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COMPOSITIONALITY AND BELIEVING THAT

TONY CHENG
h.cheng.12@ucl.ac.uk
University College London

ABSTRACT. This paper is about compositionality, belief reports, and related issues. I begin by introducing Putnam's proposal for understanding compositionality, namely that the sense of a sentence is a function of the sense of its parts *and of its logical structure* (section 1). Both Church and Sellars think that Putnam's move is superfluous or unnecessary since there is no relevant puzzle to begin with (section 2). I will urge that Putnam is right in thinking that there is indeed a puzzle with a discussion of translation and belief individuation (section 3). Later Salmon (2001/2007) reinforces Church's position, but I will argue that it is still possible to make my case by clarifying the nature of my proposal, i.e., understanding explanations of action from the third-person point of view (section 4). Now, Fine (2007) agrees with Putnam that there is indeed a puzzle to be solved, but he argues that Putnam's solution of it is problematic, and that his own semantic relationism is a better view. In response to this, I will recast the notion of compositionality based on a certain conception of belief individuation, namely that the semantic content of a sentence is a function of the semantic contents of its parts *and of the structure of intensional discourses* (sections 3 and 5). Finally the paper will end with a reconsideration of the recalcitrant Kripke's puzzle about belief (1979/1988), since it might seem to put some pressure on my account. It turns out that my understanding of this puzzle is again different from Fine's perspective (section 6).

Keywords: compositionality; belief report; synonymous; logical structure; translation; puzzle about belief

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"The propositional attitudes are dim affairs to begin with."
– W. V. Quine, "Quantifiers and Propositional Attitudes"

1. Compositionality and Believing That

In his Locke Lecture, Kit Fine proposes a unified solution to three related puzzles: Frege's Puzzle about identity, Russell's Puzzle about the antinomy of the variable, and Kripke's Puzzle about belief.[1] Despite its originality and ingenuity, however, its "allusions to moves in the literature are not always flagged…Articulating a theory is often not enough – it is also important to locate it within the space of the other, similar proposals," as Gary Ostertag (2009) emphasizes. One of the aims of the current paper is to fill in this crucial lacuna. Decades ago, Hilary Putnam (1954) proposed a similar view in a different but related context, and this view has been under serious attacks from others, as we shall see presently. Therefore, to evaluate Fine's view more thoroughly, a closer look at the controversies concerning Putnam's proposal becomes necessary. Thus the present paper can be seen as an indirect engagement with Fine's relationist proposal.[2]

We sometimes say that other animals – such as bees and dolphins – have languages. This can be granted, provided that we acknowledge a stricter sense in which only *Homo sapiens* have languages. In philosophy of language and mind, we often regard "compositionality" as the mark of the linguistic in this stricter sense. To say that a language is compositional is to recognize that in that language the meanings of complex expressions are built up from the meanings of simpler expressions with varieties of compositional rules. Compositionality helps us explain many other linguistic phenomena, such as "productivity" and "systematicity."[3] Although this characterization is not entirely uncontroversial, it cannot be denied that the notion of compositionality has been central for philosophical studies on language and mind since the late 19th century. For example, Frege's context principle (1884) has sometimes been taken as the starting point of contemporary philosophy of language. A century later, albeit with the opposite direction, Jerry Fodor and Ernest Lepore (1992, 2001a, b, 2007) use it to argue against many so-called "meaning holists," including David Lewis (1974), Donald Davidson (1984), Ned Block (1987), Paul Horwich (1999), and Robert Brandom (2001), among others. Needless to say, those holists need to show that they can in effect accommodate compositionality, and thereafter the relevant literature has grown immensely. That being said, it is not as if nothing interesting happened before this explosion of literature. Right between Frege and Fodor, Putnam made his debut by proposing what I shall call "Logical Compositionality:"

(LC) The sense of a sentence is a function of the sense of its parts *and of its logical structure* (Putnam 1954/1988, p. 154, original italics).

This formulation is supposed to be contrasted with and, indeed, an improvement on what can be called "Standard Compositionality:"

(SC) The sense of a sentence is a function of the sense of its parts, including the way in which the parts of the sentence are composed (ibid., p. 153).[4]

The crucial difference lies in the amendment that logical structure should also play a role in determining the sense of a sentence. In this paper, I am going to propose still another version of compositionality: although I believe Putnam is right in thinking that something more is required in the formulation of compositionality, LC is not sustainable due to a certain consideration that I will introduce below. My positive case will rely on a specific reading of sentences with recurrence in indirect context, a reading that takes propositional attitude verbs and other operators with similar status more seriously. The shape of this solution, however, cannot be clearly seen until more notions are introduced.

Soon after Putnam's proposal, Alonzo Church (1954) and Wilfrid Sellars (1955) independently developed a similar criticism of him. I shall focus on Sellars's version first, since unlike Church's paper the Sellars one targets Putnam directly. I will then turn to Church. After answering the Church-Sellars objection, I will further bring the original discussions into wider and more contemporary contexts. To anticipate, both Church and Sellars think that Putnam's move is superfluous or unnecessary, since there is no puzzle concerning compositionality at all at the very beginning (section 2). I urge that Putnam is right in thinking that there is indeed a puzzle (section 3). Later Nathan Salmon (2001/2007) reinforces Church's position, but I argue that it is still possible to make my case (section 4). Now, Fine (2007) agrees with Putnam that there is indeed a puzzle to be solved, but he argues that Putnam's solution of it is problematic. In response to this, I will recast the notion of compositionality based on a certain conception of belief individuation (section 3 and 5). The paper will end with a reconsideration of the recalcitrant Kripke's puzzle about belief (1979/1988), since it might seem to put some pressure on my account (section 6). Before addressing all these details, let's start with the original debate between Putnam and Sellars.[5]

2. Putnam, Sellars, and the Alleged Superfluity of LC

Here is a reconstruction of Putnam's line of thought (Putnam 1954/1988, pp. 151–154). Suppose we use "dihydrogen monoxide" (DM) and "H_2O" as synonymous.[6] Then according to SC, "All DM is DM" and "All DM is H_2O" are synonymous. By the same token,

(A) Whoever believes that all DM is DM believes that all DM is DM.
and
(A') Whoever believes that all DM is DM believes that all DM is H_2O.

should be synonymous. However, it seems that no one will doubt (A), but someone might doubt (A'). It follows that

(B) Nobody doubts that whoever believes that all DM is DM believes that all DM is DM.
and
(B') Nobody doubts that whoever believes that all DM is DM believes that all DM is H_2O.

have different truth values, and therefore cannot be synonymous. But according to SC, (B) and (B') should be synonymous, given that "DM" and "H_2O" are synonymous. However, since we have established that (B) and (B') cannot be synonymous due to different truth values, one must renounce either SC or the synonymy of "DM" and "H_2O." Putnam thinks that to give up the latter would be too drastic, since it amounts to holding that no two terms are ever synonymous. He thereby concludes that it is SC that is at fault.

This is where Putnam's positive story comes in. One needs to have an explanation of why (B) and (B') are not synonymous, and his answer to this is that they have different *logical structures*, as stated in LC. Since SC does not have anything like this (i.e., logical structures), it lacks the resources for the putative discrepancy of meaning between (B) and (B'). Now a natural move for the proponents of SC is to insist that (B) and (B') are actually synonymous, and this is what Sellars does. He remarks:

> The key to the puzzle is the initial stipulation: 'suppose *we* use 'Hellene'…as a synonym for 'Greek' (Putnam 1954/1988, p. 152).' All right, suppose *we* do – Putnam, myself and the rest of us. It follows, of course, that
>
> (1) George is Greek.
> and
> (2) George is a Hellene.
>
> *asserted by us*, necessarily have the same truth value (Sellars 1955: 119, original italics).[7]

Why is Sellars's objection at least initially plausible? Let's go back to our own example. Suppose for *me*, DM and H_2O are synonymous. Suppose that there is a miserable student MS who was absent when Salmon introduced this synonymy (see footnote 6 above), and thereby lacks this piece of belief. Then I assert both:

(γ) MS believes that DM is DM.
and
(λ) MS believes that DM is H_2O.

According to Sellars, Putnam is wrong to think that γ and λ are not synonymous. Given that it is *for me*, γ and λ are simply synonymous, since *I*

believe "DM" and "H_2O" are synonymous. But if this is the case, then LC is unnecessary, since it is proposed to solve a puzzle that is presumably derived from SC. However, if Sellars is right, the puzzle does not arise in the first place (recall "The key to the puzzle…," p. 119). Here we can see why Church says that Putnam's solution is "superfluous" (Church 1954/1988, p. 162): since there is no puzzle whatsoever, any proposed solution would be superfluous.

3. Church, Translation, and Belief Individuation

No one can sensibly deny that it is better to dissolve pseudo-puzzles than to be under the illusion that they deserve solutions, but in this particular case, I do not agree with Sellars's Wittgensteinian diagnostic treatment.

Recall this passage from Putnam quoted by Sellars: "suppose we use 'Hellene'…as a synonym for 'Greek'" (Putnam 1954/1988, p. 152). Sellars thinks that this starting point involves a crucial mistake, the mistake between object language and meta-language, between use and mention (Sellars 1955, p. 119). But I think Sellars reads too much into Putnam at this point. Synonymy seems to be a widespread phenomenon, but, when it comes to real examples, philosophers disagree. That is why Mates, Church, and Putnam all have their own favored examples. I think that in the quoted sentence Putnam just intends to propose his own example, implying that "if you are not satisfied with this one, just use your own favorite." Synonymy, as a semantic notion, should be independent of any individual language users. We can of course take some pair of expressions as synonymous, but we can be wrong. To speak of "synonymy for individual speakers" is conflating epistemology and metaphysics of meaning.[8]

Church's similar move based on the notion of translation might seem more plausible than Sellars's variant. I follow Salmon (2001/2007, p. 345) in calling it the "Translation Argument" (henceforth TA; see especially Church's 1954/1988 paper, pp. 162–165). The idea is quite simple. A test for synonymy is to translate the two terms into another language and see whether we can translate them into the same expression. In Church's example, both "fortnight" and "a period of fourteen days" can be translated into German as "*einen Zeitraum von vierzehn Tagen*." If that is so, it follows that the translations of γ and λ would be identical as well. So, like Sellars, Church concludes that there is no reason to accept LC, since, contra Putnam, there is no puzzle to be solved from the very start.

Some might think that Church's move here begs the question. A Putnamian would deny that the synonymy of γ and λ follows from the translation move, since one needs to assume SC to deduce that; that is to say, one needs

both SC and TA to say that γ and λ are synonymous, but SC is exactly what is at stake here. If SC has already been assumed, then it is not clear what the present discussion is all about.[9]

This worry helps us see the dialectic more clearly. Recall that SC is the *standard* formulation in this context, which means it occupies what philosophers sometimes call the *default position*. Now Putnam comes along and poses a challenge to it. What should the proponents of SC do? Since they insist on SC, whatever they add in their position, the new element cannot be part of the formulation of compositionality. For Church, it is TA that does the work. For those who do not accept SC, what is needed would be a refutation of TA, plus a positive account of how compositionality should be formulated. This will be the main task of the second half of this paper.

One aspect Church's response that might be superior to Sellars's one is that it does not involve the problematic "synonymy for individual speakers" idea. It instead invokes the notion of translation – an idea seems to be much more innocuous at least in this context.[10] Now let's reconsider these two crucial sentences:

(γ) MS believes that DM is DM.
(λ) MS believes that DM is H_2O.

If Church is right, we can then find a translation for "DM" and "H_2O," and thereby show that γ and λ are synonymous. But can we? For the sake of argument, we of course assume that we can find the translation in question. The crux is whether we can thereby show that γ and λ mean the same thing. Suppose we ask the miserable student whether he believes DM is DM. He might naturally reply, "sure, but what on earth is DM exactly?" He believes that DM is DM out of his belief in logical truths. If we ask him instead whether he believes DM is H_2O, he might reasonably reply that "since I have no idea what DM is, I cannot say I disbelieve it, but I cannot say I believe it either." Aren't these avowals enough to show that γ and λ are not synonymous?

Church might respond as follows: the reason one tends to say that λ and γ are different in meaning is that the result is counterintuitive. But if that is so, so much the worse for intuitions. Philosophers always disagree about the role of intuition in philosophizing, and there is no reason to favor the pro-intuition side at this point. If the opponent cannot find fault in TA, then we must conclude that intuitions in this case do not help us find the truth. Furthermore, MS's reports should not be taken too seriously, since lay people might be confused about what they really have in mind, and wary theorists are often in better positions to get clear about the situations.

Therefore, my rejoinder cannot rest on the faith in intuition and first-person reports. What I am going to argue is that TA does not work *in indirect*

contexts with recurrence, including belief reports. For simplicity, let me focus on the case of belief. We ascribe certain propositional attitudes to subjects by means of belief reports. Believing is a cognitive relation between the subject and a proposition. The *fact* that two terms can be correctly translated to one term in another language is quite another matter. If the subject in question lacks the relevant belief of synonymy, then substitution *does* change the meaning of the belief report. Let me elaborate more on this contentious point.

The basic idea is that beliefs are essentially action-guiding. Suppose MS is an international student whose native tongue is not English. When he prepared for the graduate record examination, he missed the synonymy of "lawyer" and "attorney." He believes that attorneys are attorneys, even if he has no idea about that word. But he does not believe that attorneys are lawyers (out of his laziness or inadvertence). Now, if Sellars and Church were right, MS would believe both propositions (given TA), but that cannot be the case. Suppose that in correctly answering one particular question, test takers need to know that "attorney" means "lawyer," unless they simply guess. MS does not believe that attorneys are lawyers, so he has to guess. Now, *guessing* is an intentional action. How can we explain this action if we follow Sellars and Church in attributing to him the belief that "attorneys are lawyers"?

Beliefs guide actions; explanations of actions guide individuations of beliefs. The Church-Sellars view has an extremely economical picture of our webs of beliefs. The problem, however, is that the view is too meager to explain our miscellaneous actions. Consider again our lawyer-attorney example. MS has no belief of this piece of synonymy, but I have. Both of us have some legal problems and need to find a lawyer. MS walked down a street, noticing a signboard with the word "attorney." He did not go upstairs, since he does not believe that attorneys are lawyers. When I passed by, I went upstairs out of my belief that attorneys are lawyers. What explains our different actions? According to TA, since MS believes that attorneys are attorneys, and "attorney" and "lawyer" are synonymous and hence have the same translation in certain other languages, it follows that MS believes that attorneys are lawyers. But if so, why didn't he go upstairs, just as I did? The failure of explaining actions betrays the poverty of mental economy in the Church-Sellars view.

My point can be put with the distinction between referentially *opaque* and *transparent* from Quine (1960, pp. 145–155). There is no denying that indirect reports can be read either way for different purposes, but I urge that for the purpose of understanding a subject by belief attributions, only the opaque reading is legitimate. The reason, put simply, is that believing is a cognitive relation between the subject and the content. If we violate this regulative ideal of opacity, then no wonder we cannot explain the subject's actions with his cognitive states.[11]

How about biting the bullet? Church and Sellars might insist that MS *does* believe that attorneys are lawyers, though he does not know that he has this belief. This seems to be possible, since we do not have omniscient knowledge of all of our own mental states; to suppose otherwise seems to commit ourselves a bad Cartesian picture.

I am not convinced for the following three reasons. First, the belief in question is quite simple and straightforward; when we (correctly) say that we have no access to many of our beliefs, the beliefs in question are often much more complicated (e.g., some of them are logical consequences of conjunctions of some simpler beliefs). Secondly, even in cases in which we do not have access, those beliefs still often guide actions. That is why sometimes we need to infer that we ourselves have such and such beliefs out of our actions. A belief cannot be idle all the way out. If MS does believe P, then P should manifest itself in his actions at some point. Given the scenario above, it is reasonable to say that he holds no belief attitude towards the proposition in question, and this shows the falsity of Church's move here.[12] Last but not least, by biting the bullet they commit themselves to the view that

(γ') MS knows that he believes that DM is DM.
and
(λ') MS knows that he believes that DM is H_2O.

are not synonymous, since they have different truth values. But this plainly contradicts their own position, for their view is that, given SC and TA, γ' and λ' are synonymous. I thereby conclude that TA does not succeed in preserving SC.

4. Missing Church or Meeting Salmon?

In "The Very Possibility of Language: A Sermon on the Consequences of Missing Church" (2001/2007), Salmon reinforces Church's Translation Argument.[13] Here I shall try to meet some aspects of his considerations. He first ask us to consider the following two sentences:

(1) Chris believes that the earth is round.
(2) Chris accepts "The earth is round."

The envisaged opponent proposes (2) as a semantic analysis of (1). As Salmon reminds, the word "accepts" is only schematic; we can replace it with "is disposed, on reflection, when sincere and non-reticent, to assent to some sufficiently understood translation or other of" (Salmon 2001/2007, p. 347), or with other similar locutions. Now consider translating both (1) and (2) into French:

(1') *Chris croit que la terre est ronde.*
(2') *Chris accepte* "The earth is round."

The key point here is that the proper translation for (2) is not

(3') *Chris accepte* "*La terre est ronde.*"

This last sentence mentions a particular French sentence not mentioned in (2), while lacking any mention of the English sentence mentioned in (2). It is thus (2') rather than (3') that captures the literal meaning of (2)' (ibid., p. 348). This is an application of Church's TA. I think this application is a good one, but I am not going to justify this claim here. Let's assume its correctness, and see whether it will threaten my proposal.

The first thing to be noted is that the envisaged opponent is arguing for something quite different from my present concern. In my case there is certain recurrence (e.g., "attorney" appears twice) following the "that clause," and that is exactly where I find TA inapplicable. I have no quarrel with other applications of TA, at least for the present purpose.

But this does not mean that this application of TA cannot be extended to rebut my proposal. I quote myself: "[i]f we ask [MS]…whether he believes DM is H_2O, he might reasonably reply that 'since I have no idea what DM is, I cannot say I disbelieve it, but I cannot say I believe it either.'" My view seems to hinge on whether the speaker *accepts* the sentence in question, but if so, haven't I committed to the view that (2) is the correct semantic analysis of (1)?

Not at all. Recall that I also emphasized right away that my view is not based on the speaker's first-person report, i.e., his own opinion about whether he holds a certain belief or not. My strategy is rather based on the explanations of actions, and that is entirely a third-person enterprise. We, as theorists, set out to explain the subject's relevant actions by attributing various beliefs to him. Maybe sometimes the subject's self-reports do fit our third-person explanations, but that is not essential to my proposal. What is crucial for me is that TA is inapplicable in indirect discourses with recurrence; I do not think that TA is fallacious across the board.

5. Reformulating Compositionality

Although my counterarguments against the Church-Sellars picture and Salmon's reinforcement may not be conclusive, I believe it has given us reasons to think that Putnam's move, at least in broad outline, is not altogether pointless. There is indeed a point to hold that something more is required in the formulation of compositionality, or we cannot have a satisfactory account of actions and belief individuations.

Then why not just accept Putnam's original version? Recall that he thinks:

(LC) The sense of a sentence is a function of the sense of its parts *and of its logical structure* (Putnam 1954/1988, p. 154, original italics).

At this point, I would like to consider a recent objection to LC from Fine (2007). Unlike Church and Sellars, Fine's objection targets Putnam's formulation itself. According to Fine,

> The advocates of 'logical form'…will argue that the phenomenon is *pre-semantic*. The difference between the pairs of names 'Cicero,' 'Cicero' and 'Cicero,' 'Tully,' or between the identity sentences 'Cicero = Cicero' and 'Cicero = Tully,' is one of *logical form*; and it is only once the logical form or 'syntax' of the sentences has been determined that the question of semantics comes into play (Fine 2007, p. 41, my italics).

Fine further points out that the idea of logical form cannot be right, "[f]or what is it for the logical form of 'Cicero = Cicero' to be 'a = a' rather than 'a = b'?" (ibid., p. 41). What is at stake when it comes to compositionality should be *semantics*. Both SC and LC introduced above invoke the notion of sense, and it is semantic if anything is. If one does not want to commit to senses, one needs to supply some other things, provided that they are semantically relevant. To submit "logical form" as an answer seems to be "seriously off-track" (ibid., p. 41), as Fine suggests.

That is why in my own proposal there is nothing pre-semantic involved. According to the proposal,

(Q) All DM is DM.
and
(R) All DM is H_2O.

might be synonymous, since my proposal applies only to indirect contexts. I want to leave open, for the moment, whether Church's TA is applicable in this case. Fregeans might object that (Q) and (R) cannot be synonymous, since they are cognitively different. I think that whether cognitive differences entail semantic differences is still a lively debate between the Fregeans and the Millians, and I do not take sides on this occasion. What I insist is that

(γ) MS believes that DM is DM.
and
(λ) MS believes that DM is H_2O.

are *not* synonymous, since, if they were, then we would not have resources to account for some different actions. On the present proposal, what are at work are the notion of belief and, relatedly, the notion of action. They are semantically relevant, in the sense that they are *intentional*. This protects my

view from Fine's objection based on the distinction between syntax and semantics.

There is a huge literature on the nature of propositions – for example, whether they are Fregean, Russellian, or Lewisian (sets of possible world). I do not pretend that I have offered anything substantially new in this area. As I just mentioned, my proposal keeps silent about Q and R, and this means that I do not take sides in the debate between the Fregean, the Russellian, and the Lewisian. What I am doing is rather humble: simply to consider those belief reports and to see which ones we are willing to use to ascribe propositional attitudes to the subject in question. What I want to distill from the above discussion is a new, and I believe more sensible, formulation of compositionality, as follows:

(IC) The semantic content of a sentence is a function of the semantic contents of its parts (including the way in which the parts of the sentence are composed) *and of the structure of intensional discourses*.

Several comments are needed. First, the idea of sense is replaced by a more neutral idea of semantic content. Secondly, I intend the formulation to cover all the indirect discourses. For example,

(α) It is necessary that all DM is DM.
and
(β) It is necessary that all DM is H_2O.

should not be taken as synonymous, though there is no denying that they have the same truth value. According to TA, they are synonymous. But I shall not enter into the details concerning modal contexts on this occasion.[14] Finally, the proponents of SC might contend that IC adds nothing new to the standard version, since "the sense of its parts" in SC of course includes the senses of propositional attitude verbs and other terms with similar status, such as modal operators. Fair enough. The trouble is that too often defenders of SC do not respect this fact, even if their wordings are loose enough to encompass it. Therefore, I propose to include the idea of *intensional discourse* explicitly in the formulation in order to preempt relevant confusions.

6. Kripke and the Contradictory

Before closing, I would like to relate the present proposal to the knotty puzzle about belief from Kripke. It is relevant since it also concerns belief reports and translation, and it might seem to threaten my proposal, as I shall explain. I do not pretend, to be sure, that I am able to solve or dissolve this difficult puzzle on this occasion.

Kripke discusses two cases, Pierre and Peter. I will focus on the case of Pierre, since only his case involves translation. Once upon a time, Pierre was an absolute monolingual of French. He heard (in French) nice things about London, and "he is inclined to think that it is pretty. So he says, in French, '*Londres est jolie*'" (Kripke 1979/1988, p. 119). It seems to be innocuous to conclude "Pierre believes that London is pretty." Later, for some reason Pierre moved to an unattractive part of London. He picked up English basically through radical translation, and he did not realize that "*Londres*" and "London" refer to the same city. Since his experiences there are so unpleasant, he comes to "assent to the English sentence: 'London is not pretty'" (ibid., p. 119). Now, consider the following three sentences:

(X) Pierre believes that "*Londres est jolie*," before and after.
(Y) Pierre believes that "London is pretty," before and after.
(Z) Pierre believes that "London is not pretty," after picking up English.[15]

Instead of discussing Kripke's own take on the matter, I will explain how my proposal above might be taken to deliver paradoxical consequences here and try to dampen that worry. I reject Church's translation maneuver in belief contexts, so it seems that I am forced to regard Y as false. But this is problematic, since it would render explanations of actions in different languages impossible. Suppose that I do not know a word of Mandarin but I want to make sense of the political situation between Taiwan and Mainland China. I say, "The President of Taiwan recently signed many important financial contracts with China, since he believes that China has softened its relevant policies." Now suppose that the present President of Taiwan has no knowledge of English. If, the train of thoughts continues, we do not allow translation in belief contexts, then the above rationalization becomes impossible, but this has disastrous consequences: it simply makes inter-language understanding impossible, and this is falsified by the fact that people always have inter-language understandings, in person, on the phone, on the Internet, and so on.

To avoid the problem, we need to notice that what I am against is certain application of the Translation *argument*, not translation *per se*. In cases that we have considered, we have synonymy pairs "DM," "H_2O" and "attorney," "lawyer." What I am proposing is that when it comes to belief contexts, synonymy pairs should not be translated into the same term, since it would deprive us of the resources of explaining actions. Of course, we can still translate those belief reports, provided that our translations preserve the original beliefs. Now, in the case of Pierre, there is no synonymy pair *within any belief*: for example, we do not have "*Londres* is London." So my proposal does not prevent us from regarding X and Y as having the same truth value.

So, my case against TA in belief contexts does not force me to say that Y is false. Indeed, I think all of the three sentences are true. An immediate

objection, however, is that Y and Z plainly contradict each other. People can have contradictory beliefs only when the contradiction is not obvious. But isn't the contradiction here quite obvious? "London is not pretty" just means "it is not the case that London is pretty," and it takes only a negation to get "London is pretty."

I submit that it is not at all obvious from Pierre's perspective. Pierre has no belief that "*Londres* is London," so, even if we can translate X into any language we like, it does not follow that Pierre would be aware of those results of translation. Since he is not aware of that, he is in no position to detect the contradiction between Y and Z. Unbeknownst to him, he holds contradictory beliefs. My point of explaining actions also chimes well with the present account. Out of his belief that "*Londres est jolie*," Pierre strongly urges his family to visit there, and he wants to be there as well. Out of his belief that "London is not pretty," Pierre strongly urges his family *not* to visit him, and he wants to leave for some other place as well. These two sets of action are in conflict, because they are results of a pair of contradictory beliefs. Pierre does believe that London is pretty, and this explains why he urges his family to go there. He is just not aware that this belief of his can be put into English this way.

In his paper Kripke considers four possible solutions, and my proposal is one of them. Kripke finds this maneuver problematic:

> [S]urely anyone…is in principle in a position to notice and correct contradictory beliefs if he has them. Precisely for this reason, we regard individuals who contradict themselves as subject to greater censure than those who merely have false beliefs. But it is clear that Pierre…is in no position to see, by logic alone, that at least one of his beliefs must be false. He lacks information, not logical acumen. He cannot be convicted of inconsistency: to do so is incorrect (ibid., p. 122).

The argument seems to be this. Contradiction is a more serious mistake than mere falsity, so it deserves greater censure. But since Pierre lacks information, he is not in a position to see the contradiction in his case. *Ergo*, to convict him of inconsistency is incorrect on our part.

This argument seems to be based on a conflation of facts and values. True, contradiction is a more serious mistake than mere falsity; true, since Pierre lacks information, he is not in a position to see the contradiction in his case. But why are all these relevant to censure? It is true that in this case we do not want to censure Pierre, but that is not because he commits no inconsistency but because he is not in the right contexts, for example, moral, legal, or logical. What we should say is that he contradicts himself due to the lack of information; the fact that we do not want to censure him is simply another matter.

In developing his overall account of semantics, Fine also talks about and rejects my maneuver. Here are his relevant remarks:

> Implicit in the formulation of the puzzle is the assumption that we cannot correctly attribute a pair of contradictory beliefs to a rational person and this had led some philosophers to doubt whether this is indeed true under the intended understanding of the belief reports. However, the question of what a rational person might believe is not really at issue (Fine 2007, p. 91).

Fine goes on to say that "[w]hat is really at issue is a question of *coordination*" (my italics), which is "the very strongest relation of synonymy or being semantically the same" (ibid., p. 5). Now, "coordination" is Fine's technical term, and to enter into it is far beyond the scope of this paper. As I mentioned above, I am not here proposing a solution to or dissolution of Kripke's puzzle about belief, so I am not obliged to compete with other proposals on this occasion. What I want to stress is that Fine seems to owe us an explanation of why the possession of contradictory beliefs is not at issue. I think it is exactly what is at issue, and I have made explicit my commitments concerning the puzzle and tried to relate it to my point that explanations of actions guide individuations of beliefs. There is no denying that Kripke's puzzle deserves a much more full-fledged treatment, but I defer this task to future occasions.

Compositionality has been a central theme in philosophy for quite a while, and the literature has become extremely rich. However, one strand of this theme – the exchange between Putnam and Church – seems to be largely forgotten nowadays or be relegated as a quite specific problem in philosophy of language. What's more, the connection between this strand and contemporary themes – such as the discussions of Fine's semantic relationism – has been lost. On this occasion, I dispute many points of Church's, Salmon's, and Fine's. But even if I am wrong about them, I hope this piece can nevertheless serve to remind people of this important thread: no matter who stands with the truth, what should not be denied is that this strand can still teach us much about compositionality, indirect discourses, and much more beyond.[16]

NOTES

1. The materials have been further developed in his later Brown Lecture and subsequently published as *Semantic Relationism* (2007).

2. This paper belongs to a larger project that contains a more direct engagement as well, but I cannot include them here for space limit. To be sure, Putnam's proposal is far less developed than Fine's, but the parallel can still be seen. The crucial difference between them will be discussed in section 5.

3. For example, see Fodor (1998) and various related writings. Since they are not my main themes on this occasion, I shall not go into the fine details here. In effect,

compositionality and those related phenomena are important not only for philosophy, but also for psychology, linguistic, and cognitive science in general. For a nice indication of this, please see *Oxford Handbook of Compositionality* (2012).

4. This formulation, at least in spirit, can be traced back to Frege. Those who do not buy the idea of sense should replace "sense" with "semantic content" or whatever captures their intuitive idea of meaning. My argumentation below will not hinge on any specific theory of the ontological status of content. Zoltán Gendler Szabó (2012) formulates this standard version like this: "The meaning of a complex expression is a function of the meanings of its constituents and the way they are combined," and he comments (rightly) that it is "theory-neutral." If one takes a look of Szabó's paper, one gets the sense that though the exchange between Putnam and Church is old and there is no denying that relevant discussions have been very much developed since then, the issue being tackled here is still around today.

5. Although my title is reminiscent of his paper on relevant issues, I deliberately omit Davidson's proposal on this occasion, since I take it that he is offering an entirely different framework, one which is originated by Quine. Consider Davidson's remarks that the Church-Sellars view "is a solution only if we think there is some way of telling…what is owed to the *meanings* he gives his words and what to his *beliefs* about the world. According to Quine, this is a distinction that cannot be drawn" (Davidson 1968/1984, p. 102, my italics). If Quine and Davidson are right, then the whole exchange between Putnam and Church-Sellars might be pointless. Here I am *not* assuming that the Quine-Davidson framework is wrong; rather I take myself to be answering a conditional question: *given* that the distinction between meanings and beliefs can be drawn, how should we formulate compositionality in response to the challenge posed by indirect reports? Similar considerations apply to other drastically different frameworks, such as the unstructured possible world approach. There are also new developments concerning compositionality that I do not discuss here, such as Napoletano (2015), Unnsteinsson (2014), Smith (2014), Starr (2014), and Wellwood (2015).

6. This example is from Salmon. I agree with him that this example is acceptable, since chemistry can help us anchor the meanings to some extent, but of course readers may use their preferred ones. Another way is to follow Benson Mates (1950) to use an abstract example, such as D and D'.

7. "Hellene" and "Greek" are Putnam's original examples.

8. I do not spend too much space on Sellars, since I find his criticism of Putnam rather unclear. Given that Sellars himself acknowledges that Church's argument "reaches the same (or similar) conclusions by a slightly different route" (Sellars 1955, p. 117) and that this is also the consensus of the subsequent literature (e.g., Davidson 1984, p. 101), in what follows I shall exclusively deal with Church's argumentation.

9. This potential objection is raised by Ted Sider in discussion.

10. But see footnote 5 for my qualification concerning the Quine-Davidson approach.

11. Perhaps Russellians would disagree, for example Braun (2000). In this paper I do not engage this line of argumentation.

12. Church makes a distinction between propositions about the world and propositions about propositions (1954/1988, p. 164; these are not his terminologies). According to his picture, MS does believe that DM is H2O; what he does not believe is that the word "DM" is used as a synonym of "H2O." But if this were the case, it seems that MS's actions should be able to be explained by his belief that "DM is H2O." Church's consideration seems not to be responsive to my proposal that explanations of actions guide individuations of beliefs.

13. Unlike Salmon, many others do not take TA seriously. Prominent examples include Peter Geach (1972), Michael Dummett (1973), and Tyler Burge (1978). Gareth Evans (1982, p. 75) seems to agree with Church, but it is hard to tell the reason from his rather short footnote. In a more recent piece, Salmon targets Fine's semantic relationism directly (2012), but the basic line of thought is the same.

14. A short comment would be that while α is at *de dicto* level, β is a case of *de re* necessity (in Kripke's sense), and therefore empirically substantial; they seem to be too different to be synonymous.

15. I change slightly the wordings of Kripke to suit my purpose here. "Before" means "before he became a bilingual," and "after" means "after he became a bilingual."

16. A relevant passage from Burge is illuminating: "The question of what substitutions are admissible on purely logical grounds in oblique belief contexts presents no mere exercise in formal semantics. Dealing with it forces one to consider issues about the relation between language and mind, the community and the individual" (Burge 1978, p. 119).

REFERENCES

Block, N. (1987), "Advertisement for a Semantics for Psychology," *Midwest Studies in Philosophy* 10: 615–678.

Brandom, R. (2001), *Articulating Reasons.* Cambridge, MA: Harvard University Press.

Braun, D. (2000), "Russellianism and Psychological Generalizations," *Nous* 34(2): 203–236.

Burge, T. (1978), "Belief and Synonymy," *Journal of Philosophy* 75(3): 119–138.

Church, A. (1954), "Intensional Isomorphism and Identity of Belief," *Philosophical Studies* 5(5): 65–73; reprinted in Salmon & Soames (1988), 159–168.

Davidson, D. (1968/1984), "On Saying That," *Synthese* 19: 130–146; reprinted in his (1984), 93–108.

Davidson, D. (1984), *Inquiries into Truth and Interpretation*. Oxford: Oxford University Press.

Dummett, M. (1973), *Frege: Philosophy of Language*. Cambridge, MA: Harvard University Press.

Evans, G. (1982), *The Varieties of Reference.* Oxford: Oxford University Press.

Fine, K. (2007), *Semantic Relationism.* Malden, MA: Wiley-Blackwell.

Fodor, J. (1998), "There are No Recognitional Concepts – Not Even RED," in his *In Critical Condition.* Cambridge, MA: MIT Press, 35–47.

Fodor, J., and E. Lepore (1992), *Holism: A Shopper's Guide*. Malden, MA: Wiley-Blackwell.

Fodor, J., and E. Lepore (2001a), “Brandom’s Burdens: Compositionality and Inferentialism,” *Philosophy and Phenomenological Research* 63(2): 465–481; reprinted in their *The Compositionality Papers* (2002). Oxford: Oxford University Press, 135–154.

Fodor, J., and E. Lepore (2001b), “Why Compositionality Won’t Go Away: Reflections on Horwich’s ‘Deflationary’ Theory,” *Ratio* 14(4): 350–368; reprinted in their *The Compositionality Papers* (2002). Oxford: Oxford University Press, 43–62.

Fodor, J. and Lepore, E. (2007), “Brandom Beleaguered,” *Philosophy and Phenomenological Research* 74(3): 677–691.

Frege, G. (1884/1980), *The Foundations of Arithmetic*. Evanston, IL: Northwestern University Press.

Geach, P. (1972), “The Identity of Propositions,” in his *Logic Matters*. Oxford: Blackwell.

Horwich, P. (1999), *Meaning*. Oxford: Oxford University Press.

Kripke, S. (1972), *Naming and Necessity*. Cambridge, MA: Harvard University Press.

Kripke, S. (1979), “A Puzzle about Belief,” in Salmon & Soames (1988), 102–148.

Lewis, D. (1974), “Radical Interpretation,” *Synthese* 27(3/4): 331–344.

Mates, B. (1950), “Synonymity,” *University of California Publications in Philosophy* 25: 201–226.

Napoletano, T. (2015) “Compositionality as Weak Supervenience,” *Synthese* 192(1): 201–220.

Ostertag, G. (2009), “Review of *Semantic Relationism*,” *Australasian Journal of Philosophy* 87(2): 345–349.

Putnam, H. (1954), “Synonymy and the Analysis of Belief Sentences,” *Analysis* 14(5): 114–122; reprinted in Salmon & Soames (1988), 149–158.

Quine, W. V. (1956), “Quantifiers and Propositional Attitudes,” *Journal of Philosophy* 53(5): 177–187.

Quine, W. V. (1960), *Word and Object*. Cambridge, MA: MIT Press.

Salmon, N. (2001/2007), “The Very Possibility of Language,” in his *Metaphysics, Mathematics, and Meaning* (2007). Oxford: Oxford University Press, 344–364.

Salmon, N. (2012), “Recurrence,” *Philosophical Studies* 159(3): 407–441.

Salmon, N., and S. Soames (eds.) (1988), *Propositions and Attitudes*. Oxford: Oxford University Press.

Sellars, W. (1955), “Putnam on Synonymity and Belief,” *Analysis* 15(5): 117–120.

Smith, N. (2014), “Is Evaluative Compositionality a Requirement of Rationality?” *Mind* 123(490): 457–502.

Starr, W. B. (2014), “What ‘if’?” *Philosophical Imprint* 14(10): 1–27.

Szabó, Z. G. (2012), “The Case for Compositionality,” in M. Werning, W. Hinzen, and E. Machery (eds.), *The Oxford Handbook of Compositionality*. Oxford: Oxford University Press, 64–80.

Unnsteinsson, E. G. (2014) “Compositionality and Sandbag Semantics,” *Synthese* 191(14): 3329–3350.

Wellwood, A. (2015) “On the Semantics of Comparison across Categories,” *Linguistics and Philosophy* 38(1): 67–101.

Werning, M., W. Hinzenm, and E. Machery (eds.) (2012), *Oxford Handbook of Compositionality*. Oxford: Oxford University Press.