

John Perry, *Reference and Reflexivity*, CSLI Publications, Stanford, 2001, 208 pp.

In this accessible yet also challenging book Perry attempts to find a *via media* between the referential paradigm, according to which the semantic contributions of referential uses of proper names and indexicals (including demonstratives) are simply referents, and the descriptivist paradigm, according to which the semantic contributions of referential uses of such expressions are identifying conditions. The fundamental move that makes theoretical space between these venerable paradigms is appreciation of what Perry calls “the subject matter fallacy”: “The subject matter fallacy is supposing that the content of a statement or a belief is wholly constituted by the conditions its truth puts on the subject matter of the statement or belief” (p. 50). Recognition of the subject matter fallacy allows Perry to claim that a statement containing a proper name or indexical used referentially has not just one content, but several contents: in addition to its “referential content,” which Perry identifies with “what is said”, the statement will have several levels of “reflexive content”. The compromise between referentialism and descriptivism is then achieved by maintaining that referentialism is (usually) the correct view concerning the “what is said” content of statements, while descriptivism is the correct view concerning the other contents of statements. Or as Perry puts it,

The basic idea of the book, then, is that there are both reflexive and referential contents. The referentialist is right, basically, that “what is said”, the official contents of statements, are referential contents. [...] The descriptivist is right, in holding that to explain the cognitive significance of statements we need to associate identifying conditions with the names and indexicals. These are found at the level of reflexive content. (p. 13)

Perry sets up the clash between referentialism and descriptivism in terms of four arguments, two in support of referentialism and two in support of descriptivism. The two in support of referentialism are the “argument from counterfactual circumstances” (p. 5) and “the argument from same-saying” (p. 5). The argument from counterfactual circumstances concerns Kripke’s observation that, e.g., our judgments concerning what the world *would* have to be like in order for my utterance of “Obama enjoys basketball” to be true involve Obama

himself, the referent of “Obama”, and not some identifying condition that Obama happens to satisfy. The argument from same-saying is the observation that our judgments concerning whether or not “two people have said the same thing” (p. 5) typically require only that speakers refer to the same objects and properties; as Frege noted, if you say of Dr. Lauben “He is wounded” and Dr. Lauben says of himself “I am wounded”, then you and Dr. Lauben seem to say the same thing, to express the same thought, even though Dr. Lauben is referred to via different modes of presentation.

Perry presents the two arguments in support of descriptivism as “problems for the referentialist” (p. 5). Perry calls the first problem the “co-reference problem” and the second the “no-reference problem,” and both problems concern the *cognitive significance* of utterances. The co-reference problem is exemplified by the following example involving the co-referential names “Bill Clinton” and “Bill Blythe”:

Suppose I say “Bill Clinton loves pickles with his hamburgers” and you say “Bill Blythe loves pickles with his hamburgers”. [...] On the referentialist account you and I have said the same thing; our statements expressed the same proposition. But then surely something is lacking in the referentialist account, for these statements, in some sense, express and convey quite different information. [...] The co-reference problem for the referentialist, then, is that statements that contain different names of the same individual, seem to differ in what is often called “cognitive significance”. The cognitive states, in particular the beliefs, that might motivate the speaker to make one statement would not motivate him to make the other, and the beliefs, adoption of which on the part of the listener, would show understanding of the one, would not show understanding of the other. (p. 6)

And in the following passage Perry presents “the no-reference problem”:

For example, there is no Santa Claus, there is no Sherlock Holmes. [...] And yet children believe in Santa Claus, and use “Santa Claus” in statements that express their beliefs, and so have cognitive significance. Adults who don’t believe use the name in statements intended to influence the beliefs of their children. [...] On the referentialist view, taken quite literally, it seems that we say the same thing when we say “Santa Claus has a white beard” as we do when we say “Sherlock Holmes has a white beard” [...] namely, nothing at all. For since those individuals

do not exist, there are no propositions with them as constituents to serve as what is said in these cases. This seems unacceptable. (pp. 6–7)

Though the examples above concern statements containing names, the co-reference and no-reference problems also arise in statements containing indexicals. Thus Perry's task is to solve these problems for referentialism by providing an account of the cognitive significance of utterances involving these different sorts of referring terms: In the first half of the book (chapters 2–6) Perry addresses the co-reference problem, first for the case of indexicals (chapters 2–5) and then for that of names (chapter 6). In the second half (chapters 7–8) Perry considers the no-reference problem, first for the case of names, and then for that of indexicals. The over-all argumentative strategy of *Reference and Reflexivity* is then the following: appreciation of the *subject matter fallacy* allows us to utilize one sort of content—official, *referential content*—to account for the intuitive pull of the arguments from counterfactual circumstances and same-saying, and other sorts of content—principally kinds of *reflexive content*—to account for the cognitive significance of utterances involving referring terms, thereby solving the co-reference and no-reference problems. The resulting position, which Perry calls “the reflexive-referential theory,” is claimed to be referentialist at its core—since the official “what is said” content is referential content—, yet at the same time it is claimed to respect the intuitions involving cognitive significance that motivate descriptivism. In what follows I will first sketch Perry's proposed solution to the co-reference problem, and I will then sketch his proposed solution to the no-reference problem. After explicating Perry's proposed solutions to these problems—for both the cases involving names and the cases involving indexicals—I will offer two criticisms. The first concerns Perry's proposed treatment of negative existentials, and the second concerns a problem for his account of cognitive significance.

The foundation of Perry's proposed solutions to the co-reference and no-reference problems is the general idea that the *success conditions* we attribute to an *act*, such as an utterance, are relative to both *constraints* (i.e. what facts we take to be *given*), and to *goals* (i.e. what the agent is taken to be attempting to bring about by acting). This relative conception of success conditions allows for one act to be attributed different success conditions depending upon what facts are taken to be *given*. Perry says that he wants to “plant the suggestion that all sorts of naturalistic content [...] will be susceptible to a

system of contents and not simply to a single content. The application of this idea to linguistic content is the central idea of this book” (p. 24). In *Reference and Reflexivity*, Perry does not explain how one is to apply the idea, but the following seems to be what Perry has in mind.¹ *Truth conditions* are the kind of success conditions that are relevant to actions that are *statements* (where a statement is a sincere utterance of a declarative sentence). The presumed *goal* of a statement is to say something true. The relevant *constraints* for utterances are then of two sorts: First, there are general conventional facts as to what expression *types* mean, and, second, there are particular contextual facts concerning who is speaking to whom at what time, etc. Whether or not a statement *u* is true thus depends upon (i) linguistic factors, such as what word types are instantiated in *u*, and what such types *mean* (in Kaplan’s terms, the *characters* of the words), and (ii) non-linguistic facts concerning the context of *u* (since *u* may contain context-sensitive words, such as indexicals or names), and finally (iii) whether the world really is the way *u* depicts it to be. The constraints in (i) and (ii) determine the truth-conditions of *u*, but, as we saw above, by taking different things as *given* in (i) and (ii), different truth conditions for *u* are determined. As a consequence *u* has various *reflexive truth conditions*, depending upon which factors in (i) and (ii) are taken as *given*. If we are dealing with competent speakers of a natural language, the conventional meanings of expression *types* are always taken as given. But this still allows the truth-conditions of an utterance to vary depending upon how much information concerning the context of utterance is taken as given. Thus an important sort of *reflexive content* of an utterance *u* is derived when one takes the meanings of the words uttered as given, yet assumes nothing (or relatively little) about the context in which *u* takes place; Perry refers to this sort of reflexive content as “indexical content,” or “content_M” where the “M” indicates *meaning* (83).

Perry uses statements of the following (pp. 100–102) to illustrate his theory of reflexive-referentialism:

- (4) “I am a computer scientist” (said by David Israel)
- (5) “David is a computer scientist” (said by someone who is referring to David Israel with “David”)

¹ Perry explicitly states that he does not “propose to develop or defend these ideas in this book” (p. 24). The ideas are developed and defended in Israel and Perry 1990, and Perry 2001 and 2002. O’Rourke and Washington provide a helpful overview of Perry’s philosophy, including his views concerning representation and information, in the introduction to their O’Rourke and Washington 2007.

These statements pose the co-referential problem because they have the same referential content (viz. the singular proposition that contains David Israel and the property of being a computer scientist as constituents), yet, as Perry explains, they have different cognitive significance: “utterances of (4) and (5) could be motivated by different beliefs and desires on the part of the speaker, and might give rise to different beliefs on the part of the listener” (p. 101). Perry’s solution to the problem is to maintain that the cognitive significance of the statements is not accounted for by their referential content, but rather by their reflexive content. The reflexive content of statement (4) is a result of applying the meanings of the types instantiated in the statement, where such meanings provide the “conditions of designation” for utterances of the types. Perry says the meaning of “I” is the following general rule:

If u is an utterance of “I”, the condition for designation for u is *being the speaker of u*.

Thus, Perry explains, “the condition of designation assigned to an utterance u has that very utterance as a constituent, hence it is reflexive” (p. 76). So, assuming some principles of semantic compositionality, it follows that the reflexive content of statement (4) is

(P^x4) That *the speaker of* ι is a computer scientist.

(where ι is David Israel’s sub-utterance of “I”). Now Perry’s fundamental idea is that every statement has a “system of contents”. So, statement (4) has different contents, each of which is determined by taking as given different information concerning the utterance and the context in which it appears. The reflexive content (P^x4) does not take it as given that David Israel is the speaker of ι . In contrast, if we take this contextual fact as given—in Perry’s terms, if we “load” this contextual fact into the reflexive content (P^x4)—then we derive the “incremental” truth conditions. And Perry maintains that “traditional truth-conditions are *incremental*; they are conditions on the *subject matter*; they are what *else* has to be true, given the linguistic and contextual facts” (p. 81). Incremental content is thus referential content, which is also (usually) what Perry calls “subject matter content”.

Statement (5) does not have the same sort of reflexive content as statement (4). This is because statement (5) contains the name “David” in place of the indexical “I”, and names do not have the

sorts of context-sensitive meanings (where *meanings* are similar to Kaplan's *characters*) that indexicals do. Perry's response to this difficulty involves the observation that though names do not have context-sensitive *meanings*, they are nonetheless context sensitive: There are many people named "David", many named "Mary", etc. Or as Perry puts it, names are "nambiguous" (p. 105). So, competent speakers' knowledge of how utterances of indexicals such as "I" depend upon contextual facts for their referents is roughly analogous to their knowledge of how utterances of names such as "David" depend upon contextual facts for their referents. In the case of names, the relevant contextual facts concern which *permissive convention* is being exploited by the use of a name: when one uses 'David' to refer to the philosopher of language David Kaplan, one exploits one permissive convention, and when one uses the same name to refer to David Israel the computer scientist, one exploits a different permissive convention. The reflexive content of statements involving names is then similar to the reflexive content of statements involving indexicals, the difference being that where the latter utilizes the *meanings* of indexicals, the former utilizes the practical knowledge—essential to competence with regard to names—that a use of a name exploits a particular permissive convention.

So, the reflexive content of statement (5) is then

(P^{x5}) That ***the person the convention exploited by (5) permits one to designate with "David Israel"*** is a computer scientist.

Note that though (P^{x5}) does not invoke a *meaning* of "David" in the way that (P^{x4}) invoked the *meaning* of "I", (P^{x5}) is nonetheless *reflexive* in that one of its constituents is statement (5) itself.

To solve the co-reference problem posed by statements (4) and (5) Perry needs to explain why (P^{x4}) and (P^{x5}) are plausibly viewed as accounting for the cognitive significance of statements (4) and (5), respectively. Perry maintains that (P^{x4}) and (P^{x5}) provide an interpreter with different "cognitive paths" to the referent, David Israel. In particular, (P^{x4}) would enable an interpreter to "learn that the person standing in front of him is a computer scientist" (p. 101), whereas it is not true that (P^{x5}) "provides the interlocutor with information that David Israel is the person that is speaking to him" (p. 108) and thus (P^{x5}) might not enable an interpreter to learn that the person standing in front of him is a computer scientist.

To solve the *no*-reference problem in the case of names Perry cannot simply invoke the sorts of reflexive contents he invoked to solve the *co*-reference problem in the case of names. This is because the permissive conventions appealed to above are conventions of using a name *to refer to someone*; since there is no Santa Claus, there can be no such permissive convention for using “Santa Claus”. So, to solve the no-reference problem in the case of names, Perry invokes yet another sort of reflexive content, which he calls “network content”. This new sort of reflexive content utilizes the idea that a use of a name is supported by an “intersubjective network of notions”:

We learn about objects through perceptions. When we perceive things, we have ideas of them (notions), that we associate with ideas for the properties we perceive them to have, creating a sort of internal file (a notion associated with ideas). Thus the first link in our networks: perceptions of objects give rise to notions, and information flows from perception to notion. We retain these files when we are no longer perceiving the objects —the detach and recognize information game. We use language to share information that we gain in this way. Hence, the networks are intersubjective, involving notions and files that different people have of the same object. When we share information, the person doing the sharing constructs a statement with a reference in it, which is guided by the internal file he has of the object. This is the second kind of connection between nodes of the network: from notion to utterance. The person receiving the information has a perception of the utterance. On the basis of it, he starts a new file or adds to one he already has. This is the third sort of connection, from perception of an utterance to notion. (pp. 128–129)

Perry claims that the permissive conventions exploited in the use of a name are supported by such notion-networks: “The convention to call an individual *a* by the name α exists because in a number of people’s minds a notion of *a* is associated with the idea of being called α ” (p. 147). But, it may also come about that the notions in such a network are not *of* any individual at all, or in Perry’s terms, borrowed from Donnellan (1974), the network may be “blocked”. Perry suggests that there are three types of block that will result in a network with no “origin” (pp. 130–139). In a type-1 block, a network is begun with a perceptual illusion of the alleged referent. For example, someone mistakes a shadow in the woods for a beast, which they dub “Bigfoot”. In a type-2 block, a network is begun with a misperception of an utterance. For example, I might mistakenly hear you as talking about some place named “Johnston Lake”, but

really you were asking, with a full mouth, whether or not I “want some cake”. And finally a type-3 block begins with the “free creation” of a notion. For example, the author of *The Horn Papers* freely created his fictional character Jacob Horn.

With the concept of a blocked notion-network in place, the sort of reflexive network-content Perry utilizes to solve the no-reference problem in the case of names can be introduced. Consider a statement that uses the empty name “Jacob Horn”:

(46) Jacob Horn was an important person in Colonial America.

Perry maintains that this statement would express the following reflexive content:

(P^x46b) That *the network that supports the use of the name “Jacob Horn” in [statement] (46)* has an origin, and he was an important person in Colonial America.

Such reflexive network contents provide a partial solution to the no-reference problem: by claiming that statement (46) expresses (P^x46b) one can explain why a person unfamiliar with the Jacob Horn hoax might take the statement to say something, perhaps even to say something true. But there is another aspect of the no-reference problem that such a reflexive network content will not solve: Suppose you and I both sincerely utter sentence (46). Intuitively we have said the same thing, or expressed the same content that is in some sense about Jacob Horn. But what could this content be? It cannot be referential content, for there is no such referent. Nor can it be reflexive-network content, for the reflexive content(s) of your utterance contain *your utterance* as a constituent, and the reflexive content(s) of my utterance contain *my utterance* as a constituent. As Perry puts it, “While our reflexive contents allow us to explain multiple takes on the same object, they do not provide an account about shared beliefs about an object that does not exist” (p. 14).

To account for such non-referential-content *sharing* Perry posits a new sort of incremental content, viz. “intentional content”, which is derived from the above sorts of reflexive network contents:

There is a now a new incremental level of content available in our theory, the level at which facts about networks, but not about origins, are loaded. Call the network that was begun by the writing of *The Horn Papers* “N_{JH}”. Given that the uses of “Jacob Horn” in [...] (46) are supported by N_{JH}, we get [...]

(P46c) That N_{JH} has an origin, and he was an important person in Colonial America. (pp. 149–150)

It is such intentional incremental content that is shared when we both utter (46).

Perry presents his solution to the no-reference problem in the case of indexicals in terms of an utterance of

(6) You are a computer scientist.

where the sub-utterance of “you” lacks a referent. Perry has us imagine the following situation:

an urgent call has gone out from a meeting for a computer scientist to resolve some particularly algorithmic problem [...] the group sits forlornly waiting for a computer scientist to rescue them. A noise is heard, which one member of the group takes to be a knock at the door. She utters (6) hopefully. But in this case there is no addressee; no one is there; it was only ice falling on the stoop. (pp. 10–11)

In the case of indexicals, of course, notion-networks do not support *naming* conventions, but Perry suggests that “short-lived notion networks” support indexicals in the same way that more permanent notion networks support the use of names. With regard to the above described statement (6) Perry claims that “we can see this is the formation of a short-lived notion-network, with a type-1 block, a perception mistakenly taken to be of a person” (p. 151). Thus Perry claims he can utilize the same sorts of reflexive network-contents and incremental intentional contents to solve the no-reference problem in both the case of names and in the case of indexicals.

One aspect of the no-reference problem involves the puzzle of negative existentials. Perry applies the same machinery—involving reflexive network content and intentional content—to account for the cognitive significance of both utterances of

(46) Jacob Horn was an important person in Colonial America.

and utterances of

(44) Jacob Horn does not exist.

Now it is plausible to suppose that the *cognitive significance* of utterances of both (46) and (44) can be accounted for by the reflexive network contents and incremental intentional contents Perry posits. But the challenge posed by an utterance of (44) is not only to account for the fact that it has *cognitive significance* even though “Jacob Horn” has no referent, but moreover to account for the fact that uses of it are interpreted as being *true* even though “Jacob Horn” has no referent. Perry does address this second challenge, but what he says is inadequate, and this raises a general question about the project undertaken in *Reference and Reflexivity*.

Recall that referential content is supposed to be the “official content”; i.e. whether or not *what is said* by a statement u is true is determined by the referential content of u (and the way the world is). A statement of (44) constitutes an obvious counterexample to this claim, for it has no referential content (or as Perry puts it, “there are no subject-matter contents for statements about Jacob Horn” (p. 161)), yet one could use (44) to say something true. Perry’s response is to allow that sometimes—including the case of negative existentials—the default identification of what is said, or “subject matter content”, with referential content is pragmatically overridden: “It seems our concept of what is said is simply too useful to be confined to referential content in all cases. Semantics makes available a system of contents, reflexive and incremental. We choose among them, pragmatically” (p. 163). The idea then that because an utterance of (44) expresses no referential content, pragmatic reasoning requires an interpreter to find its subject matter content elsewhere, and Perry suggests that it is the intentional content,

(P44c) That N_{JH} has no origin (= ends in a block).

that plays the role of the *subject matter* content in these cases.

This suggestion, however, is problematic. Despite Perry’s claim that “it is natural to take existence and non-existence statements as telling us that the relevant notions do or do not have origins” (p. 161), it seems obvious that a speaker who utters (44) does not in any intuitive sense *say something about* a notion network, and thus (P44c) does not provide the intuitive “what is said” content of an utterance of (44).² One way of coming to appreciate this point

² Perry states that Donnellan’s 1974 account of negative existentials “foreshadows” his reflexive-referential account, and he correctly notes that “Donnellan rather carefully does not claim that he is telling us *what is said* by a statement like (44)” (p. 124). But, unlike Donnellan, Perry does seem to be committed to the claim that his reflexive-referential theory tells us *what is said* by such statements.

involves considering how one might appropriately respond to an utterance of (44). For example, if I am a firm believer in the existence of Jacob Horn, I could appropriately deny your utterance of (44) by uttering, “No, he *does* exist”. But, even if we are both familiar with the concepts of *notion networks* and *blocks*, I could not appropriately deny your utterance of (44) by uttering, “No, it *does* have an origin”. The problem is that if the content of (P44c) really were what you are intuitively “telling us” with your utterance (44), then I would be able to deny your utterance in this way. A more theory-laden way of appreciating the point involves considering the modal profiles of an utterance of (44) and the content of (P44c): what the utterance of (44) says could be true even if there were no such notion network as N_{JH} . Imagine a world in which neither N_{JH} nor Jacob Horn exists. Evaluated relative to this world, what an utterance of (44) says is true, while the content of (P44c) is neither true nor false. (If N_{JH} does not exist in this world, then it is neither among the things in the world that have origins, nor among the things that lack them.) So clearly (P44c) cannot provide the *subject matter* of, or *what is said* by, an utterance of (44).³

My second criticism concerns whether or not *Reference and Reflexivity* successfully defends its central thesis that the cognitive significance of an utterance can be accounted for by reflexive content. Perry is very clear that he takes this thesis to be incompatible with Wettstein’s (1986) view that explaining the cognitive significance of an utterance “does not lie within the province of semantics” (1991, p. 127). Thus, though Perry rejects the assumption that an utterance has only one semantic content (i.e. “the subject matter fallacy”), he retains the assumption that explaining the cognitive significance of an utterance lies within the province of *semantics*. This assumption thus serves as a sort of constraint on the adequacy of a semantic theory, and Perry formulates this constraint as follows:

³ That Perry’s proposed solution to the puzzle of negative existentials is inadequate is not surprising, given that nowhere in *Reference and Reflexivity* does Perry address the phenomena of presupposition and presupposition failure, which are central to the puzzle. The challenge is precisely to explain how it is that we interpret some utterances of (44) as both informative and true, despite the fact that such utterances have the paradoxical feature of denying their own referential presuppositions. Thus, (P44c) cannot provide an adequate analysis of *what is said* by an utterance of (44), since (P44c) does not possess this paradoxical feature. In Clapp 2009, I offer an approach to the puzzle that attempts to countenance, rather than explain away, this paradoxical feature of negative existentials.

If there is some aspect of meaning, by which an utterance u of S and an utterance u' of S' differ, so that a rational person who understood both S and S' might accept u but not u' , then a fully adequate semantics should say what it is. (p. 9)

But the above does not seem to express the constraint required. Note that even Wettstein could accept this conditional, though he would maintain that in some cases the antecedent is not satisfied. (Moreover, if, as is plausible, *semantics* is by definition supposed to explain all aspects of the *meaning* of utterances, then the conditional is analytic, and thus the constraint is vacuous.) A better formulation of the constraint is as follows:

If an utterance u of S and an utterance u' of S' differ, so that a rational person who understood both S and S' might accept u but not u' , then there is some aspect of meaning that accounts for this and a fully adequate semantics should say what it is.

In conclusion I want to consider two questions about the above cognitive significance constraint. First, does Perry's reflexive-referential theory satisfy it? There are two ways in which Perry's theory might fail to do so: The first way would be if there are utterances u and u' that differ in the relevant way, and though Perry's theory does provide reflexive contents of u and u' that account for this difference, these reflexive contents are not aspects of the *meaning* of u and u' . In fact, Perry sends somewhat mixed signals as to whether or not even he believes his theory fails to satisfy the constraint in this way. On the one hand he asserts of all the sorts of contents he posits that they "will be propositions that embody the truth-conditions associated with a particular statement in virtue of its meaning and context" (p. 20). But, on the other hand, and as was noted above, Perry (p. 83) classifies only indexical reflexive content as "content_M", i.e. *meaning* content; Perry does not classify the reflexive content of statements involving names as meaning content. And Perry's classification seems appropriate, for it does not seem as if the sorts of notion networks that feature in the reflexive contents of utterances involving names are aspects of the linguistic meanings of names. For example, it would be something of a stretch to claim that

(P^x46b) That *the network that supports the use of the name "Jacob Horn" in [statement] (46)* has an origin, and he was an important person in Colonial America.

is an aspect of the *meaning* of an utterance of

(46) Jacob Horn was an important person in Colonial America.

The second way in which Perry's reflexive-referential theory could fail to satisfy the cognitive significance constraint is if there were utterances u and u' that differ in the relevant way, yet Perry's theory would not assign distinct reflexive contents to u and u' . Since reflexive contents are individuated so finely that no two utterances can express the same reflexive content, the only way this could come about is if a subject had distinct cognitive responses to the *same* utterance (so $u = u'$). In the final chapter Perry considers just such a case described by Taylor (1995). In Taylor's case one subject encounters the same token on two different occasions, and the subject's cognitive responses on the occasions differ. In the case considered by Perry, a student first sees an obviously hungry teacher writing the token

(53) I am hungry now

on a blackboard, and she thus responds affirmatively to (53). And then the next day the student again sees (53), but does not recognize it as the same token she saw the previous day, and on this second occasion she does not respond affirmatively. Since it is the same token that is encountered, the relevant reflexive content on the two occasions is the same:

(P*53) That *the person who wrote (53)* was hungry at *the time (53) was written*.

Here we have an apparent difference in cognitive significance, yet no difference in reflexive content, thus, it would seem, illustrating that Perry's reflexive-referential theory does not satisfy the cognitive significance constraint.

Perry's response to this problem is complex, and puzzling. For Perry concedes that "As long as our candidate [content for explaining cognitive significance] is a singular proposition, there will be different ways of cognizing it [...] and as a result of that, to accept the proposition in one guise, but not the other" (181). Since reflexive contents are singular propositions, this is tantamount to admitting that the reflexive-referential theory does not satisfy the cognitive significance constraint. But at this point Perry neither rejects the reflexive-referential theory, nor concedes that Wettstein is correct

to reject the cognitive significance constraint. Rather what Perry does, it seems, is to explain how the different cognitive responses by Taylor's subject can be accounted for by different reflexive contents of the subject's *beliefs*:

Call the utterance in question *u*. Taylor's student will have two beliefs about *u*. One she would express in Kaplan-English with "Dthat[the utterance I saw the teacher make by writing the token on the board yesterday] was made by someone who was hungry at the time it was made"; this has the content that *u* was made by someone who was hungry. The other belief she would express with "Dthat[the utterance a trace of which I see on the board now] was made by someone who was not hungry"; this has the content that *u* was made by someone who was *not* hungry. So the contents of her beliefs about utterances are inconsistent, while her beliefs are in some sense internally consistent. (pp. 181–182)

And then, in what seems to be an attempt to explain the sense in which the student's beliefs are internally consistent, Perry writes,

On my view, it is not having beliefs about utterances (or beliefs) that solves the problem, but appeal to reflexive contents of believes and utterances. The student's two statements in Kaplan-English have the same referential content, but not the same reflexive content. Thus they can be motivated by different beliefs of the speaker, and can lead to different beliefs on the part of the competent hearer. (p. 182)

This passage is puzzling for several reasons. For one thing, it is difficult to see how the claim that "the student's two statements in Kaplan-English have the same referential content" could be correct. For the statements in Kaplan-English express the student's beliefs about *u*, and in the first citation Perry claims that "the contents of her beliefs about utterances are inconsistent". Thus, it seems that what Perry intends to say in the second passage is that "The student's two statements in Kaplan-English have [inconsistent] referential content, but [consistent, yet distinct] reflexive content." But even if the second passage is amended in this way, Perry's response remains puzzling. For Perry seems to be claiming merely that there are aspects of the beliefs of the student that explain her different responses to *u* on the different occasions. This claim is very plausible, but how does this serve to defend the reflexive-referential theory from Taylor's objection? If the purpose of Taylor's example is to show that the theory

does not satisfy the cognitive significance constraint by providing an example in which the cognitive significance of an utterance cannot be explained by any aspect of its *meaning*, then how does it help to claim that the cognitive significance can be explained by appeal to factors independent of *meaning*, such as the reflexive contents of the beliefs of the subject?⁴

I hope that it is now clear why, in the opening sentence of this review, I said that *Reference and Reflexivity* is both accessible and challenging. The accessible aspect of the book is the application of the reflexive-referential theory to the co-reference and no-reference problems. The challenging, and to my mind most valuable, aspect of the book concerns the framing of the more traditional issue concerning the cognitive significance of utterances within the context of Perry's general information-theoretic approach to representation. The challenge for the reader of *Reference and Reflexivity* is to answer these two questions: What role does cognitive significance play in Perry's general information-theoretic approach to representation, and why, and to what extent, does this commit Perry to providing a *semantic* account of the cognitive significance of utterances? These questions present a formidable task, but some insightful clues as to how they are to be answered can be found in the books Perry (p. 2) calls "companions" to *Reference and Reflexivity*, viz. *Knowledge, Possibility and Consciousness* (2001) and *Identity, Personal Identity, and the Self* (2002), as well as in other relevant works by Perry.⁵

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⁴ Perry himself seems somewhat hesitant concerning his response to Taylor's objection. He concludes his discussion of the objection with the following: "Whether this is a Fregean perspective, I am not sure, but it is surely a perspective that accepts, in the spirit of Frege, cognitive constraints on semantic theory" (p. 184). But one, such as Wettstein (1986), who denies that semantics must account for the *cognitive significance* of utterances need not, and probably does not, deny that semantics must be subject to some sorts of *cognitive constraints*.

⁵ For a translation of *Reference and Reflexivity* in Spanish, see Perry 2006.

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Samir Okasha, *Evolution and the Levels of Selection*, Clarendon Press, Oxford, 2006, 263 pp. + xii.

Okasha's book on the levels of selection is the most comprehensive philosophical discussion of the subject in relation to the idea of major evolutionary transitions. The following is a critical review of his discussion of some problems and concepts involved in understanding multilevel selection as a causal process. The book begins with an argument in favor of multilevel selection based on the existence of biological units at various hierarchically organized levels, with lower level particles nested within collectives (genes in cells, cells in organisms, organisms in groups). Perhaps a biological world with a hierarchy of levels of biological units is possible without selection operating simultaneously at the different levels. Our world, however, seems to have undergone processes that began with free ranging particles in interaction and ended up in collectives with internal cohesion, functioning as adaptive units. These processes involved selection and involved the leap from genes to genomes, from cells to multi-cellular