

Indexical Belief: The Belief State Theory Defended*

Lowell Friesen

November 2008

For much of the last century, the received view was that having a belief is a matter of a believer standing in a certain relation to a proposition. In the latter part of the century, some philosophers argued that the received view couldn't adequately account for certain beliefs called 'indexical' or 'self-locating beliefs'. Philosophers responded in various ways. Some philosophers, Proposition Theorists, opted to defend the received view by trying to show that it could deal with the problems that had been raised for it. Others elected to abandon the received view and developed alternative theories of belief. One of the alternative theories that emerged from this, a theory first introduced and defended by Perry, was the Belief State Theory. My project, in this paper, is to show that the Belief State Theory is superior to the Proposition Theory. This will happen in two parts: in §2 and §3, I will raise some objections against two defenses of the Proposition Theory and then, in §5, I will defend the Belief State Theory from some objections that Proposition Theorists have raised against it. Before embarking on my project, however, I will say a few words about how indexical or self-locating beliefs are problematic for the received view.

1 Problems for the Received View

The term 'belief' is multiply ambiguous. Sometimes it is used to refer to a mental state; sometimes it is used to refer to the content of a mental state, the "thing believed"; and sometimes it is used to refer to the relation that

*This is a draft. Please consult me before citing it.

obtains between a believer and a content. I will regiment my terminology as follows: I will use the term ‘belief’ to refer to mental states and ‘content’ to refer to their contents. Employing the terminology in this way, it will then be correct to say that, according to the received view, the content of a belief is a proposition.¹

Indexical beliefs are properly called ‘indexical’ because they are often reported with ‘that’-clauses that include indexical or demonstrative terms (e.g., ‘I’, ‘here’, ‘now’, ‘this’, ‘that’, etc.). These beliefs are also properly called ‘self-locating’, because, speaking somewhat vaguely, they serve to locate their subject within a conceptual representation of reality. Suppose McCain had had a mishap on the campaign trail, in which he bumped his head and temporarily lost some of his memory. Had he turned on the radio, while in his amnesic state, and heard an interview he gave earlier that day, he might not have remembered giving the interview and, as a result, he might have been inclined to say

- (1) I believe that McCain is the Republican nominee for President.

without being inclined to say

- (2) I believe that I am the Republican nominee for President.

We could say that what McCain lost, when he bumped his head, was his bearing within his conceptual representation of reality and that this is what he would recover if he were to regain his memory. Regaining his memory would involve a significant change in his mental state; he would come to have a belief he didn’t have while he was suffering from amnesia, and he would, once again, be prepared to utter (2). The belief he would come to have is an indexical or self-locating belief.²

¹The term ‘belief’ is ambiguous along another dimension. Sometimes it is used to refer to an occurrent thought that is at the forefront of a person’s mind at a time, and sometimes it is used to refer to something like a disposition to have a certain thought, given the right circumstances. A complete theory of belief will have to say something about both of these phenomena. The philosophers who have defended the theories of belief I will be discussing, however, have not always made their intentions with respect to this distinction explicit. This is significant, because it’s not always clear how well their respective theories are able to account for these phenomena. I will assume that these theories are directed, primarily, at occurrent belief and leave open the question concerning how well they are able to account for dispositional belief.

²This way of characterizing the relevant class of beliefs is more suggestive than precise.

The belief McCain would acquire upon recovery from his amnesic state is a special kind of indexical belief, namely, a *de se* belief. Some writers have framed the problem for the received view as a problem that is generated by *de se* beliefs. The pressures exerted by *de se* beliefs upon the received view, however, are the same ones that are generated by other indexical beliefs that aren't, strictly speaking, *de se*. For instance, the beliefs one would naturally report with the expressions, 'The building is quiet *now*' and 'It is cold in *here*', are also problematic for the received view, but these beliefs aren't *de se* beliefs. This being said, it will be convenient, for much of the discussion in the following pages, to focus almost exclusively on *de se* beliefs.

According to the received view, there is no difference in belief without a corresponding difference in content. If a person comes to have a new belief, he must also come to be related, via the appropriate relation, to some proposition he wasn't related to before. And if a person ceases to have a certain belief, there must be some proposition he ceases to be related to. The problem indexical beliefs raise for the received view is that it's often difficult to distinguish indexical beliefs from each other and from non-indexical beliefs strictly in terms of content. The story regarding why this is the case is somewhat complicated. The reason for this is that there are several conceptions of propositions on offer. Here, I will briefly outline how the problem for the received view arises on three different conceptions of propositions.

Suppose McCain were to snap out of his amnesic state and acquire the *de se* belief he would report by uttering (2). According to the received view, this would have to be accompanied by McCain coming to be related, in the appropriate way, to some proposition he wasn't related to before. But what proposition would this be? The natural place to look for the content of a belief is in its corresponding belief report. However, if we take McCain's belief reports at face value and assume that the content of the belief McCain comes to have is the proposition expressed by the embedded sentence in (2), we seem to end up with a proposition McCain already believed when he was inclined to utter (1). Assuming a Russellian conception of propositions, the content of the belief McCain reports with (2) is the singular proposition, $\langle \text{McCain}, x \text{ is the Republican nominee for President} \rangle$. But the embedded

It is difficult to say more about these beliefs without becoming heavily embroiled in the theories I will be discussing in this paper. I trust that, even if the boundaries of the class of indexical beliefs aren't as clear as one would, perhaps, like, they are clear enough to proceed.

sentence in (1) also seems to express the very same singular proposition. The only difference between the two embedded sentences is that one includes the proper name, ‘McCain’, and the other the indexical, ‘I’. In the given context, ‘McCain’ and ‘I’ refer to the same individual.

Problems also arise when the received view is wedded to a Fregean understanding of propositions and belief reports.³ According to Frege, the semantic value of a ‘that’-clause is the *sense* of its embedded sentence. Using corner quotation marks to form the name of a sense, we can say that the content of McCain’s *de se* belief is the structured abstract individual consisting of the sense, [I], and the sense, [... AM THE REPUBLICAN NOMINEE FOR PRESIDENT]. Frege called these abstract individuals ‘thoughts’, but it isn’t much of a stretch to think of them as propositions; like propositions, they are the bearers of truth-values and their truth-values do not change relative to a time, place, or person. For a Fregean, the problem for the received view arises when we consider similar *de se* beliefs across individuals. Suppose McCain’s misfortune rubbed off on Palin and she also had a mishap on the campaign trail, causing her to become confused and sincerely utter (2) to one of her aides. What would be the content of her belief? If we take her belief report at face value, it seems as though the content of her *de se* belief would be the same proposition that was the content of McCain’s *de se* belief, namely, the proposition consisting of [I] and [... AM THE REPUBLICAN NOMINEE FOR PRESIDENT]. However, if McCain’s *de se* belief and Palin’s *de se* belief have the same content, their beliefs would have to have the same truth-value. But they don’t have the same truth-value. McCain’s belief is true; Palin’s is not. Thus, the content of Palin’s belief can’t be the content of McCain’s belief. But then we are left to wonder: What proposition, according to a Fregean view, is the content of Palin’s belief?

Finally, the problem for the received view has also been outlined within a conception of propositions according to which they are sets of possible worlds. Here the problem for the received view can, perhaps, be seen more clearly if we consider Lewis’s well-known case of the two gods.⁴ Lewis asks us to imagine a world, *w*, in which there are two gods. One god, call him ‘TM’, lives on top of the tallest mountain and throws down manna; the other god, call her ‘CM’, lives on top of the coldest mountain and throws down bolts of lightning. Both gods are omniscient with respect to all the true propositions.

³See Perry [13].

⁴See Lewis [5].

As a result, both gods know exactly which world is the actual world. Yet, Lewis suggests, there could still be something each of the gods doesn't know: both CM and TM might not know which of the two gods in w he or she is. Knowledge of which world is the actual world is not sufficient for knowledge of one's location within that world. If this is right, then there is some belief TM or CM could acquire without coming to be related to some proposition he or she doesn't already believe; both TM and CM already believe all the true propositions, so there isn't a proposition for either of them to *come* to believe.

Proposition Theorists have attempted to address these problems on behalf of the received view by attempting to show that propositions are fine-grained enough to distinguish all the beliefs that need to be distinguished. Belief State Theorists, on the other hand, have responded to the above problems by abandoning the received view. In the next two sections, I will take up two defenses of the Proposition Theory, one offered by Stalnaker and one offered by Markie, and raise objections to each of them.

2 Stalnaker's Defense of the Proposition Theory

According to Stalnaker [19], to have a belief is to distinguish amongst possible ways the world might be; if a person has a belief, he takes a stand with respect to certain possibilities he takes to be ruled out and certain possibilities he takes to be live. Taking propositions to be sets of possible worlds, as Stalnaker does, the contents of a person's beliefs at a time will be all those propositions that are true in all the worlds not ruled out by that person's conception of the world at that time.

Stalnaker develops his version of the Proposition Theory by considering the case of Rudolf Lingens. Lingens, an amnesiac, is lost in the Stanford Library. While lost, he reads the biography of a man named 'Lingens', who is the cousin of a spy named 'Ortcutt'. He also reads a detailed description of a certain library. Because Lingens is an amnesiac, he doesn't know that the biography is about himself, and he doesn't know that the library he reads about is the library he, in fact, is in.

Stalnaker asks what the world is like according to Lingens. Lingens believes what he reads in the biography, so, in each of the possible worlds

compatible with what he believes, there is a person named ‘Lingens’, who is the cousin of a notorious spy named ‘Ortcutt’ and has a biography written about him. Also, in each of the worlds compatible with what Lingens believes, there is a person in a library reading that biography. What Lingens *doesn’t* know is whether the person reading the biography is the person whom the biography is about. Thus, in some of the worlds compatible with what Lingens believes, the person reading the biography in the library is identical to the person whom the biography is about, and, in some of the worlds compatible with Lingens’ beliefs, the person reading the biography is distinct from the person whom the biography is about.

What proposition is the content of Lingens’ belief when he believes the sentence in the biography and thinks to himself

- (3) Lingens is the cousin of a spy.

And what would be the content of his belief if he were to learn who he was and acquire the *de se* belief he would report by saying

- (4) I am the cousin of a spy.

To answer these questions, Stalnaker introduces the notion of a *propositional concept*. For any given sentence token, we can ask two questions: we can ask what proposition it actually expresses, and we can ask what proposition would be expressed by a token of the same sentence type in other possible worlds. Consider three possible worlds. In w_1 , the world in which Lingens resides and the one we will consider to be actual, the man reading the biography is identical to the person whom the biography is about. In w_2 , the man reading the biography is *not* identical to the man whom the biography is about; there exists a man named ‘Lingens’ who is the cousin of a spy named ‘Ortcutt’ and has a biography written about him, but the man *reading* the biography, the man who has the name ‘Lingens’ in w_1 , has some other name in w_2 . w_3 is just like w_2 except that, in w_3 , the biography makes at least one false claim. It says ‘Lingens is the cousin of a spy’, but this is false; the man the biography is about, there, is not the cousin of a spy.

In each of these three possible worlds, the biography contains (3). We can ask what proposition (3) expresses in each world in which it is tokened, and we can represent these propositions with a two-dimensional matrix. Each row of truth-values in the matrix indicates the proposition that is expressed by (3) when tokened in the world at the left end of the row. The man picked

	w_1	w_2	w_3
w_1	T	F	F
w_2	F	T	F
w_3	F	T	F

out by ‘Lingens’, when (3) is tokened in w_1 , is the cousin of a spy there, but he is not the cousin of a spy in w_2 or w_3 . Thus, the proposition expressed by (3), when tokened in w_1 , is true in w_1 , but false in w_2 and w_3 . The man picked out by ‘Lingens’, when (3) is tokened in w_2 , is the cousin of a spy there, but he is not the cousin of a spy in w_1 —we can suppose he doesn’t exist in there—or in w_3 . The man picked out by ‘Lingens’, when (3) is tokened in w_3 , is not the cousin of a spy there or in w_1 ; however, he *is* the cousin of a spy in w_2 .

According to Stalnaker, none of the propositions indicated by the horizontals of the matrix are the content of Lingens’ belief when he accepts (3). This would require Lingens knowing which world he is in. Lingens accepts what the biography says, so he believes he is not in w_3 , the world in which the biography says something false. However, he doesn’t know whether he is in w_1 or w_2 . Stalnaker suggests that what Lingens believes, when he accepts (3), is the proposition indicated by the *diagonal* of the matrix, the proposition that is true in w_1 and w_2 , but false in w_3 .

What would be the content of Lingens’ belief were he to accept (4)? To answer this question, we need only consider which possibilities would be ruled out by his new belief. Prior to learning who he is, Lingens takes w_1 and w_2 to be live possibilities. When he learns who he is, he comes to believe that he and the subject of the biography are the same man. As a result, he rules out w_2 . The content of Lingens’ belief is the proposition that’s true in w_1 and false in w_2 and w_3 ; that is, the proposition he believes is the diagonal of the propositional concept for (4) when it is tokened by the man reading the biography. Incidentally, the diagonal proposition of this propositional

	w_1	w_2	w_3
w_1	T	F	F
w_2	T	F	F
w_3	T	F	F

concept is identical to the each of the horizontals. Since the diagonals of the two propositional concepts are distinct propositions, Stalnaker is able to

distinguish the belief Lingens has when he is prepared to utter (3) from the *de se* belief he has when he learns who he is and is prepared to utter (4).

Philosophers have pointed to several problems with Stalnaker's Proposition Theory.⁵ I will not bother to rehearse their arguments here. I will, however, point to a deficiency of Stalnaker's view that, to the best of my knowledge, has not yet been pointed out.

In the problem cases that have been discussed up to this point, namely, the cases of McCain on the campaign trail and Lingens in the library, the concern has been to find a difference in content to go along with a difference in belief. One of the reasons for thinking that there is, in fact, a change in belief in these two cases is that we think behaviour is determined, in part, by belief and that McCain and Lingens will behave in different ways before and after they acquire certain information.⁶ This is significant, because, in the same way expected differences in behaviour lead us to posit a difference in belief, expected *similarities* in behaviour lead us to posit similar beliefs. And just as we expect a theory of belief to be able to distinguish beliefs when there is a difference in belief to distinguish, we expect a theory of belief to be able to account for a similarity in belief when there is one. The problem for Stalnaker's Proposition Theory is that it doesn't seem to have the resources to say what's similar about beliefs that have similar behaviour-determining roles. Suppose, to use one of Perry's famous examples,⁷ two hikers are startled by what sounds like a large angry animal running toward them through the woods. They might each have the thought

(5) I'm about to be attacked by a bear.

causing each of them to roll up into a ball and try to be as still as possible. *Ceteris paribus*, a theory of belief that gives an account of the similarity between the beliefs of these unfortunate hikers that corresponds to their common behaviour-determining role is a more powerful theory than a theory that can't. Stalnaker's theory, it seems, doesn't have the theoretical resources to do this.

For Stalnaker, and, indeed for any Proposition Theorist, the only theoretical resources available to characterize the hikers' beliefs are the propositions that are the contents of their respective beliefs. What the Proposition Theorist must do is point to some feature of the the hikers' respective belief

⁵See Robbins [14] and Perry [8].

⁶I'm assuming that their desires remain constant.

⁷See Perry [13].

contents and say that that feature is what corresponds to the similarity in the hikers' respective behaviours. If the two hikers, in thinking (5) to themselves, believed the same proposition, the Proposition Theorist could point to the identity of content between their beliefs and say that the similarity in their respective behaviours tracks this identity. However, the two hikers believe different propositions when they each think (5); one believes a proposition whose constituents, i.e., possible worlds, all contain him and a charging bear, the other believes a proposition whose constituents all contain *him* and a charging bear. Since these are different sets of possible worlds, they believe distinct propositions.

Can the similarity between their beliefs be accounted for by pointing, not toward an identity of content, but toward a *similarity* of content? It's not clear that it can. It's certainly true that the worlds that are the constituents of the first hiker's belief content will be similar to the worlds that are the constituents of the second hiker's belief content; in both sets of possible worlds, each world in the set will contain a person, the same person in each world in that set, being attacked by a bear. However, this similarity between the contents of the two hikers' beliefs doesn't correspond to the relevant behaviour-determining role of their beliefs. A third party could observe the scene, demonstrate one of the hikers, and think to himself, 'He is about to be attacked by a bear', without rolling up into a ball and trying to be as still as possible. Yet the content of the bystander's belief would be similar to each of the two hikers' belief contents in the suggested respect. The Proposition Theorist might interject at this point and say that this last suggestion points in the right direction. There is a difference between the bystander and the two hikers that could be employed to distinguish the bystander's belief from the beliefs of the two hikers and to say what is similar about the two hikers' beliefs: for each hiker, the relation of identity holds between the believer of the content and the unfortunate individual in each possible world in that belief content; whereas, for the bystander, this relation doesn't hold. But this proposal won't do. In order to account for the similarities and dissimilarities that correspond to the similarities and dissimilarities between the behaviour-determining roles of their beliefs, this proposal makes use of materials that are not available to the Proposition Theorist; it relies upon elements that are not constituents of the belief contents themselves, namely, some extrinsic properties of the belief contents. There is nothing philosophically objectionable about this, indeed the Belief State Theory does exactly this, but it amounts to an abandonment of the Proposition Theory.

3 Markie's Defense of the Proposition Theory

Markie [6] defends the Proposition Theory by suggesting three ways the Proposition Theorist could develop his theory so that it could account for all the similarities and dissimilarities between beliefs that need to be accounted for. In this section, I will briefly outline Markie's three suggestions and then I will argue that they are all less than satisfactory.

The first of Markie's three suggestions is modeled on Russell's [16] account of knowledge by acquaintance. According to this suggestion, when an individual has a *de se* belief about himself he does so by being directly acquainted with himself. The special epistemic relation of direct acquaintance always contributes the object of acquaintance to the proposition. Thus, when an individual forms a belief about himself via the special epistemic relation of direct acquaintance, the content of that individual's belief contains himself as a constituent. For instance, when Hume thinks to himself, 'I am Hume', to use Markie's example, he is directly acquainted with himself and, as a result, the content of his belief is the singular proposition, $\langle \text{Hume}, x \text{ is } Hume \rangle$. Non-*de se* beliefs are formed as a result of standing in some other epistemic relation to an individual. Only the epistemic relation of direct acquaintance contributes the object of belief to the proposition believed. Thus, what distinguishes an individual's *de se* beliefs from an individual's non-*de se* beliefs is that an individual's non-*de se* beliefs aren't singular propositions. So if Hume were to think to himself, 'The author of the *Treatise* is Hume', his belief, though about himself, would not involve the relation of direct acquaintance and, therefore, would not have a singular proposition for its content. In this way, Hume's two beliefs are differentiated.

Markie also suggests that the acquaintance strategist can say what is similar about *de se* beliefs that are similar with respect to their behaviour-determining roles. Suppose Hume and Heimson each think to themselves, 'I am Hume'. Their *de se* beliefs will have similar behaviour-determining roles. The acquaintance strategist can't say that this similarity corresponds to an identity of belief content, because Hume's and Heimson's belief contents are distinct; Hume's belief has the singular proposition, $\langle \text{Hume}, x \text{ is } Hume \rangle$, for its content and Heimson's belief has the singular proposition, $\langle \text{Heimson}, x \text{ is } Hume \rangle$, for its content. However, Markie suggests, the acquaintance strategist can introduce a new entity, the content *type* of Hume's and Heim-

son's beliefs, and say that it is similarity of content type that corresponds to the relevant similarity of behaviour-determining role. The content type of Hume's and Heimson's *de se* beliefs is the set of all singular propositions that have the open proposition, *x is Hume*, for a constituent. Any belief that has a content of this type (i.e., is a member of this set) will be similar with respect to its behaviour-determining role to the *de se* beliefs of Hume and Heimson.

Markie's second and third suggestion are similar to the first in that they distinguish Hume's *de se* beliefs from his non-*de se* beliefs by finding a special constituent for his *de se* beliefs. They are also similar to Markie's first suggestion in that they account for the similarity between Hume's and Heimson's *de se* beliefs by pointing to a similarity of content type.

According to Markie's second suggestion, when Hume has a *de se* belief, he apprehends his individual essence and, in doing so, his essence becomes a constituent of his belief content. Hume's non-*de se* beliefs don't have his individual essence as a constituent of their contents. Thus, Hume's *de se* belief is distinguished from his non-*de se* belief. The similarity between Hume's and Heimson's *de se* beliefs that corresponds to their similar behaviour-determining role is a similarity of content type.

According to Markie's third suggestion, when Hume has a *de se* belief, he individuates himself as the owner of some element of his experience, something he doesn't do when he has non-*de se* beliefs about himself. When he thinks about himself in this special way, the object of his belief "contains some element of his experience, a relation that uniquely relates him to that element, and [an open proposition] [6, 578]." Here Markie borrows from Zemach [21]. Zemach, in developing his own version of the Proposition Theory, employs this strategy to show what is special about *de se* beliefs.

Zemach's account relies on the notion of a *display proposition*. If we see a sign on a bridge that says 'Unsafe for Lorries', we know what is being said. The reason, Zemach contends, is that a complete sentence has been tokened. Most sentence tokens consist entirely of symbols that refer to the things they are symbols of. This is not the case in this situation. No symbol is required to refer to the bridge; the bridge is right there, available to be a constituent of the sentence. It is displayed. The sentence tokened on the bridge is a display sentence of which the bridge itself is a constituent. The proposition expressed by this sentence token is a display proposition, one in which the displayed item, the bridge, is a constituent.

Zemach suggests that, when mental items combine in certain ways, we

have what could be thought of as mental sentences. Most often, the mental items that compose mental sentences refer to things beyond themselves. Some mental sentences, however, have constituents that are displayed, as when I think to myself, ‘That pain is terrible’. In thinking this thought, says Zemach, my pain itself is a constituent of my mental sentence. And, once again, the proposition expressed by this mental sentence is a display proposition, one of whose constituents is my pain.⁸

According to Zemach’s account, when a person has a *de se* belief, the content of his belief is also a display proposition, a display proposition whose displayed item is a component of the believer’s experience. For instance, the content of Hume’s belief, when he thinks to himself ‘I am Hume’, is a display proposition that consists of an element of Hume’s experience and the open proposition, *x is owned by the individual that is Hume*. Any non-*de se* belief Hume might have about himself will not have such a display proposition for its content. In this way, Hume’s *de se* indexical beliefs can be distinguished from his non-*de se* beliefs. And again, the similarity of behaviour-determining role between Hume’s and Heimson’s *de se* beliefs is said to correspond to a similarity of content type.

I will now point out some problems for the suggestions Markie makes on behalf of the Proposition Theorist. First, I will make some general criticisms that apply to each of the three suggestions. Then, I will draw attention to some special problems that arise for one or other of the various suggestions.

⁸Zemach develops a formal language into which he translates written and mental sentences, but he doesn’t say much about what his conception of propositions is, whether he has a Russellian or Fregean conception of propositions. However, it seems as though his account of indexical belief could be meshed with either.

Zemach introduces some conventions for representing the distinction between items that are displayed and items that are used referentially. ‘ $\vdash \phi$ ’ indicates that ‘ ϕ ’ is used referentially and not displayed. Square brackets are used to indicate that the expression flanked by them is an expression in a person’s mental language. The symbol, ‘ $\hat{\ }^{\ }^{\ }$ ’, is used to indicate that the items that flank it are combining to form a more complex expression. If we give the pain I experience a name, say, ‘pain_a’, then the mental sentence corresponding to my thought would be represented as follows:

$$(6) \text{ pain}_a \hat{\ }^{\ }^{\ } \vdash [\text{terrible } \xi].$$

Again, just to be clear, (6) indicates that my pain itself, not some mental word that refers to it, is part of my mental sentence. Within a Russellian conception of propositions, (6) would express the proposition, $\langle \text{pain}_a, x \text{ is terrible} \rangle$. Within a Fregean conception of propositions, (6) would express the proposition, $\text{pain}_a \hat{\ }^{\ }^{\ } [\dots \text{ IS TERRIBLE}]$ —Zemach [21, 196] says that the sense of a displayed item is the item itself.

By distinguishing *de se* beliefs from non-*de se* beliefs in terms of the first constituent of their respective contents, Markie's suggested strategies all commit the Proposition Theorist to the view that some propositions are private, that is, that some propositions can be believed by just one person. This gives rise to at least two problems for the Proposition Theory: the strategies complicate any accompanying theory of communication and they don't generalize very well to indexical beliefs that are reported with other indexical terms such as 'now' and 'here'.

If a colleague approaches you and says, "I accidentally left my wallet at home this morning. Could I borrow some money for lunch? I'll pay you back tomorrow." You understand perfectly well what your colleague says, and, if your colleague is trustworthy, you will probably believe him. However, if the proposition your colleague believes, when he promises to pay you back, is private in the way Markie's suggestions require, what you believe as a result of the exchange is not what your colleague believes.

Markie counters this objection by saying that the Proposition Theorist will maintain that "the communication between [you and your colleague] rests on the *relevant similarity*, not identity, of what the one asserts and the other grasps (my emphasis) [6, 583]." I don't doubt that, with enough ingenuity, one could construct an account of communication able to accommodate Markie's claim. However, it is sufficient for my purposes here to point out that the assumption Markie objects to is, I think, the default assumption, the one that most naturally fits with our naive understanding of communication, and that adopting any one of Markie's suggested defenses of the Proposition Theory makes constructing an accompanying theory of communication that much more difficult.

The problem with private propositions is even more apparent when we try to generalize Markie's suggestions to indexical beliefs one might have regarding one's location in time and space, beliefs one would report using the terms 'now' and 'here'. Should we say, for instance, that two colleagues who simultaneously think to themselves, 'The Admissions Committee meeting starts *now*', have beliefs with different contents even though they are thinking about the same meeting at the same time? And should we say of two Civil War historians walking around the battlefield at Chancellorsville that their beliefs have different contents when they stop at the side of a trail in the woods and say, 'General Jackson was injured by friendly fire *here*'? The defender of the Proposition Theory who accepts any of Markie's suggested defenses is under some pressure to answer in the affirmative. If he doesn't,

he owes us an explanation for why indexical beliefs having to do with one's location in time and space should be treated differently than indexical beliefs one would report with 'I'. And if he doesn't provide such an explanation, his account is vulnerable to the charge of being *ad hoc*.

There is another general problem that plagues each of Markie's three suggestions. This is a problem that arises for Markie's suggestion that the similarity between Hume's and Heimson's *de se* beliefs that corresponds to their similarity of behaviour-determining role is a similarity of content type. According to Markie, the contents of Hume's and Heimson's respective *de se* beliefs are members of a certain set, namely, the set of all propositions that have a certain first element—according to the acquaintance strategy, it is an individual; according to the essence strategy, it is an individual essence; according to the Zemachian strategy, it is an element of the believer's experience—and the open proposition, *x is Hume*. The problem with his account of the relevant similarity, however, is that it doesn't cast a wide enough net; some beliefs that have similar behaviour-determining roles will not exhibit a similarity of content type.

Consider Hume and Hume's duplicate, who lives in a nearby possible world. Hume has a harmless but mildly irritating skin condition, one that is relatively common in Hume's world. There is no known cure, and the sciences haven't developed to the point where it is possible to study the micro-structure of whatever it is that causes it. Call the cause of Hume's skin condition 'Itch'. Hume's duplicate also has a harmless but mildly irritating skin condition. He lives in a possible world that is exactly like the world Hume lives in except for the fact that, in his world, the cause of his skin condition has a slightly different micro-structure. Call the cause of Hume's duplicate's skin condition 'Scratch'. When Hume, with some annoyance, notes the onset of his skin condition, the content of his *de se* belief will have the open proposition, *x has Itch*, as a constituent. However, when Hume's duplicate notices the onset of his own skin condition, the content of his *de se* belief will have a different open proposition as a constituent, namely, *x has Scratch*. According Markie's account, this entails that Hume's belief and his duplicate's belief are not of the same content type. Yet, because the two men are duplicates, their beliefs will surely have the same behaviour-determining role.

The above problems are problems for all three of Markie's suggestions on behalf of the Proposition Theorist. But there are, in addition, some special problems faced by several of Markie's suggestions. Consider the first

of Markie's three suggestions, the acquaintance strategy. Many philosophers are attracted to a direct reference semantics for indexical and demonstrative terms and proper names. As outlined by Markie, however, the acquaintance strategy comes at a cost for the direct reference theorist.

According to the direct reference theorist, if a person says, 'Hume is wise' or, demonstrating Hume, 'He is wise', the proposition expressed by both of these utterances is $\langle \text{Hume}, x \text{ is wise} \rangle$. But if one accepts the acquaintance strategy, then one is committed to saying that this proposition is what Hume believes when he has the *de se* belief he would report with 'I am wise'. Moreover, since the proposition has Hume as a constituent, it can't be the content of any non-*de se* belief Hume might have, including the non-*de se* beliefs he would report by saying 'Hume is wise' or, demonstrating himself in a mirror, 'He is wise'. What this means is that if the direct reference theorist were to accept the acquaintance strategy, he would have to say that, when Hume has the non-*de se* beliefs in question, his utterances, when he reports these beliefs, do not have the same content as the beliefs he reports with them. Although this is a consistent position, it seems a rather unattractive one. *Ceteris paribus*, a theory that permitted more continuity between the contents of beliefs and the contents of linguistic items would be a preferable one.

The second of Markie's three suggestions, the essence strategy, also faces a special problem. According to this suggestion, when a person has a *de se* belief, the content of his belief has his individual essence as one of its constituents. Call Hume's individual essence 'HUME'. According to the essence strategy, when Hume thinks to himself, 'I am Hume', the content of his belief is the proposition, $\langle \text{HUME}, x \text{ is Hume} \rangle$. Any non-*de se* belief Hume might have does not have HUME as a constituent of its content.

One rather obvious problem for the essence strategy is that it makes Hume's *de se* belief false. Consider the proposition, $\langle \text{Hume}, x \text{ is Hume} \rangle$. This proposition is true, because the individual indicated by 'Hume' has the property indicated by '*x is Hume*'; it's true because Hume is Hume. The content of Hume's *de se* belief, according to the essence strategy, is $\langle \text{HUME}, x \text{ is Hume} \rangle$. But HUME isn't Hume. Rather, HUME is a property Hume has. So the content of Hume's *de se* belief is false. There is a simple way to get around this problem. Instead of saying that the content of Hume's *de se* belief is the proposition, $\langle \text{HUME}, x \text{ is Hume} \rangle$, one could say that the content of his belief is something like $\langle [\nu y: y \text{ has HUME}], x \text{ is Hume} \rangle$. This proposition is true; Hume has HUME. Although this way of getting around the problem

gets the truth-value of Hume's *de se* belief right, the Proposition Theorist who accepts the essence strategy must still address another worry, one that has been suggested in the literature but Markie does not address. Both the essence strategy, as Markie presents it, and its suggested revision above require the believer to be able to apprehend his or her essence. However, it's far from clear that this is possible.

As Lewis [5, 154] says, individual essences are extremely rich properties; a person's essence not only distinguishes him or her from all other actual people, it also distinguishes him or her from all other individuals in any possible world in which he or she exists. For this reason, it's doubtful that any mere mortal could apprehend his or her essence. But suppose, for the sake of argument, that it is possible to do so. What's clear is that a person couldn't apprehend his or her essence by merely gaining qualitative information about him or herself. The reason for this is that, for any set of qualitative properties one person might come to discover that he has, there is some other possible, and perhaps even actual, individual who has the same properties and knows that he has them. If one person could apprehend his essence by knowing that he has a certain set of properties, then it would seem that some other individual who has those same properties could apprehend *his* essence by coming to know that he has those properties. But, in order to make the essence strategy work, these two individuals would have to apprehend different essences through this process. But how could this be? How could one individual apprehend a certain essence by coming to know he has a certain set of properties while another individual could apprehend a different essence by discovering he has those same properties? It seems that, in order to avoid this problem, the defender of the essence strategy would have to maintain that one apprehends one's essence by coming to know some *non-qualitative* information about oneself. But what sort of non-qualitative information could one learn about oneself that would set one apart from all other individuals? A merely trivial truth, such as the truth that one stands in the identity relation to oneself, wouldn't do the trick; all individuals have this property. But what other non-qualitative information could one learn about oneself that would do the work it needs to do? It's not easy to see what sort of information this could be. Until the essence strategist addresses this question, it seems as though the essence strategy is a non-starter.

Finally, the Zemachian strategy also faces a special problem. According to this strategy, the content of the *de se* belief Hume has when he thinks to himself 'I am Hume' has an element of his experience as a constituent. Using

‘E’ to name an element of Hume’s experience at the moment he thinks this thought, we can say that the content of his belief is the proposition, $\langle E, x \text{ is owned by the individual that is Hume} \rangle$. The problem for this strategy is that the proposition it assigns to be the content of Hume’s belief doesn’t have the right modal profile.

When Hume thinks to himself, ‘I am Hume’, the content of his belief has certain truth-conditions; his belief is true just in case a certain individual has a certain property. At the actual world, his belief is true; the individual his belief is about, namely, himself (Hume), has the relevant property. But we can also ask about the truth-value of the content of his belief at other possible worlds. His belief will be true at all and only those worlds in which he (Hume) is Hume; that is, the content of his belief will be true at a world, w , just in case, in w , the individual who represents Hume there has the property that corresponds to the open proposition, $x \text{ is Hume}$.⁹ However, if we take the content of Hume’s belief to be what the Zemachian strategy says it is, it won’t be true at exactly the same worlds. The proposition, $\langle E, x \text{ is owned by an individual that is Hume} \rangle$, is true at a world, w , just in case, in w , the experience that represents E there has the property that corresponds to the open proposition, $x \text{ is owned by the individual that is Hume}$.¹⁰ Of course, some worlds in which Hume is Hume will be worlds in which the owner of E is Hume, but it’s not the case that *all* worlds in which Hume is Hume will be worlds in which E is owned by Hume. Consider worlds in which Hume exists and E doesn’t, or consider worlds in which both exist but e is owned by someone other than Hume. In these worlds, the proposition the Zemachian strategy assigns to Hume’s *de se* will be false. This is problematic, because, intuitively, every world in which Hume exists is a world in which the content of the belief he has, when he thinks to himself ‘I am Hume’, is true.

Having presented some objections to Stalnaker’s and Markie’s defenses of the Proposition Theory, I will now turn my attention to the Belief State Theory. I will outline the theory briefly, showing how it is able to handle the problems for the received view, and then I will defend it from some objections that have been raised against it.

⁹For my purpose here, I don’t need to say anything about truth-values at worlds in which Hume doesn’t exist. So, for the sake of convenience, I’ve disregarded them.

¹⁰Again, I ignore worlds in which E doesn’t exist.

4 The Belief State Theory

In a series of influential papers, Perry has argued that beliefs are to be distinguished as much by the *way* in which they determine their contents as by their contents themselves.¹¹ In the earlier presentations of his view, he employed the term ‘belief state’ to refer to these ways of determining a content, hence the name of the theory.

According to Perry, beliefs are concrete cognitive particulars. They are complex and have structure, come into and go out of existence, and stand in various relationships, including causal ones, to each other and to their agents’ perceptual and motor systems. Beliefs are composed of notions and ideas. Notions and ideas are themselves concrete cognitive particulars and are the cognitive analogues of subject and predicate terms. They can be combined in various ways and, given their origin conditions and the roles they play within their subjects’ cognitive processes, they can represent their subjects’ environments as being a certain way.¹² Roughly, to be in a certain belief state is to have a belief with certain constituents (i.e., notions and ideas) standing in certain relations to each other. Two believers will have a belief state in common when the constituents of their respective beliefs stand in the same relations to each other and play similar functional roles in the cognitive processes of their respective owners. An indication that two believers have a belief state in common is that they are disposed to behave in similar ways in similar contexts.¹³ In Perry’s earlier writings on this subject, he exploits this fact by suggesting that a handy way to individuate belief states is in terms of the sentences people in those belief states are disposed to utter.

There is an unmistakable similarity between Perry’s account of belief and Kaplan’s [3] account of sentences containing demonstrative and indexical terms. According to Kaplan, the same indexical sentence, in the mouth of different people in different contexts, can have different *content*, that is, express different propositions, even though the sentence has the same *character* in each case.¹⁴ According to Perry’s Belief State Theory, there is a similar relationship between belief states and the contents of belief; two people can be in the same belief state and yet have different propositions for the con-

¹¹See Perry [13], [12], and [2].

¹²For Perry’s account of how this happens, see [11] and [10].

¹³Again, this assumes that the believers have similar desires.

¹⁴On Kaplan’s account, the character of an indexical sentence is a function from its context of use to content.

tents of their respective beliefs. What falls out of this is that “there is not an identity, or even an isomorphic correspondence, but only a systematic relationship between the belief states one is in and what one thereby believes [12, 18].”

The Belief State Theory distinguishes McCain’s *de se* belief, the one he has when is prepared to utter (2), from his non-*de se* belief, the one he has when he is only prepared to utter (1), by invoking McCain’s belief states. Even though the contents of McCain’s beliefs don’t change when he recovers his memory—in both cases, the content of McCain’s belief is the proposition, $\langle \text{McCain, } x \text{ is the Republican nominee for President} \rangle^{15}$ —there is still a change of belief, because, when he recovers his memory, there is a change in his belief state. The Belief State Theory can also account for the similarity between the two hikers’ beliefs that corresponds to the similarity of their behaviour-determining roles. The contents of the hikers’ respective beliefs are distinct, but the hikers are in the same belief state.

5 Objections to the Belief State Theory

One of the objections to the Belief State Theory I will address is an objection that has been raised by Stalnaker [19]. Stalnaker raises his objection to the Belief State Theory by adding to Perry’s case of Lingens lost in the library.

Lingens, still lost in the Stanford Library, meets Ortcutt. “I’ve lost my memory and don’t know who I am,” says Lingens. “Can you tell me?” “Who am I?” “You’re my cousin, Rudolf Lingens,” replies Ortcutt [19, 146].

Stalnaker suggests that this exchange between Lingens and Ortcutt reveals a limitation of the Belief State Theory: the theory cannot provide an adequate account of the *information* exchanged between Lingens and Ortcutt.

Lingens requests some information from Ortcutt. Ortcutt provides it. Lingens learns something and, as a result, there is a change in his beliefs. Stalnaker asks what the information that is exchanged between Lingens and Ortcutt might be. The Belief State Theory characterizes beliefs in terms of two entities: contents and belief states. Belief states can’t be identified

¹⁵Perry develops his Belief State Theory with a Russellian conception of propositions. It seems to me, however, that the theory could also be developed with other conceptions of propositions

with the information Ortcutt gives and Lingens receives, argues Stalnaker, because “belief states are too subjective to represent informational content [19, 148].” That leaves the contents of belief. However, identifying the information exchanged between Ortcutt and Lingens with the content of either Ortcutt’s or Lingens’ belief is problematic. This can be seen if we focus on part of what Ortcutt says. Ortcutt says, ‘You’re my cousin, Rudolf Lingens’. In effect, this utterance by Ortcutt expresses two propositions: $\langle \text{Lingens}, x \text{ is Lingens} \rangle$ and $\langle \text{Lingens}, x \text{ is Ortcutt’s cousin} \rangle$. Both of these propositions are propositions Lingens *already* believes; he came to believe them, albeit by being in different belief states than the one he comes to be in when he speaks with Ortcutt, when he studied the biography in the library. Thus, it seems a stretch to say that either one of these propositions is the information Lingens learns from Ortcutt’s utterance.

In my opinion, the defender of the Belief State Theory has an adequate response to Stalnaker’s objection. It is certainly true that, if the Belief State Theory is correct, the information Lingens receives from Ortcutt can’t be *exhausted* by the propositional content of Ortcutt’s utterance. As Stalnaker points out, Lingens already believes that proposition. However, Stalnaker is too quick in his dismissal of belief states and their potential role as part of the information Ortcutt passes on to Lingens. Stalnaker argues that belief states cannot be identified with the information that Ortcutt gives Lingens because belief states are “too subjective to represent informational content.” Stalnaker’s point seems to be that Ortcutt’s belief state is inaccessible to Lingens and, therefore, isn’t something that could plausibly be considered part of the information Lingens receives. This inference, in my opinion, is invalid.

Ortcutt’s belief state isn’t accessible to Lingens in the way that Ortcutt’s appearance or Ortcutt’s utterance is, since the belief state Ortcutt tokens is “in his head”; however, that’s not to say that Ortcutt doesn’t communicate facts about his belief state with his utterance. It’s no accident that Perry, in developing the Belief State Theory, elects to individuate belief states in terms of sentences believers in those states are prepared to utter.¹⁶ People in similar belief states tend to act in similar ways, given similar desires, and one of the ways in which they tend to behave similarly is by saying similar things. Had Ortcutt mistaken Lingens for someone else and, thereby, been in

¹⁶This is, of course, only a rough and ready way to individuate belief states. See Spencer [17, 187-9] for some critical commentary on this way of individuating belief states.

a different belief state while standing there in front of Lingens, Ortcutt would not have said, ‘You are *Lingens*’; rather, he would have inserted some other name for ‘Lingens’, the name of whoever he mistook Lingens for. Ortcutt’s use of the indexical, ‘you’, is also significant. When someone is prepared to use ‘you’, that person is in a belief state in which he or she is engaging with his or her local environment in a certain way. Thus, the fact that Ortcutt utters the particular sentence he does in this context allows Lingens to learn something about Ortcutt’s belief state. Lingens knows and understands the language. He knows what belief state he (Lingens) would be in if he was prepared to utter what Ortcutt uttered in that context. This allows Lingens to deduce something about Ortcutt’s belief state from his utterance, namely, that Ortcutt is in a belief state in which he is connecting an individual represented in his memory with a certain individual with whom he is in perceptual contact. Although Lingens doesn’t have direct access to Ortcutt’s belief state, he is given a sort of indirect access to Ortcutt’s belief state *via* Ortcutt’s utterance. In this way, Ortcutt’s belief state could be said to be part of the information conveyed by his utterance.

Markie [6] also objects to the Belief State Theory. He considers a case involving Hume, Hume’s twin, and Heimson. Hume and Heimson are in the same room. Heimson, directing his attention to Hume, believes that the person he is looking at is Hume. Heimson closes his eyes briefly. While his eyes are closed, Hume steps out of the room and Hume’s twin quickly takes his place. Heimson opens his eyes, but he doesn’t notice that a change has been made; he still believes that the person he is looking at is Hume. According to Markie, “He represents the world to himself in exactly the same way [6, 589].”

Markie claims that this situation shows a deficiency for the Belief State Theory. To form a belief, says Markie, “is to make a determination of how the world is [*ibid.*].” Before and after Hume switches with Hume’s twin, Heimson makes the very same determination of how the world is. The Belief State Theorist, argues Markie, can’t use belief contents to account for the way in which Heimson’s determination of the world remains constant through the switch, because the Belief State Theory says that Heimson’s beliefs before and after the switch have distinct contents. Neither can the Belief State Theorist use belief states to account for the way in which Heimson’s determination of the world remains constant through the switch, because, argues Markie, belief states have no content except for the propositions they determine, and the propositions that are the contents of Heimson’s beliefs before and after

the switch, as we have seen, are distinct.

In the most general of terms, Markie's demand upon the Belief State Theory seems to be this. Given that beliefs represent the world as being a certain way and that Heimson doesn't notice a difference in the way the world is, there must be something about the way Heimson's beliefs represent the world that remains constant through the switch. However, at this level of generality, it's hard to see why the Belief State Theorist can't account for what remains constant during the switch. The Belief State Theorist can tell the following sort of story. Indeed, this is exactly the sort of story Perry has, in fact, told.¹⁷

According to my theory, having a belief is a matter of being in a certain belief state that, together with the context in which it is instantiated, determines a proposition. Being in a certain belief state is a matter of having certain cognitive particulars standing in certain relations to each other. In Heimson's case, the situation will be something like this. At some point in Heimson's career, he will have formed a notion, i.e., a concrete cognitive representation, of Hume. Perhaps the notion was formed when he first read about Hume. Perhaps it was formed when he saw a visual likeness of Hume. Or perhaps it was formed after meeting Hume on the street for the first time. It doesn't really matter when it happened. Since that time, Heimson's Hume-notion will inevitably have become linked to many different ideas, i.e., concrete cognitive representations of properties and relations. When Hume walks into the room, Heimson will form a notion of the man he sees entering the room and the notion will become linked to various ideas, depending on what Heimson notices about the man's appearance, demeanor, etc. Until Heimson recognizes Hume, however, Heimson's notion that corresponds to the man entering the room will not be linked to his Hume-notion. When Heimson recognizes Hume, this changes. At that point, perhaps at the precise time when Heimson thinks to himself, 'He is Hume',

¹⁷See footnote 12. To be fair to Markie, it should be pointed out that these works were published after the publication date of Markie's paper. However, Perry was already on record stating that belief states played the role, in his theory of belief, that *character* played in Kaplan's account of indexicals and demonstratives. See Perry [12]. Perry's later works can be seen as expanding upon an idea already in print at the time of Markie's writing.

the two notions will become linked. What's important for the issue currently under discussion is that, when Hume is switched for Hume's twin, Heimson doesn't notice the difference. Heimson continues to use the notion he formed when Hume first walked into the room to represent the man he is attending to after the switch has been made. Heimson is still disposed to think to himself, 'He is Hume'. The relations that obtain between a person's notions and ideas determine how that person represents the world to himself. And since Heimson doesn't form a new notion when he opens his eyes after the switch—his belief state remains constant—he represents the world to himself in exactly the same way after the switch as before.

Given this response by the Belief State Theorist, the demand Markie places upon the Belief State Theory seems to be met; there is a legitimate sense in which belief states represent the world as being a certain way, and, according to the Belief State Theory, Heimson's belief state remains constant through the switch.

There is, however, another way Markie's objection can be understood. Having raised this objection against the Belief State Theory, Markie suggests that this shows an advantage the Proposition Theory has over the Belief State Theory. The advantage, says Markie, is that the Proposition Theory "lets us say that Heimson believes the very same proposition when he first takes Hume to be Hume and then takes Hume's twin to be Hume [6, 591]." This is an advantage, however, only if a theory of belief *ought* to let us say this. But why ought a theory of belief to let us do this? Markie doesn't say. Of course, one could respond to this question by saying that a theory of belief must let us do this because we need to be able to say how Heimson's beliefs represent the world as being the same way through the switch. But, if this is the answer, we don't have a reason to prefer the Proposition Theory over the Belief State Theory; as we've seen above, the Belief State Theorist is able to give an account of this in terms of belief states and, therefore, has no need to employ propositions to do this work. Alternatively, one could respond to the question by insisting that differences and similarities with respect to the way in which one's beliefs represent the world must be reflected in the propositions one is thereby related to. Perhaps Markie takes this to be a plausible requirement for theories of belief and his objection should be understood as a claim to the effect that the Belief State Theory is incompatible with it.

There are a couple of things that can be said in response to this understanding of Markie's objection. First, *pace* Markie, it seems as though a theory of belief that was *compatible* with this claim would be wrong. To see this, we need merely consider the case of Hume and Hume's duplicate. If any two subjects are identical with respect to the way in which they represent the world to themselves, it is Hume and his duplicate. However, we don't want to say that they believe the same propositions, for then we would have to say that, when Hume's duplicate notices his skin condition, he believes a proposition to the effect that Hume has Itch. It's true that Hume has Itch, but this isn't what Hume's duplicate believes when he notices that *he* has a certain skin condition. What Hume's duplicate believes is some proposition according to which *he*, not Hume, has *Scratch*. Thus, a theory of belief according to which two individuals believe the same proposition whenever they represent the world to themselves in the same way seems to get it wrong.

Markie could respond, in turn, by backing away from the general claim while still maintaining that, in this particular case, there should be uniformity with respect to the proposition believed. Markie could insist that, whatever the epistemic relation that obtains between Hume and Heimson while the two of them are in the room together is, it doesn't permit Heimson to think about Hume directly; it only permits of a sort of mediated thought about Hume and that this is reflected in the proposition that is the content of Heimson's belief. In this way, Markie could make a case for the claim that the proposition Heimson believes while attending to the individual before him is not the singular proposition, $\langle \text{Hume}, x \text{ is Hume} \rangle$, before the switch and the proposition, $\langle \text{Hume's Twin}, x \text{ is Hume} \rangle$, after the switch, but rather something like $\langle [\iota y: I \text{ am attending to } y], x \text{ is Hume} \rangle$ both before and after the switch.¹⁸

But even if Markie were to retreat from the general claim to the position that, in this particular case, Heimson believes the same proposition before and after the switch, Markie would still not pointed to a problem for the Belief State Theory. All the Belief State Theorist is committed to is the dyadic characterization of belief in terms of belief states and belief contents. Nothing about the Belief State Theory commits its defender to a particular

¹⁸It should be noted that, even according to this account of Heimson's beliefs, Heimson doesn't believe the same proposition before and after the switch unless it is assumed that propositions have their truth-values relative to times. If, instead, the temporal element is built into the proposition, as most are wont to do, then there is still a change with respect to the propositions Heimson believes.

view regarding what the content of a belief in a given situation is. The Belief State Theorist could maintain that the content of Heimson's belief is a singular proposition or that isn't; either claim would be consistent with the Belief State Theory.

I have argued that there are problems for Stalnaker's and Markie's defenses of the Proposition Theory. In addition, I have shown how the Belief State Theorist can address some of the objections that have been raised against his theory of belief. If my arguments are sound, I will have shown that there are reasons to prefer the Belief State Theory over the Proposition Theory.

References

- [1] Almog, Joseph, John Perry, and Howard Wettstein. Eds. 1989. *Themes From Kaplan*. Oxford University Press.
- [2] Crimmins, Mark and John Perry. 1989. "The Prince and the Phone Booth: Reporting Puzzling Beliefs." *The Journal of Philosophy* 86: 685-711.
- [3] Kaplan, David. 1989. "Demonstratives: An Essay on the Semantics, Logic, Metaphysics, and Epistemology of Demonstratives and Other Indexicals." In [1]: 481-564.
- [4] Lewis, David. 1983. *Philosophical Papers*. Volume 1. Oxford University Press.
- [5] ———. 1979. "Attitudes *De Dicto* and *De Se*." In Lewis [4]: 133-59.
- [6] Markie, Peter J. 1988. "Multiple Propositions and 'De Se' Attitudes." *Philosophy and Phenomenological Research* 48: 573-600.
- [7] O'Rourke, Michael and Corey Washington. Eds. 2007. *Situating Semantics: Essays on the Philosophy of John Perry*. The MIT Press.
- [8] Perry, John. 2006. "Stalnaker and Indexical Belief." In Thomson and Byrne [20]: 204-221.
- [9] ———. 2006. *Identity, Personal Identity, and the Self*. Hackett Publishing Company.

- [10] ——— . 2006. “The Self, Self-Knowledge, and Self-Notions.” In Perry [9]: 189-213.
- [11] ——— . 1989. “The Prince and the Phone Booth: Reporting Puzzling Beliefs.” *The Journal of Philosophy* 86: 685-711.
- [12] ——— . 1979. “The Problem of the Essential Indexical.” *Noûs* 13: 3-21.
- [13] ——— . 1977. “Frege on Demonstratives.” *The Philosophical Review* 86: 474-497.
- [14] Robbins, Philip. 2004. “To Structure, or not to Structure.” *Synthese* 139: 55-80.
- [15] Russell, Bertrand. 1929. *Mysticism and Logic*. Norton.
- [16] ——— . 1929. “Knowledge by Acquaintance and Knowledge by Description.” In [15]: 209-232.
- [17] Spencer, Cara. 2007. “Is There a Problem of the Essential Indexical?” In O’Rourke and Washington [7]: 179-97.
- [18] Stalnaker, Robert. 1999. *Context and Content*. Oxford University Press.
- [19] ——— . 1981. “Indexical Belief.” In Stalnaker [18]: 130-49.
- [20] Thomson, Judith Jarvis and Alex Byrne. Eds. 2006. *Content and Modality: Themes from the Philosophy of Robert Stalnaker*. Oxford University Press.
- [21] Zemach, Eddy M. 1985. “*De Se* and Descartes: A New Semantics for Indexicals.” *Noûs* 19: 181-204.