# How to refrain from answering Kripke's puzzle 

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#### Abstract

In this paper, I investigate the prospects for using the distinction between rejection and denial to resolve Saul Kripke's puzzle about belief. One puzzle Kripke presents in "A Puzzle About Belief" poses what would have seemed a fairly straightforward question about the beliefs of the bilingual Pierre, who is disposed to sincerely and reflectively assent to the French sentence "Londres est jolie", but not to the English sentence "London is pretty", both of which he understands perfectly well. The question to be answered is whether Pierre believes that London is pretty, and Kripke argues, of each answer, that it is unacceptable. On my proposal, either answer to the question is to be rejected, but neither answer is to be denied, using the resource of partially-defined predicates. After demonstrating how this serves as a solution to the puzzle, I illustrate some philosophical moti-vations-independent of Kripke's puzzle-for adopting a view on which belief is a partially defined predicate. I conclude that there are decent prospects for the proposed response to Kripke's puzzle.


Keywords Kripke's puzzle • Belief • Dispositional account of belief • Partiallydefined predicates • Rejection • Denial • Propositional attitudes • Belief-ascriptions

The first version of the eponymous puzzle in Saul Kripke's "A Puzzle About Belief" (1979) poses what would have seemed a fairly straightforward question about the beliefs of the bilingual Pierre, who is disposed to sincerely and reflectively assent to

[^0]the French sentence "Londres est jolie" and to the English sentence "London is not pretty", both of which he understands perfectly well. ${ }^{1}$

Since the two sentences are contradictory, and since someone's sincere reflective assent to a sentence they understand is a good-one might have thought ironcladindicator of belief in the proposition expressed by that sentence, it would seem that we have to attribute contradictory beliefs to Pierre. However, according to Kripke, nothing stipulated about the case so far precludes the possibility that Pierre is meticulously logical, or rational, etc., and is therefore not guilty of committing any logical error. But, what could be a better case of logical error than to believe a proposition and its negation? And so it would seem we cannot attribute contradictory beliefs to Pierre.

Kripke then presents a slight variation of the puzzle, in which we do not stipulate that Pierre is positively disposed to assent to "London is not pretty", but instead, that he simply lacks a disposition to assent to the English sentence "London is pretty". On this version of the puzzle, Kripke shows that his strengthened disquotation principle (roughly: a non-reticent speaker who understands a sentence $S$ believes the proposition it expresses if and only if she is disposed to sincerely and reflectively assent to ' $S$ ') can be employed in the revised case to derive a contradiction, not just in the contents of Pierre's beliefs, but in our ascriptions of belief to Pierre. ${ }^{2}$ Pierre understands the French "Londres est jolie" and is disposed to sincerely and reflectively assent to it, so, by the strengthened disquotation principle, Pierre believes that London is pretty. However, Pierre understands the English "London is pretty" and is not at all disposed to assent to it, so Pierre does not believe that London is pretty. The purpose of this paper is to investigate the use of partially-defined predicates as a way of responding to the version of Kripke's puzzle that relies on strengthened disquotation (though the results of the investigation will bear on the original version of the puzzle as well).

The version of the puzzle I investigate purports to derive contradictory answers to the question "Does Pierre believe that London is pretty?" There are three obvious ways to go about answering this question without contradicting oneself: one could maintain that the answer is simply "yes" (requiring the rejection of one or more of the principles used to derive the "no" answer), ${ }^{3}$ one could insist that the answer is simply "no" (requiring the rejection of one of more of the principles used to derive the "yes" answer), ${ }^{4}$ or one could maintain that belief-ascriptions are semantically

[^1]context-sensitive, and maintain that the answer is "yes" in some contexts and "no" in others. ${ }^{5}$ There are also two less obvious strategies: One is to deny both answers, maintaining that the belief ascriptions for Pierre lack truth value. The other, which I intend to examine in this paper, is to maintain that both answers to our question about Pierre are to be rejected, while neither answer is to be denied. For either of these two strategies, it will be the case that, in at least some contexts, it would not be appropriate to answer either "yes" or "no". ${ }^{6}$ The important distinction between the first of these two views, and the approach I favor, is that the latter, but not the former, has a natural account of the apparent breakdown in bivalence produced on the view. Thus, while both ways of proceeding might fairly be described as employing "truth-value gaps", there are deep differences between these two ways of pursuing a "gappy" approach.

The machinery of partially-defined predicates (Soames 1999) is especially useful in exploring the details of the approach in question. I aim to demonstrate that, by treating "...believes that..." as a partially-defined predicate, we will have an account that does justice to our reticence to answer either "yes" or "no" to the question "Does Pierre believe that London is pretty?".

In the first section of this paper, I will briefly present the central components of Soames's partially-defined predicates as they relate to the Liar paradox. In the second section of this paper, I present Kripke's puzzle in a fashion that illustrates a relevant structural similarity between the Liar paradox and Kripke's puzzle, and demonstrate that Soames's approach to dealing with Liar sentences can be extended to the relevant sorts of belief-ascriptions as a solution to the puzzle. While the proposed solution to Kripke's puzzle is the mechanism of partially-defined predicates, showing the solution to be viable requires us to provide sufficient independent philosophical motivation. Thus, in the third section of the paper, I introduce a toy dispositional account of belief, for the purpose of demonstrating some ways in which dispositional accounts (in general) could motivate the favored treatment of "...believes that...". In the fourth section of the paper, I argue that the sort of gappy reply under investigation is versatile. I show how the reply itself is independent of one's assumptions about the semantic content of proper names and predicates and the nature of propositions (understood in a deflationary sense as: the objects of the attitudes, whatever those

[^2]happen to be). ${ }^{7}$ Additionally, I consider a number of refinements to the toy account, not in order to defend any of these refined versions as adequate analyses of belief, but in order to establish the persistence of the features which motivate the solution, licensing the expectation that a sophisticated dispositional account of belief would retain the very features that motivate the solution in question.

## 1 Truth-value gaps and the Liar paradox

Since my project relies on parallels between the Liar paradox and Kripke's puzzle, and involves adapting a particular treatment of the semantics for the predicate "...is true." to the relational predicate "... believes that...", I need to start by getting Soames's view on the table. I start by presenting the Liar paradox, identifying the central considerations about the paradox that lead Soames to adopt his "partially defined predicate" approach to Liar sentences, and explaining the core mechanics of his partially-defined predicates.

As Soames presents it, the Liar paradox can be derived (using classical logic) from Schema T and an empirical premise. ${ }^{8}$

Schema T: "S" is true iff P.
Instances of T are obtained by replacing ' S ' with a (declarative, non-indexical) sentence of English, and 'P' with the same sentence, or with a sentence of English that expresses the same proposition. The empirical premise regards the following sentence:

1. Sentence (1) is not true.

For our purposes, the expression "Sentence (1)" is intended to be synonymous with the definite description "The sentence that is the first numbered example in the paper How to Refrain from Answering Kripke's Puzzle". The empirical premise is this: Sentence $(1)=$ "Sentence (1) is not true."

The premise is taken to be empirical since "Sentence (1)" abbreviates a definite description that the sentence "Sentence (1) is not true" only contingently satisfies (for example, had the first numbered sentence in this paper been "Snow is blue," the empirical premise would have been false). We can now derive a contradiction.

P1: "Sentence (1) is not true" is true iff sentence (1) is not true.
P2: Sentence (1) = "Sentence (1) is not true".
C1: Sentence (1) is true iff sentence (1) is not true.
C 2 : Sentence (1) is true and sentence (1) is not true.
$P 1$ is an instance of schema $T$, where ' $S$ ' and ' $P$ ' are replaced by the same sentence. P2 is the empirical premise, which one would be hard pressed to deny. C1

[^3]is obtained by substitution of 'Sentence (1)' for "Sentence (1) is not true" in P1 (a substitution that is legitimized by P2), and C2 tautologically follows from C1 (given bivalence). Since C2 is a contradiction, and can be derived from Schema T, the empirical truth about sentence (1), and the classical laws of logic, we are faced with a serious paradox.

While Graham Priest has famously argued that we should accept this contradictory result, and regard (S1) as both true and not true, ${ }^{9}$ many philosophers working on truth have been drawn to views that purport to reject the pair of attributions, rather than views that accept them. Since such approaches require us to reject bivalence, it becomes a central task for such views to explain this rejection of bivalence. ${ }^{10}$ Soames's preferred approach can be drawn out by contrast with a pair of alternative approaches to rejecting sentential bivalence that invoke failures of presupposition.

One such approach is to reject bivalence with respect utterances (and/or sentence tokens) in a fashion modeled on Strawson's discussion ${ }^{11}$ of the presupposition failure involved in someone's utterance of "this is a fine red one" while cupping their hands around nothing at all. Here is Soames's account of the case:

The natural thing to say about this utterance is, I think, that it is untrue, not because it expresses a proposition that is neither true nor false but rather because it fails to express any proposition at all.
Soames, p. 168
To put the point simply, the utterance fails to be true or false in much the same way that a piece of chalk or a chair fails to be true or false. So, on Soames's characterization, to utilize Strawsonian presupposition in treating the Liar paradox is to posit that utterances/tokens of the Liar (or Liar-like sentences) fail to express a proposition. ${ }^{12}$ That this treatment of the Liar is not adequate can be brought out by the contrast between the following pair:
2. Jones wonders whether this is a fine red one.
3. Jones wonders whether sentence (1) is true.

An utterance of (2) by someone who is cupping their hands around nothing at all seems to exhibit the same failures as utterances of "this is a fine red one" exhibited. Utterances of (3), on the other hand, may be entirely non-defective. Suppose that Jones is curious about how often papers contain truths versus falsehoods as their first numbered sentences, to the point that it is the first thing he ponders about any paper he hears about. Were Jones to hear about this paper, we could correctly say, "Jones wonders whether sentence (1) is true". But if that is the case, then (3) could be true irrespective of the difficulties surrounding our

[^4]assessment of (1). Soames diagnoses this difference between (2) and (3) as the result of an important difference between "This is a fine red one" and sentence (1). The non-defective nature of (3) is an indication that sentence (1) does express a proposition, and thus, that the defect with (1) is not a failure of Strawsonian presupposition. Soames concludes that it is important to find a diagnosis of sentence (1)'s defect that does not preclude it from expressing a proposition. However, as we are assuming that sentences inherit their truth-values from the truth-values of the propositions they express, this means that we must reject propositional bivalence, in addition to sentential bivalence. ${ }^{13}$

The second presuppositional approach considered is logical presupposition, associated (by Soames) with Fregean treatments of definite descriptions. ${ }^{14}$ Logical presupposition is a relation among propositions-with derivative application to sentences/utterances-defined as obtaining between a proposition P and a proposition $Q$ if and only if, every circumstance in which $Q$ is not true is a circumstance in which $P$ is neither true nor false. The "Fregean" view in question is that-at least sometimes-the proposition expressed by a sentence containing a definite description logically presupposes that the description is uniquely satisfied. For instance, considering the sentence "The present king of France is bald", the view would maintain that the sentence expresses a proposition which is (i) true in those situations where France has (at that time) exactly one king and that person is bald, (ii) false in those situations where France has (at that time) exactly one king, and that person is not bald, and (iii) neither true nor false in those situations where France has (at that time) either more or less than one king. ${ }^{15}$

Attempting to resolve the Liar by appealing to logical presupposition would thus avoid the problem discussed for Strawsonian presupposition, in that sentences defective in virtue of false logical presuppositions still express propositions. However, Soames argues that this approach suffers from a different defect. Specifically, since the Fregean categorizes a proposition with a false logical presupposition as neither true nor false, they are thereby committed to regard the proposition as not true. ${ }^{16}$ In other words, there are, on the Fregean view, two ways for it to be the case that a given proposition is not true: it can be not true and also false, or it can be not true without being false. If Liar sentences were treated as suffering from a failure of logical presupposition, we would be no closer to blocking the contradiction from above, since that derivation uses the claim, endorsed on the

[^5]Fregean picture, that sentence (1) is not true. So, this approach also fails to provide us with a rejection of bivalence that assists us in blocking the Liar paradox. ${ }^{17}$

Soames's approach is informed by these considerations. The lesson he takes from Strawsonian presupposition is that our diagnosis will require a rejection of propositional bivalence, while the lesson he takes from logical presupposition is that we need a view which does so without affirming of the proposition in question that it is neither true nor false. ${ }^{18}$ However, propositional bivalence is the view that every proposition is either true or false. As the negation of this is the view that some proposition is neither true nor false, the two lessons would seem to push in opposite directions: the first lesson is that we need to reject propositional bivalence and the second lesson is that we need to avoid accepting its negation.

Importantly, the very line one needs to toe in order to abide by both lessons is the exact same line we were already trying to toe in pursuing this sort of resolution to the Liar paradox: carving out space for the rejection of a proposition without the acceptance of its negation. If our purpose in rejecting bivalence is to reject the claim that (1) is true while also rejecting the claim that (1) is not true, then it is natural for us to reject the claim that bivalence is true while also rejecting the claim that bivalence is not true. The crucial feature of Soames's approach is that it rejects propositional bivalence and the negation of propositional bivalence. The principle notion used to cash out this position is that of a partially defined predicate. Given my project in this paper, and considerations of space, it not possible for me to adequately address a large number of the questions and concerns that are raised by such a view. Instead, in the remainder of this section, my aim will be to explain the mechanics of partially defined predicates so as to give us the resources to understand how to apply this notion to the relational predicate "...believes that...".

When we describe division by zero as "undefined", we do not think of this as saying that there is this other number, the number Undefined, which you get when you divide six by zero. Instead, it is something more like the view that the division function from pairs $\langle\mathrm{x}, \mathrm{y}\rangle$ to values z , fails to assign any z to those ordered pairs where y equals zero. Rather than treating partially-defined predicates as mapping any object either to the value True, to the value Not True, or to the value Undefined, Soames's strategy is to treat some predicates-e.g. "...is true"-as associated with partial functions, and thus as failing, for some objects, to assign any value. ${ }^{19}$ These partial functions only ever output two values, and, consequently, it is important not to think of the function as assigning any sentences a status other than True or Not True (or even as assigning any sentences the status of Lacking A Truth Value).

[^6]While it can be quite easy to slip into the habit of misdescribing the status of the relevant sentences, such misdescriptions blur the very feature that distinguishes Soames's solution from the logical presupposition approach that he rejects, and so, ought to be carefully avoided.

In Soames's words, "our task is to construct a model of partially defined predicates according to which, for certain things, both the claim that these predicates apply to those things, and the claim that they do not apply to them must be rejected." He goes on to note that the central contention of the model is "that a predicate may be introduced into a language by rules that provide sufficient conditions for it to apply to an object and sufficient conditions for it to fail to apply but no conditions that are both individually sufficient and [disjunctively] necessary for it to apply or for it to fail to apply to an object" (p. 163). ${ }^{20}$ Soames proceeds to defend a model of partially defined predicates and the claim that the truth predicate plausibly conforms to such a model. ${ }^{21}$

Suppose that we have two groups of people, such that the first group's members are all adults, and are abnormally short for adults (in the neighborhood of four feet tall), while the second group's members are all adults at the low end of the normal spectrum of height for adults (that is, at least five feet tall). And suppose that some individual introduced the predicate "...is a smidget" by stipulating (i) that any adult who is as short as some member of the first group is a smidget, (ii) that any adult who is as tall as some member of the second group is not a smidget, and (iii) any non-human or non-adult human is not a smidget. This stipulative definition of the predicate "...is a smidget" provides a sufficient condition for something to be a smidget, and a sufficient condition for something not to be a smidget, but does not provide conditions that are necessary and sufficient for being a smidget. Soames notes that we might have reason to do this if our aim is to set up a rough division of two groups that are easily visually distinguished by height, even though our definition does not address what to say about individuals in between the height of the two groups. If, however, the grand majority of adult humans fit into one of the two groups, this limitation of the definition would not necessarily present any practical problems for using the term.

Soames then considers a case in which the term is applied to an individual whose height is halfway between that of the first group and that of the second (call him "Mr. Smallman"). ${ }^{22}$ Reasoning that the linguistic rules governing "...is a smidget" do not address the question of whether Mr. Smallman is a smidget, he concludes that both answers to the question must be rejected. However, someone who is confused about Mr. Smallman's height might well think that Mr. Smallman is a Smidget, and, had Mr. Smallman's height been different, he could have been a Smidget. So, Soames thinks that, while we should reject both "Mr. Smallman is a smidget" and "Mr. Smallman is not a smidget", the sentences still express propositions, which

[^7]can be believed, and which would be true (or false) in some circumstances. Soames goes on to suggest an account of the truth predicate on which it behaves similarly, offering considerations about how one might introduce a truth predicate into a language in support of this hypothesis. ${ }^{23}$ Perhaps most important to note, about Soames's approach, is that we wind up rejecting some instances of schema T, without denying-i.e. accepting the negation of-any of its instances. Every instance of schema T is either to be accepted, or is a sentence such that both it and its negation are to be rejected. Schema T thus retains a privileged status, in that its instances are undeniable (even though we must reject some of them).

Since Soames-style partially defined predicates have sufficient conditions for application, and sufficient conditions for non-application, we can represent their semantic values as pairs of sets, $\langle\{\mathrm{P}+\},\{\mathrm{P}-\}\rangle$, where $\{\mathrm{P}+\}$ is the set of all things meeting the sufficient conditions for application, and $\mathrm{P}-$ is the set of all things meeting the sufficient conditions for non-application. While "...is a smidget" and "...is true" are both 1-place predicates, it is clear that, formally speaking, there is no barrier to employing sets of ordered $n$-tuples as a means to adapt this mechanism for relational predicates. The remainder of this paper will show how a treatment of "...believes that..." as partially defined can be used to resolve Kripke's puzzle, and argue that such a treatment can be motivated on grounds that are independent of Kripke's puzzle.

## 2 A formal version of Kripke's puzzle

As mentioned in the introduction, Kripke's puzzle concerns an individual, Pierre, for whom we find it difficult to uncontroversially ascribe beliefs about London. In the version of the case I will be focusing on (relying on the strong disquotation principle), Pierre grew up in France, and came to learn French in the usual fashion. Having seen a picture postcard of London, which referred to the city only as "Londres" he came to be such that he understands and is disposed to sincerely and reflectively accept the French sentence "Londres est jolie". Pierre later moved to England, and learned English by immersion, never connecting the French "Londres" with the English "London", even though he uses "London" to refer to London. Pierre's experiences in England have made him such that he understands the English sentence "London is pretty" but is not disposed to sincerely and reflectively accept it. Kripke asks us whether or not Pierre believes that London is pretty, a question that seems difficult to answer. Kripke purports to show that we can derive both answers, given this case and some plausible principles about translation and belief ascription.

While many philosophers have attempted to resist parts of Kripke's argument, offering some answer or other to the question, and denying some premise or other

[^8]used by Kripke in deriving the contradiction, ${ }^{24}$ my plan is to investigate how we might avoid answering the question. To investigate this response, I will now present the puzzle more formally.

This version of the puzzle relies on Kripke's strengthened disquotation principle, which I am calling Schema B (to highlight the parallels to the foregoing discussion of the Liar paradox):

Schema B: Someone who understands the sentence ' $S$ ' and is not reticent with respect to ' $S$ ' believes the proposition expressed by ' $S$ ' iff that person is disposed to sincerely and reflectively accept ' S '.

By combining Schema B with the following set of premises (relating to the case), we can derive the contradictory results:

P1: "London is pretty" and "Londres est jolie" both express the proposition that London is pretty.
P2: Pierre understands the sentences "London is pretty" and "Londres est jolie", and is not reticent with respect to them.
C1: Pierre believes that London is pretty iff Pierre is disposed to sincerely and reflectively accept "Londres est jolie."
C2: Pierre believes that London is pretty iff Pierre is disposed to sincerely and reflectively accept "London is pretty."
P3: Pierre is disposed to sincerely and reflectively accept "Londres est jolie."
P4: Pierre is not disposed to sincerely and reflectively accept "London is pretty."
C3: Pierre believes that London is pretty and Pierre does not believe that London is pretty.

C3 is a contradiction. There are obviously a variety of ways one might resist the moves leading to C3. One might object to the synonymy of the French and English sentences (challenging P1), one might resist the coherence of the case stipulations (challenging some combination of P2, P3 and P4), or one might object to the criterion for applicability of the belief predicate (challenging the B schema). The sort of reply I am envisioning would not resist the synonymy of the sentences, nor would it resist any of the case stipulations. If we wish to accept P1-P4, and avoid the contradiction, we must reject some instances of the B schema.

In this case, there are two instances of the schema that we need to examine:
B1: Someone who understands the sentence 'London is pretty' and is not reticent with respect to 'London is pretty' believes the proposition expressed by 'London is pretty' iff that person is disposed to sincerely and reflectively accept 'London is pretty'.

[^9]B2: Someone who understands the sentence 'Londres est jolie' and is not reticent with respect to 'Londres est jolie' believes the proposition expressed by 'Londres est jolie' iff that person is disposed to sincerely and reflectively accept 'Londres est jolie'.

Given the facts about Pierre that are built into the case (as understanding the sentences, lacking reticence, etc.), B1 and B2 respectively entail:

B1': Pierre believes the proposition expressed by 'London is pretty' iff Pierre is disposed to sincerely and reflectively accept 'London is pretty'.
B2': Pierre believes the proposition expressed by 'Londres est jolie' iff Pierre is disposed to sincerely and reflectively accept 'Londres est jolie'.

For both $\mathrm{B} 1^{\prime}$ and $\mathrm{B} 2^{\prime}$, the right-hand side of the biconditional has some clear truth value. The problem is that they clearly have different truth values, while, given P 1 , the left-hand side of $\mathrm{B} 1^{\prime}$ cannot possess a different truth value from the left-hand side of $\mathrm{B}^{\prime}{ }^{\prime}$. So, as with the case of the Liar, we have the derivation of a contradiction from intuitively acceptable principles. And, as with the Liar, the derivation of a contradiction depends on contingent premises. ${ }^{25}$ For instance, before Pierre learned any English, B1' would not have followed from any instance of the B schema, and so $\mathrm{B} 2^{\prime}$ would not have been involved in the derivation of a contradiction. Likewise, if Pierre suffered from amnesia and lost all memories of his life before living in England (including his knowledge of French), then B2 ${ }^{\prime}$ would not follow from an instance of the B schema, and so B1 ${ }^{\prime}$ would not be involved in the derivation of a contradiction. Thus, in both the Liar paradox and in Kripke's puzzle, a schema purporting to govern the application of the relevant predicate can be instanced in a way that, in combination with an empirically possible scenario, would permit us to derive a contradiction. As we saw, one way of responding to the Liar was to reject those instances of the schema in question without accepting their denials. The strategy for Kripke's puzzle would be similar: we might reject certain instances of Schema B without accepting their denials.

Just as in the case of the Liar, the solution will only be appealing insofar as (a) it helps us avoid being committed to a contradiction and (b) it can be properly motivated by an independently plausible story about the nature of belief. It is also important to distinguish between the solution itself-treating belief as a partiallydefined predicate-from the toy dispositional account of belief I use to motivate/ illustrate that solution: the solution itself is contained in this section, and consists in rejecting, but not denying, both the proposition that Pierre believes and the proposition that he does not.

To cast this in terms of the semantic machinery from Soames, the proposal is that for some pairs of objects and propositions (for instance, Pierre and the proposition that London is pretty), the pair is neither assigned to the extension of the predicate

[^10]"...believes that...", nor is it assigned to the anti-extension of the predicate. ${ }^{26}$ This proposal translates into a specific reply to the argument: We are rejecting both the belief ascription and its denial, but we are not resisting the intuition that the case is possible. Since we grant that, in the case, Pierre has the disposition to sincerely, reflectively assent to "Londres est jolie", we would thus be required to reject B2' (as well as B2), and since we are not resisting the claim that Pierre lacks the disposition to accept "London is pretty", we would thus also be required to reject B1' (as well as B1).

The contradiction can be avoided, without giving up the case stipulations, by rejecting (without denying) some instances of schema B. ${ }^{27}$ So far, I have not explained why such an approach would seem to be appealing, apart from its capturing the data that something seems awry with either a simple "yes" or a simple "no" answer to Kripke's question. In the next section I will show how a dispositional account of belief could lead to "...believes that..." being a partiallydefined predicate. Before turning to that issue, however, there are some appealing aspects of the reply worth noting.

For instance, one might be worried that, since we accept that Pierre believed that London was pretty (when he lived in France), and reject the claim that Pierre believes that London is pretty (at present, in the case), this change in what we accept about Pierre's belief will require us to accept either (a) that Pierre lost his belief that London is pretty, (b) that he stopped believing that London is pretty, or (c) that he changed his mind about whether London is pretty. The proposed solution-just as it rejects the claim that Pierre does not believe that London is pretty-also rejects (a)(c). If Pierre lost his belief (and did not regain it), it would follow that Pierre does not presently believe that London is pretty. But, we do not accept that Pierre does not believe that London is pretty, so we would not accept that Pierre lost his belief. On this view, we only accept that Pierre has lost his belief in cases where we would accept that Pierre used to believe that London is pretty but doesn't now believe it. Similar remarks apply to the case of whether Pierre has changed his mind. It is a virtue of this account that it also avoids the consequence that Pierre lost his belief or changed his mind.

However, as has already been noted, a formally adequate semantic solution (i.e. a model of the semantics for "...believes that..." which can be used to preclude derivation of the contradiction) will not be appealing absent proper motivations from independent grounds. So far, I have simply described how a partial-definition of "...believes that..." could ensure that the contradiction cannot be derived. In the next section, I will offer motivation for the view.

[^11]
## 3 A (toy) dispositional account of belief

As a first pass at motivating the solution, consider the connection between dispositions and belief. ${ }^{28}$ The picture I am about to sketch is, no doubt, overly simplified, but it is a good starting place. ${ }^{29}$ In what follows, I will be talking about various agents' behaviors (or dispositions to behave) when they are confronted with a proposition. This notion of confrontation is to be understood as occurring any time the agent is presented with the proposition (perceptually or verbally) as well as any time the agent considers the proposition. ${ }^{30}$ The central response to a confrontation that I will be concerned with is acceptance. This notion of acceptance is to be understood as some occurrent response from the agent to a confrontation. I intend to remain neutral on the substantive details of confrontation and acceptance (for example, I intend to neither require nor rule out the view that all confrontations involve structured mental representations and that acceptance of the proposition consists in doing something with such representations). With that in mind, we can turn our attention to Tammy:


#### Abstract

Consider Tammy. Tammy is disposed to accept that Susan B. Anthony is dead when confronted with that proposition. Counterfactually speaking, in ordinary cases, were Tammy confronted with the proposition that Susan B. Anthony is dead, she would accept it. Additionally, if one of Tammy's friends were to ask her whether Susan B. Anthony was dead, Tammy would say yes. If Tammy were to discover that one of her plans required a living Susan B. Anthony, this would lead Tammy to alter or abandon those plans. In fact, Tammy is not only so disposed, Tammy's disposition does not fluctuate. While the question of whether Susan B. Anthony is dead has different degrees of relevance to different actions of Tammy's, the strength of Tammy's disposition remains fixed. Tammy's disposition to accept that Susan B. Anthony is dead is a stable one. And let us further stipulate that Tammy's disposition is realized by the ordinary mechanisms underlying such dispositions in typical humans. If all this is true of Tammy, it is uncontroversial that Tammy believes that Susan B. Anthony is dead.


[^12]Now consider Tim. Tim is disposed not to accept that Susan B. Anthony is dead. ${ }^{31}$ This means that, in ordinary cases, were Tim confronted with the proposition that Susan B. Anthony is dead, he would not accept it. If one of Tim's friends were to ask him whether Susan B. Anthony was dead, Tim would not say yes. If Tim were to discover that one of his plans required a living Susan B. Anthony, Tim would not immediately alter or abandon those plans. In fact, Tim is not only so disposed, Tim's disposition is stable. And let us further stipulate that Tim's disposition is realized by the ordinary mechanisms underlying such dispositions in typical humans. If all this is true of Tim, it is uncontroversial that Tim does not believe that Susan B. Anthony is dead.

Suppose that being stably disposed to accept a proposition (when confronted with it) is sufficient for belief, and further that being stably disposed not to accept a proposition (when confronted by it) is sufficient for lacking the belief. We might be inclined, at this point, to suppose that one believes a proposition if and only if they are stably disposed to accept it. But, it is important to note that Tammy and Tim do not exhaust the relevant possibilities. There is also the possibility of someone who lacks both Tammy's disposition to accept, and Tim's disposition not to accept:

Consider Tom. Tom is neither stably disposed to accept that Susan B. Anthony is dead, nor stably disposed not to accept that Susan B. Anthony is dead. In ordinary cases, were Tom confronted with the proposition that Susan B. Anthony is dead, he might accept it, but, then again, he might not. If one of Tom's friends were to ask him whether Susan B. Anthony was dead, Tom might say yes, but he also might not. If Tom were to discover that one of his plans required a living Susan B. Anthony, Tom might immediately alter or abandon those plans, but he might not. And further it is not that Tom's response at any given moment is random or inexplicable. Rather, Tom's reaction to being confronted with the proposition that Susan B. Anthony is dead vacillates between acceptance and non-acceptance, in the same sort of way that one's reaction to a pair of appealing menu items might vacillate. Just as one might waver between ordering lasagna and ordering gnocchi, Tom wavers between acceptance and non-acceptance. There might be brief periods during the day when Tom can be said to have one or the other disposition, however, quite plausibly, in order for a disposition to be stable, it must not come and go with the sort of frequency that Tom's does. Thus, Tom is neither stably disposed to accept that Susan B. Anthony is dead, nor stably disposed to not accept that Susan B. Anthony is dead.

It is difficult to say whether Tom believes that Susan B. Anthony is dead, just as it is difficult to say whether the wavering patron prefers the lasagna to the gnocchi. While it is not completely implausible that we could simply decide one way or the other about Tom's belief, the question is certainly not an easy one, as it is with Tammy or Tim. This difficulty in assessing Tom can be pressed further if we

[^13]suppose that he had previously been quite stably disposed to not accept that Susan B. Anthony was dead, perhaps because he bought into a conspiracy theory according to which she is still alive and hidden in the Andes. If Tom is in the (slow) process of gradually transitioning away from this bizarre conspiracy theory, it may be very difficult for us to assess, for a given intermediate stage, whether Tom has come to believe that Susan B. Anthony is dead.

We have already seen a semantic framework that licenses accepting that Tammy believes, denying that Tim believes, but does not license us to accept or deny that Tom believes. A simple way to get this result in that framework is to give the following partial account of belief: If one is stably disposed to accept $P$ then one believes it and if one is stably disposed not to accept $P$, then one does not believe it.

Tom's case is importantly different from Pierre's. First off, note that Pierre's case requires, for its construction, a pair of ways to represent a single proposition which are not known by the agent in question to be co-representational. Tom's case requires no such thing. Let me also stress that nothing about the account privileges a Millian understanding of proper names. Since Tom is wavering in his reaction to a proposition presented in a single way, it would be compatible with this account of Tom's case to posit a Fregean sense of the name "Susan B. Anthony" as a constituent of the proposition Tom is being confronted with.

So, to summarize, for a given agent x and a given proposition P , there are three possible scenarios: (i) x is disposed to accept P , (ii) x is disposed not to accept P , or (iii) x lacks both disposition (i) and disposition (ii). According to this account, belief ascriptions are to be accepted in scenario (i), denied in scenario (ii), and rejected (without being denied) in scenario (iii).

Before moving on to show why this account would also capture Pierre's case, it is important to observe that such an account of belief is guaranteed to be consistent, even though it allows for gaps. To see this, consider the set how the extension, $\{B+\}$ and anti-extension, $\{B-\}$, will be populated at a given circumstance of evaluation. If it would ever be the case that the same ordered pair $\langle x, P\rangle$ is in both $\{B+\}$ and $\{B-\}$, the account would be inconsistent. However, an ordered pair $\langle x, P\rangle$ will be in $\{B+\}$ just in case $x$ is stably disposed to accept $P$, and it will be in $\{B-\}$ just in case $x$ is stably disposed not to accept $P$. However, it cannot be, at a single time, both that x is stably disposed to accept P and that x is stably disposed not to accept P. ${ }^{32}$ It is guaranteed that these rules would never generate contradictory belief ascriptions.

The last thing to do before considering how one might adjust or alter this toy account in light of potential worries and objections is to demonstrate that it produces the desired result for Pierre.

First, observe that (a) Pierre lacks a stable disposition to accept the proposition that London is pretty when confronted with it, and (b) Pierre lacks a stable disposition not to accept the proposition that London is pretty when confronted with

[^14]it. My method in demonstrating the absence of these dispositions will be similar to the way in which one might attempt to demonstrate that a given glass is not fragile. That is to say, by illustrating that there are enough sorts of situations in which the stimulus condition occurs (or would occur) where the manifestation behavior does not (or would not) occur. While I cannot conclusively demonstrate that a given glass is not fragile by pointing to a single instance in which it was dropped without shattering, if I can produce a suitable array of cases in which the glass would survive droppings and strikings, I will have reasonably shown the glass not to be fragile. So, to demonstrate that Pierre lacks the disposition to accept the proposition that London is pretty when confronted with it, I can point to the fact that, when Pierre considers the English sentence "London is pretty", he does not sincerely and reflectively assent to it. Were he to assent, in fact, it would be insincere. However, since considering the sentence "London is pretty" is a way for Pierre to be confronted with the proposition that London is pretty, this is a case in which Pierre is confronted with the proposition that London is pretty and does not accept it. ${ }^{33}$ This is not a one-off case, however. It is the result of a disposition Pierre does have: the disposition not to assent to "London is pretty". Similarly, we can show that Pierre lacks the disposition not to accept that London is pretty by pointing to Pierre's disposition to assent to "Londres est jolie", as his tendency to assent to the sentence "Londres est jolie" when shown (or even just reminded of) the original picture postcard has not wavered. Put another way, Pierre's dispositions with regards to accepting the proposition are a product of his dispositions with regards to the various ways of being confronted by the proposition. Since Pierre responds differently to different modes of confrontation, Pierre doesn't have a stable overall disposition as regards the proposition.

This puts Pierre in category (iii), meaning we are to reject the claim that Pierre believes that London is pretty as well as the claim that Pierre does not believe that London is pretty. In other words, the toy account of belief I have proposed delivers the desired result for Pierre's case, as a consequence of the specific features of the case that seem to render it difficult for us to assess whether or not Pierre believes that London is pretty. And the account itself was motivated by cases which lack these central elements of Pierre's case.

This result warrants some optimism that a resolution of Kripke's puzzle in this neighborhood is viable (in the sense of being worth investigation). However, we've only looked at a toy account, and one might be concerned about whether there is any version of this account that is more robustly viable, but which still preserves the desired results for Pierre. In the next section of the paper, I will consider some potential refinements of the account, as a way to illustrate the versatility afforded by this general approach.

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## 4 Clarifications and possible revisions

In the previous section, we looked at an intentionally simplistic account of "...believes that..." as a partially-defined relation. In this section, I will consider a case that gives rise to two concerns for the account and explain why these concerns need not be fatal to the simple account presented. Even if one accepts the responses I offer to these specific cases, it seems clear that the account on offer is an oversimplification of how belief-ascriptions occur, and so, I will turn my attention to two ways in which one might revise the account in response to such a worry, in order to show how the desired results can be retained, even in the face of substantial refinements.

Both of the specific concerns I will address relate to this case: Suppose that Jane's brother Fred is a construction worker, but, unbeknownst to Jane, Fred has the day off. Jane sees, but does not recognize, her brother a ways off on the street, and, for whatever reason, considers the claim (about the man she sees) that he is a construction worker, and does not accept it (perhaps Fred is dressed like a businessman). She doesn't have to outright deny it, we may suppose that she simply declines to accept it. That is to say, she was confronted with, but did not accept, the singular proposition expressed by "He is a construction worker" [accompanied by a demonstration of Fred].

Intuitively, throughout the case, Jane does possess the belief that Fred is a construction worker, and the first concern is that the present account of belief does not license this belief-ascription. After all, Jane has been confronted by the proposition that Fred is a construction worker, and did not accept it. The concern is also intended to generalize, not just to cases of occurrent failures of recognition, but to any scenario in which the nearest confrontation with the proposition involves a similar failure of recognition.

My reply to this worry is that the view, as it stands, avoids it. On the view, we can ascribe Jane the belief that Fred is a construction worker (and this result carries over straightforwardly to cases in which the recognition failure does not actually occur but is a nearby possibility). Just as we want to ascribe the belief to Jane throughout the case, it seems we also want to ascribe the disposition to Jane, throughout the case, to accept the proposition that Fred is a construction worker. That there is one circumstance in which Jane did not accept the proposition upon confrontation is not sufficient to establish that she lacks the disposition, any more than a single instance of being dropped or struck without breaking is sufficient to establish that a given glass is not fragile. It may well be some evidence for us that the glass is not fragile, but we do not ordinarily require dispositions to be surefire. Someone who has a disposition to become rowdy when they drink, may, from time to time, drink without becoming rowdy, and this in no way requires that they have lost the disposition.

So, the fact that there is one case in which Jane is confronted with the proposition that Fred is a construction worker and does not accept it does not mean she lacks the disposition (and similarly for merely possible failures of recognition). The crucial difference between Jane's situation and Pierre's is that her failure to accept is
something of a fluke. ${ }^{34}$ While there are instances in which Jane is confronted with a proposition and reacts to it in a manner at odds with her usual behavior towards that proposition, there is a clear sense in which she is, on the whole, still disposed to respond to that proposition in one way. However, Pierre is not disposed to respond to the proposition that London is pretty in a single way. An individual acceptance or lack of acceptance on Pierre's part is the result of a systematic tendency to react differently to a proposition depending on which of two ordinary ways of being confronted with that proposition occurred. In other words, the objection fails because one is disposed to accept a proposition P when confronted with it only if, for each ordinary way of being confronted with P , they are disposed to accept P when confronted with $P$ in that way. ${ }^{35}$

The second concern stemming from Jane's case is that the present account cannot license our saying, "Jane doesn't believe that's Fred". Intuitively, we might say something like that in order to explain some behavior of Jane's (say, if Fred waved to her, and she did not wave back). The account will only license us to say that Jane doesn't believe that's Fred if Jane has a disposition not to accept the proposition that that's Fred. However, Jane does not have that disposition, because that is the proposition that Fred is Fred, and if she is disposed one way or the other with respect to that proposition, she is disposed to accept it. Or, at least, that is the thought driving this concern. There are two ways a proponent of the present account could address this concern without revising the treatment of belief. The first relies on the fact that the concern presupposes a direct-reference treatment of demonstratives. In order to show that such a report is not licensed on the grounds just mentioned, we need to assume that, in a context where Fred is the referent of 'that', the sentence "Jane doesn't believe that is Fred" has the same semantic value as "Jane doesn't believe Fred is Fred". One way, then, to respond to this concern would be to reject the sort of direct-reference treatment of demonstratives that would produce such a result. This sort of response is rendered significantly more appealing if one has the same intuitions about the acceptability of "Jane doesn't believe that guy is Fred", since the proper semantic treatment of complex demonstratives is even more controversial. ${ }^{36}$

However, this is not the only way to address this worry. Suppose we grant the necessary points about the semantics of demonstratives. One could also invoke the mechanism of pragmatic enrichment to address this type of case. ${ }^{37}$ Positing the

[^16]occurrence of pragmatic enrichment is a way of permitting a difference between the proposition that is the semantic value of a sentence and the proposition that is asserted by uttering that sentence in an ordinary context. For instance, if it is common knowledge in the context that Mark Twain is the author of Huckleberry Finn, then, a proponent of pragmatic enrichment might hold that an assertive utterance of "Samuel Clemens is Mark Twain" does not assert the semantic value of the sentence ( $\langle$ IDENTITY,t,t $\rangle$ ), but instead asserts the enriched proposition: Samuel Clemens is Mark Twain, the author of Huckleberry Finn.

To employ this maneuver in Jane's case, one could posit that an ordinary assertive utterance of "Jane doesn't believe that's Fred" does not produce an assertion of its semantic content (which is the false claim that Jane doesn't believe the proposition that Fred is Fred), but instead produces the assertion of a proposition including some description of Fred (perhaps, characterizing Fred as the guy in the suit across the street). This proposition would be one which Jane is disposed not to accept, and thus, would secure a way to account for the truth of the utterance without revising the account of belief.

I am not concerned here to defend either the semantic approach or the pragmatic approach just described. My goal is simply to make it clear that the proponent of even the overly simplistic dispositional account I have sketched may be able to accommodate the data prompting these concerns without any revision to the account of belief itself. Evaluating the ways of doing so is too complicated of an issue to take up in this paper.

In what remains of this section, I intend to show that the basic idea behind the account is enormously flexible in the following sense: there are a variety of simple ways to tweak or alter the account, and the family of specific accounts available by means of such tweaks or alterations make the approach amenable to theorists of differing stances on any of a number of other questions about the nature of beliefascription. I will, as an illustration, consider two such tweaks, and explain why a theorist might wish to revise the account in this way.

First, the account is amenable to being tweaked in order to produce either a contextualist or an interest relative treatment of belief ascriptions. ${ }^{38}$ The original account simply involves the disposition to accept the proposition when confronted with it. Though the details of how to adjust the account are slightly different for capturing contextualism versus capturing interest relativity, the fundamental point is the same: one can give an account which systematically invokes different dispositions in different contexts of ascription or circumstances of evaluation. For instance, suppose a theorist thinks that Pierre's British friends can truthfully say that Pierre does not believe London is pretty, if they are deliberating about whether Pierre should serve as the tour guide for some out of town visitors. Such a theorist could give a contextsensitive version of the present account, where, in such a case, the truth of the belief

[^17]ascription by Pierre's British friends requires only the disposition to accept the proposition that London is pretty when confronted by it in ways relevant to the purposes of guiding the out-of-towners. My own inclination about such a case is that it does not warrant semantic revision, because there is no need to secure the truth of their claims. In my view, we can explain the appropriateness of such utterances in light of the fact that Pierre's British friends have good evidence for thinking that Pierre doesn't believe London to be pretty. So, my point is not that this case is good motivation for contextualism or that the right view about belief ascription is a contextualist one. My goal is simply to demonstrate that the account of belief ascriptions on offer can easily be adjusted to provide a contextualist approach, if such an approach is desired.

The second way to tweak the account has to do not with which disposition is required, but with other aspects of the disposition that might be invoked in the account. For instance, dispositions can be more or less stable, they can be stronger or weaker, they can have different sorts of causal origins, etc. ${ }^{39}$ The simple account did not specify a requisite strength or degree of stability, or restriction on causal origins of the disposition, or anything like that. But, there are versions of the view that do make such specifications, and these specifications can be employed to produce any of a number of views that reject the belief ascription (and its negation) for Pierre's case, while offering different responses about a host of other cases. For instance, a version of the view that requires a certain degree of stability would reject ascriptions (and their negations) for a larger class of flip-floppers than the simpler version is. Similarly, one can be more inclusive by reducing the strength of disposition required for belief (provided it is still ensured that no one can simultaneously satisfy the conditions for both the application and non-application of "...believes that..." with respect to a single proposition).

## 5 Conclusion

In the foregoing, I have presented an account of belief intended to help explore the prospects for resolving Kripke's puzzle by utilizing the distinction between rejection and denial. In order to carry out my investigation, I selected a single approach to implementing partially-defined predicates, and motivated it by presenting a very simple analysis of belief in terms of dispositions. I make no claims to having established that this is the best way to implement partially-defined predicates, nor do I mean to defend the toy account of belief offered in the paper. My goal has been much more modest: to demonstrate that such approaches are worth further investigation as another possible means of resolving Kripke's puzzle. This is an approach which seeks to do some justice to the intuition that both answers to Kripke's question about Pierre are wrong.

In the 1980 edition of "Naming and Necessity", Kripke defends himself against the charge of having assumed a principle of the universal substitutivity of proper names, and while specifically referencing "A Puzzle about Belief", says:

[^18][T]he mode of fixing the reference is relevant to our epistemic attitude towards the sentences expressed. How this relates to the question what 'proposition' are expressed by these sentences, whether these 'propositions' are objects of knowledge and belief, and in general how to treat names in epistemic contexts, are vexing questions. I have no 'official doctrine' concerning them, and in fact I am unsure that the apparatus of 'propositions' does not break down in this area (pp. 20-21).

It seems clear that my proposal here is not what Kripke had in mind by a "break down" in the "apparatus of 'propositions'". At the same time, insofar as one shares Kripke's concerns about cases like Pierre's, and the trouble they raise for an otherwise appealing account of natural language semantics, the foregoing approach is one way to provide a philosophical account of some breakdown of the apparatus of propositions in epistemic contexts.

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[^1]:    ${ }^{1}$ It should also be noted that, apparently, Kripke's example invokes somewhat odd if not outright improper French; I have been informed by French speakers that "belle" is more appropriate than "jolie" when talking about cities. Fortunately, nothing in the discussion turns on the specific terms chosen, so I will simply stick to the established example.
    ${ }^{2}$ Though Kripke himself eschews talk of propositions, I find it helpful to frame things in terms of propositions, and one primary motivation for doing so will become apparent from my discussion of the Liar's paradox.
    ${ }^{3}$ For examples of views that would simply provide "yes" answers, see Lewis (1981), Salmon (1989), Soames (2002), or McGlone (2007). It is common of such views to reject the principle that lack of assent to a sentence indicates absence of belief, though the Lewisian solution is notable for going beyond this by offering a more drastic revision of the semantics of belief ascriptions implicit in Kripke's discussion.
    ${ }^{4}$ It is much harder to locate extant defenses of views that would simply offer a "no" answer to the question. Arguably such a view is present in Frege (1960), but for examples of other views that seem to be in this category, see Forbes (1990) and Bealer (1993).

[^2]:    ${ }^{5}$ By qualifying the context-sensitivity involved in the third option as semantic, I mean to exclude, for example, approaches like the pragmatic enrichment story advocated in Soames (2002). On that view, there is a sensible question to be asked about the truth of the context-invariant semantic content of the belief ascription, and given that the belief-ascription's semantic value is a true proposition, it seems appropriate to group that view (and views like it) with the first way of responding. For contextualist answers of the sort I have in mind, see Richard (1990), Schiffer (1987), Stalnaker (1999), Crimmins (1992), and Crimmins and Perry (1989).
    ${ }^{6}$ While I do not wish to argue that this solution is something Kripke had in mind, it is worth noting that a thought along these lines is suggested by the well known passage in the preface of Kripke (1980), where Kripke claims to be "unsure that the apparatus of 'propositions' does not break down" in epistemic contexts. I think that the account I will propose in this paper would be one way of explaining such a break-down. It is worth noting that Fine (2009) similarly claims to offer some vindication of this remark of Kripke's. As his view involves positing multiple readings of belief attributions, some of which are contextually determined in part by the other sentences uttered in the discourse as well as the rejection of compositionality, it will be apparent that neither the view I articulate, nor the manner in which it would vindicate Kripke's comments is particularly similar to the view espoused by Fine.

[^3]:    ${ }^{7}$ As noted above, I differ here from Kripke by freely relying on the notion of a proposition in presenting this puzzle. The prevalence of propositions in debates about the nature of belief makes it important to demonstrate that the approach being advocated can be framed in terms of propositions.
    ${ }^{8}$ This discussion of the Liar is adapted from Soames (1999).

[^4]:    ${ }^{9}$ See Priest (1987). For more extensive discussions of dialetheism, see Hyde (1997) or the Stanford Encyclopedia of Philosophy article—Priest and Berto (2010).
    ${ }^{10}$ As we will see shortly, rejecting a proposition may be different from denying the proposition. See also, for example, Field (2008).
    ${ }^{11}$ See Strawson (1950).
    ${ }^{12}$ Here, I am following Soames in taking propositions to be both (a) the primary bearers of truth and falsity, and (b) the objects of the attitudes. Unless otherwise noted, these arguments rely on no other substantive assumptions about the nature of propositions.

[^5]:    ${ }^{13}$ To make it clear why a Strawsonian treatment would avoid the need to reject propositional bivalence, we can observe that the explanation for the sentence's status depends on there being no proposition from which to inherit a truth-value. Failures of Strawsonian presupposition allow us to assess the sentences (or utterances) as truth-valueless without having to reject the view that every proposition is true or false.
    ${ }^{14}$ Such a view is labeled "Fregean" because of remarks on presupposition in Frege (1960). See also Atlas (2004).
    ${ }^{15}$ I am ignoring a variety of possible complications arising from views which also regard definite descriptions (or sentences containing them) as semantically context-sensitive for ease of exposition.
    ${ }^{16}$ To a rough approximation, this is simply because, falsity of the presupposition prevents the proposition from possessing a referent. Since, the referent of a proposition, on Frege's view, is its truth value, failure to possess a referent is equivalent to failure to possess a truth value. For more detailed exposition of this claim, see Chap. 6 of Soames (1999), and Atlas (2004).

[^6]:    ${ }^{17}$ Note that an adaptation of this Fregean approach would be one straightforward way of implementing the strategy of regarding the belief-ascriptions for Pierre as lacking truth values.
    ${ }^{18}$ This is neither to criticize the use of Strawsonian presupposition in treating sentences like "This is a fine red one" nor the use of logical presupposition in treating sentences like "The present king of France is bald", only the thought that these resources can be employed to resolve the Liar paradox.
    ${ }^{19}$ There is one hitch in the analogy, which is important to observe. When it comes to division by zero, we can affirm: "For any numerical value z , six divided by zero is not z ", in part because Not Six isn't a numerical value, and thus, isn't one of the values $z$ can take. If it were, then by affirming that sentence, we would be committed to the claim that six divided by zero is not not six (or, equivalently, that six divided by zero is six). So, when it comes to the case of truth-values, we can't affirm: "For any truth-value v, sentence (1) is not v", precisely because, Not True is among the values v can take.

[^7]:    ${ }^{20}$ In Soames (1999) the passage uses the phrase "jointly necessary", but Soames (2009) amends the phrasing from "jointly" to "disjunctively".
    ${ }^{21}$ Soames notes that he is attempting to provide a philosophical semantic theory based on insights about the views in Kripke (1975) suggested to Soames by Nathan Salmon.
    ${ }^{22}$ According to a footnote in Soames (1999), this example is adapted from a case suggested to him by Nathan Salmon in a seminar.

[^8]:    ${ }^{23}$ For considerations of space, I will not go into the motivation for Soames's account here. Additionally, there are important limitations of this approach in terms of its ability to fully resolve the Liar paradox, but these, too, are not relevant to our present interests. For more on the motivation behind Soames's account, and its limitations, see Chaps. 5 and 6 of Soames (1999).

[^9]:    ${ }^{24}$ Given my interest in showing the parallel to the Liar paradox in this paper, it makes sense to structure the puzzle in a fashion that is not particularly illuminating with respect to the variety of other ways in which one might try to resist or deny assumptions leading to the contradiction. Consequently, some philosophers with radically different takes on the puzzle would all be classed together as rejecting what I call "Schema B". For a formulation of the puzzle that separates out various component principles and allows for a far more interesting classification of alternative responses than my formulation, see Bach (1997).

[^10]:    ${ }^{25}$ This is not to say that the puzzle is only puzzling contingent on the truth of these premises: obviously P1-P4 are in fact false unless preceded by an "According to Kripke's case" operator, but we are puzzled nonetheless.

[^11]:    ${ }^{26}$ For simplicity, I avoid explicitly qualifying assignments as relative to world-time pairs, but it should be clear that something like this would be needed to capture the modal and temporal profile of the sentences/propositions.
    ${ }^{27}$ Contrast this with what we might consider a more orthodox Millian approach to the puzzle, as presented in Salmon (1989), on which some instances of Schema B (such as B2) are simply false.

[^12]:    ${ }^{28}$ There is not a straightforward, universally accepted account of the relationship between a given disposition and corresponding counterfactuals. Among those working on dispositions, a variety of accounts are still considered live options, and I do not mean to presume the truth of any one of those accounts in this work. Rather, I hope to confine my discussion, for the most part, to cases in which the verdicts about the counterfactuals would be largely convergent, and avoid engaging with the details of those debates.
    ${ }^{29}$ For some examples of more extensively/thoroughly worked out dispositional accounts of belief, see Armstrong (1973), and Schwitzgebel (2002). Though my discussion is greatly simplified relative to any serious attempt to give a dispositional account of belief, this is principally due to my focus and for ease of exposition.
    ${ }^{30}$ For present purposes, verbal presentation requires some sort of linguistic comprehension. If someone utters a Russian sentence to someone who does not speak Russian, no proposition has been verbally presented, as I will use the term.

[^13]:    ${ }^{31}$ Note that this case is given in terms of being disposed not to accept something, which is crucially different from simply not being disposed to accept it. It might be that the disposition to not accept entails not having a disposition to accept, but the reverse is not the case.

[^14]:    ${ }^{32}$ This is meant to be a somewhat formal point about dispositions: it is not possible for someone to be disposed to do X in C and disposed not to do X in C at the same time. This is importantly different from the more substantive claim that it is not possible for someone to be disposed to accept P in C and disposed to accept $\sim \mathrm{P}$ in C . One might take a committed dialetheist to have the latter pair of dispositions, without attributing to them the former.

[^15]:    ${ }^{33}$ This reasoning should be acceptable regardless of whether one wishes to treat assent to a sentence (withholding assent) as constitutive of acceptance (non-acceptance), or merely as evidentially related to acceptance (non-acceptance).

[^16]:    ${ }^{34}$ For more thorough discussions of how dispositions can remain present even when the simple counterfactuals fail to be true, see Lewis (2003), Manley and Wasserman (2008), or the Stanford Encyclopedia of Philosophy article on dispositions-Fara (2009). While I do not have the space to engage with the details here, it is worth noting that the phenomena of "masks" and "finks" are commonly accepted among theorists working on dispositions. For a notable exception see Gunderson (2002).
    ${ }^{35}$ This should not be taken to require that one understands every "ordinary" sentence that expresses the proposition. A monolingual English speaker who hears "Londres est jolie" is not confronted with the proposition that London is pretty. A lack of understanding of some sentence expressing the proposition prevents that sentence from being a way of confronting the individual with that proposition, in the sense relevant to the proposed account of belief.
    ${ }^{36}$ For more on the debate about whether to adopt a directly referential semantics for descriptions, King (2001) and Salmon (2002).
    ${ }^{37}$ For a more thorough discussion of pragmatic enrichment, see Soames (2002, 2004).

[^17]:    ${ }^{38}$ It is crucial to note here that such a contextualist maneuver is intended in a fashion completely compatible with neither answer being appropriate in our context (that is, the context in which we are theorists with a full understanding of Pierre's situation). In other words, one could maintain that there is a sensible question asked in our context (where theoretical concerns are dominant), and that we cannot appropriately give either answer, but in other contexts, for instance, where more practical concerns are salient, it may be that one or the other answer is licensed.

[^18]:    ${ }^{39}$ This tweak could also be utilized to generate a contextualist semantics, but it is beyond my aims to discuss this.

