dicto*, and the ones that are only true *de re*. This distinction is supposed to show in such ambiguities as: ‘John believes Orcutt is a spy’. Like Brandom, we think it’s important that a semantic theory be responsive to these intuitions. They are, however, *prima facie* hard for an inferentialist to accommodate. That’s because it’s so natural to treat the *de re* reading of a belief ascription as one that remains *true* under substitution of *coreferring expressions*; and, *prima facie*, inferentialists have no access to a robust notion either of truth or of reference. Brandom has, on offer, an alternative construal of the distinction; one he says that he shares with all and only Dan Dennett. In fact, we’re pretty sure it’s wrong.

The basic idea is that

...the distinction between *de dicto* and *de re* should be understood to distinguish not two kinds of belief or belief contents, but two kinds of ascription... My suggestion is that the expressive function of *de re* ascriptions of propositional attitude is to make explicit which aspects of what is said express commitments that are being attributed and which express commitments that are being undertaken. The part of the content specification that appears within the *de dicto* ‘that’ clause is limited to what, according to the ascriber, the one to whom the commitment is

ascribed would ... acknowledge.... The part of the content specification that appears within the scope of the *de re* 'of' includes what ... is acknowledged [by the ascriber] as an expression of what the target of the ascription is committed to (176–77).

For all we know, this may be a correct account of some of the pragmatics of *de re* and *de dicto* ascriptions; perhaps, that is all that Brandom means to claim for it. What seems clear, however, is that you can't explicate the semantic notion of a *de re* reading by reference to the part of the ascribed belief for which the attributer is (or even should be) prepared to take responsibility. Consider John, who says that 'Bill believes the present king of France is bored'. Question: Can the *de re* reading be reconstructed as the one that attributes 'the present king of France' to John? Answer: Clearly not; they aren't even equivalent. We assume, after all, that *de re* ascriptions do remain true under substitution of coreferring expressions, whether or not it's appropriate for semantics to identify them by adverting to the fact that they do; surely, to give this up would be simply to change the topic.¹⁶ So, then, the result of substituting in the *de re* reading is true whatever true description of the current king of France you put in place of 'the present king of France'. In particular, it remains true whether or not the substituted description is one that the ascriber is prepared to acknowledge.

'Right', you reply; 'but that's only because you've misunderstood the view. What's claimed is that the *de re* reading holds for and only for those descriptions that the ascriber *should* accept. *De re* is a normative notion too', This presumably means that the *de re* ascriber is making some sort of mistake—misusing the language—whenever he rejects an ascription that differs from his own only in the substitution of a coreferring expression. Well, if that's the norm, then only God is without sin. Excepting God, nobody can (hence, nobody is required to) identify the class of descriptions referentially equivalent to his own, and we take it that there can't be a norm that nobody but God could comply with. This should be particularly embarrassing for semanticists who think that *material* inferences are constitutive of inferential roles, since it apparently implies that (barring accidents) nobody could use a singular term correctly unless he knew *all* the true identity statements in which the term is implicated.¹⁷

¹⁶ *A propos*: it would also burden Brandom with eccentric accounts of *object* and *objectivity*, since he wants to define these by reference to the *de re* readings of propositional attitude attributions.

¹⁷ Unsurprisingly, the same sort of point also holds about how quantifying in works with respect to *de re* belief ascriptions. Suppose you believe that Vulcan exists. Then, if Brandom's story is right, I could presumably express something true with the form of words 'Bill believes of Vulcan that he exists' where this means that I take responsibility for ascribing to Bill a *de re* belief about Vulcan.

5. Reliabilism

Suppose 'John's belief that a is F is rational' could be analyzed as something like 'John's belief that a is F was arrived at by a reliable belief-producing procedure'. This would be bad for Brandom, because it would mean that even if mind/world relations don't enter into the analysis of semantic notions like *content*, they do enter into the analysis of epistemological notions like *rational belief*.

In fact, though Brandom thinks that there's a lot that's right about reliabilism, he also thinks that it can't be literally true. He has several reasons for holding this, but the crucial one is that reliability *is context sensitive*; there is no general context free notion of reliability in terms of which a corresponding context-free notion of rationality can be reconstructed. "... the reliability of the belief-forming mechanism varies depending on how we describe the mechanism and the believer. [Suppose pseudo-barns are rare in Barn Facade County, but that elsewhere they are frequent. Then] described as apparently perceiving this barn, [the observer] is reliable and knows that there is a barn in front of him. Described as an apparent barn-perceiver in [the state at large] he does not know there is a barn in front of him..." (116). And so forth.

But this can't be a serious objection to reliabilism since, though the reliability of perception is indeed context relative, so too is the reliability of every other kind of instrument that's deployed in rational belief fixation. It is, *ceteris paribus*, rational to believe that the room is hot if the thermometer reads 105°. That's true even though the reliability of thermometers for measuring temperature is context relative; they don't work on the sun, and they don't work near absolute zero. The moral of the context relativity of the reliability of thermometers is *not*, however, that using them to acquire a belief about the temperature is insufficient to rationalize the belief. Rather, it's that, insofar as it's an epistemically interesting notion, reliability is really a three-place relation; *viz.*, between the context of measurement, the parameter that's measured, and the instrument that's employed to measure it. This being so, it's available to a reliabilist to hold that a procedure for belief acquisition (perceptual or otherwise) might be sufficient to justify a belief in a certain circumstance even though it would not have been sufficient to justify that same belief had the circumstances been otherwise. We see no reason at all why this concession should make a reliabilist unhappy. Compare: the fact that *the very thought that is true in some circumstances may be false in others*; that this is so does not impugn the notion of truth. In particular, it doesn't impugn the idea that truth is a condition on a belief counting as knowledge.

6. Normativity

This will be a very short section. Apparently, Brandom thinks that the essential insight of inferentialism is that content is a *normative* notion. For: content is to be explained in terms of knowing how; and knowing how invokes rules, procedures and the like; and rules, procedures, and the like are the kinds of things that can be applied rightly or wrongly. (See *circa* 162.) This is fine with us. But we're puzzled by what appears to be Brandom's assumption that you can't make a comparable observation if you approach the notion of content from such starting points as truth, truth-condition and the like. As we remarked above, truth is itself a normative notion; it's what you *ought* to try to believe, all else equal. And, for better or worse, it's part and parcel of contemporary Cartesianism to suppose that truth conditions are what you need to reconstruct notions like representation (see, e.g., Davidson, 1984).¹⁸ So, what is all this stuff about normativity?

Brandom says of some of his main conclusions that they are "odd and marvelous."¹⁹ And indeed they would be if only they were true. As things stand, the relevant points against 'inferentialism' are banal and obvious: You can't rely on the notion of inference to abstract the world from the theory of meaning. This is because you can't abstract the notion of truth from the notion of inference; truth is what good inferences preserve, and truth is a symbol-world relation. Likewise, if the language that you talk/think in happens to be productive, then you can't subtract the notion of reference from the notion of truth, since productivity demands compositionality, and compositionality implies the priority of subsentential semantics to sentential semantics, and referring is the typical job that subsentential expressions perform. And, finally, you can't subtract the notion of an object from the notion of reference because, in the paradigm cases, objects are what subsentential expressions refer to.

Will anybody who finds any of this in the least surprising please raise his/her hand?²⁰

¹⁸ It is, of course, independently plausible that representation is a normative notion; for sure, some of your representations are *misrepresentations* (unless you are God).

¹⁹ For example: "we can say that two assertible contents are *incompatible* in case *commitment* to one precludes *entitlement* to the other" (194). Whereas, we would have sworn that two statements are incompatible just in case it's necessary that if one is true, the other is false. You can no more reduce (in)compatibility to an epistemic notion like entitlement than you can reduce truth to an epistemic notion like assertibility; not, anyhow, if it's part of the story that everybody is obliged to know the entitlement conditions of the assertions they can make. To suppose that you can reduce truth to assertibility *by* reducing (in)compatibility to entitlement strikes us as pretty close to begging the question. Compare Brandom's ch. 6.

²⁰ Thanks to Alex Oliver, Carlo Penco, and Rob Stainton for comments on an earlier draft of this paper.

REFERENCES

- Brandom, Robert, *Articulating Reasons*, Cambridge, MA: Harvard University Press, 2000.
- Chomsky, Noam, *Aspects of the Theory of Syntax*, Cambridge, MA: MIT Press, 1965.
- Davidson, Donald, "Truth and Meaning", in *Essays on Truth and Interpretation*, Oxford: Oxford University Press, 1984.
- Fodor, J. and E. Lepore, "Why Meaning Probably isn't Conceptual Role" *Mind and Language*, Vol. 6, No. 4, pp. 329–43, 1991.
- Fodor, J. and E. Lepore, *Holism: A Shopper's Guide*, Oxford: Basil Blackwell, 1992.
- Fodor, J. and E. Lepore, "All at Sea in Semantic Space", *the Journal of Philosophy*, Vol. XCVI, No. 8, pp. 381–403, 1999.
- Fodor J. and Z. Pylyshyn, "Connectionism and Cognitive Architecture", *Cognition*, Vol. 28, Nos. 1–2, pp. 3–71, 1988.
- Russell, Bertrand, "On Denoting", *Mind*, 14, pp. 479–93, 1905.
- Strawson, P.F., "On Referring", *Mind*, 59, pp. 320–44, 1950.