## Chalmers on Epistemic Content

## Alex Byrne, MIT

1. Let us say that a thought is about an object o just in case the truth value of the thought at any possible world W depends on how things are with $o$ in W . Thus the thought that the first Chancellor of the German Empire was an astute diplomatist is not about Bismark, because that thought is true in a world W iff, in W, whoever happens to be the first Chancellor was an astute diplomatist, and that may well not be Bismark. On Russell's view in The Problems of Philosophy, we cannot think about external objects like Bismark at all: we sometimes make the attempt, but "[i]n this we are necessarily defeated, since the actual Bismark is unknown to us". ${ }^{1}$ For example, when one thinks that (as one would put it) Bismark was an astute diplomatist, according to Russell the content of one's thought is some descriptive proposition, for example that the first Chancellor of the German Empire was an astute diplomatist.

On Russell's view we can think about some objects, namely those with which we are acquainted, for example sense data. In fact, Russell didn't merely claim that we can think about sense data. According to him, we can entertain what are now called "Russellian" propositions about sense data: propositions that do not identify a certain sense datum descriptively, but rather simply contain it as a constituent. If a thought about an object $o$ is Russellian, let us say that it is directly about $o$. (The thought that the actual first Chancellor of the German Empire was an astute diplomatist is an example of a thought that is about an object, namely Bismark, without being directly about that object.)

So Russell's view has a negative and a positive component. The negative component is that one cannot think about objects like Bismark. The positive component is that one can think directly about objects to which one has exceptionally intimate epistemic access (sense data, for example).

[^0]With the benefit of a lot of post-Russellian philosophy, Russell's view seems highly unattractive. First, if the positive component is conceded, then only misguided Cartesian doctrines could lead us to suppose that objects with which one is acquainted are all one can think about directly-let alone all one can think about. Second, as Kripke pointed out, one can think about objects like Bismark.

However, in a series of papers, including the one under discussion, David Chalmers has defended an elegant and powerful account of mental content that bears some striking similarities to Russell's. It is at least hard to prevent the account from having both the negative and the positive component, or so I shall argue. Although Chalmers does not offer an explicit opinion on the positive component, he does clearly reject the negative one-but let us leave that twist until the end of this comment.
2. Let us begin by reviewing Chalmers' basic claims about epistemic content. Recall Chalmers' story of Oscar, who lives on Earth and believes that water is XYZ. Oscar's confusion about chemistry comes from a misreading of The Conscious Mind, whose author Oscar once met at a conference. Oscar believes that Chalmers is a professional philosopher, and (being prone to error) he also believes that Chalmers is the son of Bertrand Russell. That second belief is necessarily false, or so we may suppose. Chalmers could not have been Russell's son: in every world in which Chalmers exists, Russell is not his father.

Going by a priori reflection alone, Oscar cannot rule out that water is XYZ, that David Chalmers is a philosopher, or that Chalmers is Russell's son. So, in Chalmers' terminology, Oscar's three beliefs are epistemically possible. Note that by 'Oscar's belief that $p^{\prime}$, Chalmers does not mean the proposition that p , nor does he mean the state/property of believing that p . Rather, Oscar's belief that $p$ is "an occurrent propositional attitude token", or what Chalmers calls a thought. ${ }^{2}$ We can forget this terminological stipulation for the moment, but it will be important later on.

[^1]
## Chalmers writes:

It is a common intuitive idea that when a thought is epistemically possible, there are specific epistemically possible scenarios that the thought endorses....the thought divides epistemic space: the space of epistemically possible scenarios. (§2)

And:
[I]t is useful to think of my belief contents as constituting a model of my world, a kind of map by which I steer. This is a model of the world as I find it...and my beliefs are constraints on that world. Beliefs constitute a model by constraining epistemic space: the space of epistemic possibilities that were open to me a priori. One belief might rule out these epistemic possibilities as a candidate for the world where I am, another might rule out these, until only a limited class of worlds is left. (CC, §6)

These scenarios that comprise epistemic space are supposed to be maximal: for every thought T and scenario S , either T or not-T endorses S (ignoring, for simplicity, cases of indeterminacy). Equivalently, either T or not-T is verified by S. So a scenario is something like a possible world. In fact-ignoring complications due to indexical thoughts—Chalmers thinks that familiar possible worlds will serve as scenarios. ${ }^{3}$

What is it for a thought to endorse a scenario, or for a scenario to verify a thought? A thought T endorses a scenario W just in case "a thought that W is actual

[^2]implies T"; that is, if one accepts that W "is actual", one "should rationally accept" T (§3). ${ }^{4}$

Given just the above intuitive motivation, one might think that Oscar's belief that Chalmers is a philosopher is verified by a scenario W iff, in W, Chalmers is a philosopher. Again, one might think that Oscar's belief that Chalmers is Russell's son is verified by a scenario W iff, in W, Russell fathers Chalmers.

But, of course, this isn't right, at least as Chalmers sees it. If Oscar's second belief were verified by those scenarios in which Russell fathers Chalmers then, because there are no such scenarios (worlds), this belief would be epistemically impossible. Yet it is epistemically possible and so, according to Chalmers, is verified by some scenario.

What about Oscar's first belief, that Chalmers is a philosopher? Consider TwinOscar, who lives on Twin Earth in some non-actual scenario. Twin-Chalmers, the author of The Conscious Mind-or at any rate a book that is a word-for-word copy of The Conscious Mind -also lives on this planet. Twin-Oscar does not believe that Chalmers is a philosopher: Twin-Oscar has never heard of Chalmers, who does not even inhabit this scenario. Twin Oscar, rather, believes that Twin-Chalmers is a philosopher, a belief he would express by uttering the sentence 'David Chalmers is a philosopher'. According to Chalmers, Oscar's belief that Chalmers is a philosopher and Twin-Oscar's belief that Twin-Chalmers is a philosopher are verified by the very same scenarios. By symmetry, these scenarios can hardly be just those in which Chalmers is a philosopher.

So what are these scenarios that allegedly verify Oscar's beliefs? The outline of an answer is clear enough. Take Oscar's belief that Chalmers is a philosopher. According to Chalmers, this belief is verified by a scenario W iff, in W, the F is a philosopher-where ' $F$ ' is replaced by certain "neutral vocabulary" suitable "for characterizing a world’s qualitative structure" (§3). (Names, and rigid desigators generally, are not allowed.) So, for example, perhaps Oscar's belief that Chalmers is a philosopher is verified by a scenario W iff, in W, the author of The Conscious Mind is a

[^3]philosopher (pretending that this description is suitably neutral). Or perhaps Oscar's belief is verified by a scenario W iff, in W , the long-haired man wearing a koala bear T shirt is a philosopher. Or perhaps Oscar's belief is verified by a scenario W iff, in W, the bearer of 'David Chalmers' is a philosopher. No doubt none of these suggestions is close to right, but they will serve to give the flavor. ${ }^{6}$ And similarly for Oscar's belief that Chalmers is Russell's son. That belief is verified by a scenario W iff, in W, the F is the son of the G, where all these descriptions are appropriately "neutral"."

The epistemic content of a belief is the set of scenarios (worlds) that verify the belief. So, for example, the epistemic content of Oscar's belief that David Chalmers is a philosopher is (we may suppose for illustration) equivalent to the proposition that the author of The Conscious Mind is a philosopher. ${ }^{8,9}$

That completes the brief review. We now need to explain how the two Russellian components mentioned earlier threaten to get into the account. This can be done by considering two objections. The first (section 3) is that Chalmers' claims about what is epistemically possible sometimes seem too strong: apparent epistemic impossibilities are classed as possible. The second (section 4) is that Chalmers' claims sometimes seem too weak: apparent epistemic possibilities are classed as impossible. The first objection indicates why the negative component is needed; the second objection does the same for the positive component. Chalmers' attempt to block the negative component is addressed in section 5.

[^4]3. First, a case where an apparent epistemic impossibility is classed as possible. Consider a world (scenario) $\mathrm{W}_{1}$, in which Chalmers went into plumbing instead of philosophy, and in which Bertrand Russell is a philosopher who writes The Conscious Mind. Oscar may come to accept the hypothesis that $\mathrm{W}_{1}$ is actual and, if he does, it would seem that he "should rationally accept" that Chalmers is a plumber, not a philosopher. After all, accepting the hypothesis that $\mathrm{W}_{1}$ is actual presumably includes accepting that Chalmers is a plumber, not a philosopher. In other words, it appears that the conjunction of scenario $\mathrm{W}_{1}$ and Oscar's belief that Chalmers is a philosopher is not epistemically possible. ${ }^{10}$ However, according to Chalmers, this is not so: the conjunction of $\mathrm{W}_{1}$ and Oscar's belief that Chalmers is a philosopher is epistemically possible. Put another way, if Oscar believes that Chalmers is a philosopher, Oscar's belief does not thereby rule out $\mathrm{W}_{1}$, despite the fact that, in $\mathrm{W}_{1}$, Chalmers is not a philosopher.

It might appear that there is no problem here, because Chalmers emphasizes that if possible worlds are to serve as scenarios, it matters how they are described. When one considers the hypothesis that W "is actual", "one considers the hypothesis that D is the case" where ' $D$ ' is replaced by a "canonical description" of W , a description purged of vocabulary that is "susceptible to Twin Earth thought-experiments" (§3). So, in the case at hand, when Oscar considers the hypothesis that $\mathrm{W}_{1}$ is actual, he considers the hypothesis that there is a unique long-haired koala-bear-T-shirt-wearing man who practices plumbing, not philosophy, and there is a unique white-haired pipe-smoking man who practices philosophy and writes The Conscious Mind, etc.-the hypothesis does not specify who Chalmers is. It is therefore no surprise that Oscar's belief does not rule out $\mathrm{W}_{1}$-even though $\mathrm{W}_{1}$ is a world in which Chalmers is not a philosopher.

But this reply puts the technical cart before the intuitive horse. Canonical descriptions are supposed to be part of an apparatus we can use to theorize about our intuitive notion of epistemic possibility, as Chalmers informally explains it. In order for

[^5]the introduction of canonical descriptions to be legitimate, the informal explanation has to make it plausible that Oscar's belief divides epistemic space in a way that has nothing to do with Chalmers' occupation. And-I am suggesting-the informal explanation does not.

If Oscar really could come to accept the hypothesis that Chalmers-that very individual-is a plumber, not a philosopher, then the conjunction of $\mathrm{W}_{1}$ and Oscar's belief that Chalmers is a philosopher would be epistemically impossible. Since, according to Chalmers, this conjunction is epistemically possible, Oscar could not come to accept that hypothesis. That is—at least at this stage in the exposition of the theory-it appears that Oscar cannot think about Chalmers at all.
4. Now a case where an apparent epistemic possibility is classed as impossible. Consider a world $\mathrm{W}_{2}$, in which Chalmers is a philosopher of unshakable materialist convictions, and in which Russell is a plumber, not a professional philosopher. In $\mathrm{W}_{2}$ it is Russell-theplumber, not Chalmers-the-philosopher, who writes The Conscious Mind. Oscar may come to accept the hypothesis that $\mathrm{W}_{2}$ is actual and, if he does, it would seem that he "should rationally accept" that Chalmers is a (professional) philosopher. After all, accepting the hypothesis that $\mathrm{W}_{2}$ is actual presumably includes accepting that Chalmers is a philosopher. In other words, it appears that the conjunction of $\mathrm{W}_{2}$ and Oscar's belief that Chalmers is a philosopher is epistemically possible. However, according to Chalmers, this is not so: the conjunction of $\mathrm{W}_{2}$ and Oscar's belief that Chalmers is a philosopher is not epistemically possible. Put another way, Oscar's belief that Chalmers is a philosopher rules out $\mathrm{W}_{2}$, despite the fact that, in $\mathrm{W}_{2}$, Chalmers is a philosopher.

This illustrates again the point made in the previous section. If Oscar really could come to accept the hypothesis that Chalmers is a plumber, not a philosopher, then the conjunction of $\mathrm{W}_{2}$ and Oscar's belief that Chalmers is a philosopher would be epistemically possible. Since, according to Chalmers, this conjunction is epistemically impossible, Oscar could not come to accept that hypothesis.

Let us now waive this problem, and suppose that when Oscar accepts that $\mathrm{W}_{2}$ "is actual" he merely accepts that there is a unique long-haired koala-bear-T-shirt-wearing man who is a philosopher, and that there a unique white-haired pipe-smoking man who,
despite not being in the philosophical profession and working full-time as a plumber, manages to write The Conscious Mind, etc. Why does Chalmers think that the conjunction of $\mathrm{W}_{2}$ and Oscar's belief that Chalmers is a philosopher is epistemically impossible?

The answer is that, according to Chalmers, Oscar's belief that Chalmers is a philosopher identifies Chalmers in "neutral" terms. Specifically—we are supposing for illustration-this belief identifies Chalmers as the author of The Conscious Mind. Because accepting that $\mathrm{W}_{2}$ "is actual" involves accepting that the author of The Conscious Mind is a plumber, not a philosopher, this is why Oscar's belief that Chalmers is a philosopher is supposed to rule out $\mathrm{W}_{2}$.

An obvious objection is suggested by Kripke's arguments against the description theory of names, specifically the arguments from ignorance and error, together with the observation that parallel points apply to beliefs whose contents are reported using names. First, Oscar may believe that Chalmers is a philosopher without having any sort of "neutral" descriptive conception of Chalmers that purports to identify him uniquely-say, as the author of The Conscious Mind. Second, even if Oscar does have a "neutral" descriptive conception of Chalmers, it may be radically mistaken-perhaps Oscar thinks of Chalmers as the author of Consciousness Explained, or as the man who proved the incompleteness of arithmetic.

Chalmers does explicitly engage with Kripke's arguments from ignorance and error elsewhere, although not in the present paper. ${ }^{11}$ Whether or not Chalmers manages to evade them, there is one related point-due in essentials to Frege ${ }^{12}$ —that seems uncontrovertible. Grant, for the sake of the argument, that it is necessary to have an accurate descriptive conception of Chalmers in order to believe that Chalmers is a philosopher. Surely there is not a single such conception shared by everyone who

[^6]believes that Chalmers is a philosopher-the conception must be allowed to vary from person to person, and from time to time within a person. Oscar may think of Chalmers as the author of The Conscious Mind, but it is not necessary to think of Chalmers in this way in order to believe that Chalmers is a philosopher. That is, it is not plausible to suppose that everyone who believes that Chalmers is a philosopher also believes that the F is a philosopher (where ' $F$ ' replaced by "neutral" vocabulary).

It is a short step from this uncontrovertible point to the conclusion that the proposition that Chalmers is a philosopher-the proposition expressed by the English sentence 'Chalmers is a philosopher'-is not a proposition that identifies Chalmers descriptively. If we think of the proposition that Chalmers is a philosopher as pinning down the extent of agreement between everyone who believes that Chalmers is a philosopher, then that proposition will not encode neutral information sufficient to identify Chalmers.

Now Chalmers, I think, displays some sympathy with this conclusion, although he would no doubt dispute my particular way of putting it. In any event, he explicitly allows that competent users of a word (say 'David Chalmers') may have quite different descriptive conceptions of its referent (§5). ${ }^{13}$

Consider again world $\mathrm{W}_{2}$, in which Chalmers rails against dualists, and Russell unclogs drains and writes The Conscious Mind. We are supposing for illustrative purposes that the epistemic content of Oscar's belief is (equivalent to) the proposition that the author of The Conscious Mind is a philosopher, and so Oscar's belief rules out $\mathrm{W}_{2}$. Lucinda, suppose, also believes that Chalmers is a philosopher. Because Oscar's and Lucinda's descriptive conceptions of Chalmers may differ, the epistemic content of Lucinda's belief may not be the same as the epistemic content of Oscar's. In particular, Lucinda's belief that Chalmers is a philosopher might not rule out $\mathrm{W}_{2}$. So the claim that Oscar's belief rules out $\mathrm{W}_{2}$ is not to be understood as the claim that the state/property of believing that Chalmers is a philosopher rules out $\mathrm{W}_{2}$, or the claim that the proposition that Chalmers is a philosopher rules out $\mathrm{W}_{2}$. For then Lucinda's belief that Chalmers is a philosopher rules out $W_{2}$ iff Oscar's does. Rather, the claim that Oscar's belief rules out

[^7]$\mathrm{W}_{2}$ is to be understood as the claim that a certain token belief in Oscar's head rules out $\mathrm{W}_{2}$. It was noted at the start that Chalmers takes a thought (e.g. a belief) to be a token-"roughly, an entertaining of a given content" in the mind of a particular thinker-and this is the reason why. (See §5.) For the same reason, when Chalmers moves on to discuss "epistemic intensions for concepts", a concept is taken to be "a mental token, tied to a specific thinker" (§5)—something like a (token) word in a language of thought.

Now although we may accept that there are such episodes as "entertaining[s] of a given content" (e.g., Oscar's wondering whether Chalmers wrote Consciousness Explained), it is quite controversial whether beliefs are among them. Perhaps when Oscar believes that Chalmers is a philosopher there is some entity in his head that is his belief, but perhaps not. And even if we accept that Oscar's belief that Chalmers is a philosopher is an item in Oscar's head, it is a further controversial step to claim that it is composed of semantically significant parts-as it might be, Oscar's concept DAVID CHALMERS, and his concept PHILOSOPHER. Ideally, an abstract framework for theorizing about content should not take a stand on these issues.

But, as Chalmers recognizes, he cannot preserve neutrality. Once it is granted that the required descriptive conceptions may vary from person to person, the items that have epistemic content must be tokens in the mind or head.

Given that Oscar believes that Chalmers is a philosopher, it is not (I take it) supposed to be a speculative conjecture that there are various items in Oscar's mind-a token belief, and token concepts DAVID CHALMERS and PHILOSOPHER. At least, it is not supposed to be a conjecture on Oscar's part. Somehow, Oscar can be quite sure that there are such entities in his mind. So it appears that Oscar bears an intimate epistemic relation to his beliefs and concepts-something rather like acquaintance.

Further, it appears that Oscar can think directly about these items in his mind, for the following reason. As I understand Chalmers' view, Oscar can investigate the semantic properties of his beliefs and concepts without going beyond the confines of epistemic content. In particular, he does not need to think about objects like Bismark or-more relevantly—himself in order to conduct the investigation. Now, when Oscar investigates his concept DAVID CHALMERS, he must have a thought that is guaranteed to pick this
concept out. ${ }^{14}$ And it seems that no descriptive thought will do the job. For example, Oscar cannot think of DAVID CHALMERS as the concept that plays such-and-such role in him, because that would involve thinking about himself. And if Oscar's thought does not pick out his concept DAVID CHALMERS descriptively, it must pick it out directly. ${ }^{15}$

Chalmers, it should be emphasized, does not explicitly say that we bear acquaintance-like relations to particular items in our minds, nor that we can think about these items directly. The point is just that Chalmer's account naturally tends in this direction.
5. If the account stopped here, then whether or not Chalmers would accept the positive component of Russell's theory-that we can think directly about items in our minds-he would certainly accept the negative component-that we cannot think about objects like Bismark. However, as mentioned at the start, we can think about Bismark. When one thinks that Bismark was an astute diplomatist, one's thought is true at a world W iff, in W, a certain actual individual was an astute diplomatist. Chalmers, of course, recognizes this point, and that is why his account of content has a second chapter. According to Chalmers, Oscar's belief that Chalmers is a philosopher has, in addition to its epistemic content, another kind of content-subjunctive content. If the epistemic content of Oscar's belief is (equivalent to) the proposition that the author of The Conscious Mind is a philosopher, then its subjunctive content is (equivalent to) the proposition that the actual author of The Conscious Mind is a philosopher. Admittedly, this proposition is not directly about Chalmers, but it is about him; if we can believe such propositions, that is presumably enough. ${ }^{16}$

[^8]Since we can think about objects like Bismark and Chalmers, the concession about subjunctive content has to be made. ${ }^{17}$ But the question is whether Chalmers can make it without spoiling the original claims about epistemic content. There are two difficulties here. First, if Oscar's belief that Chalmers is a philosopher has the content, inter alia, that the actual author of The Conscious Mind is a philosopher, then one might wonder why, for example, the conjunction of $\mathrm{W}_{2}$ and Oscar's belief that Chalmers is a philosopher is epistemically impossible. $\mathrm{W}_{2}$, after all, is a world in which the actual author of The Conscious Mind is a philosopher.

The second difficulty is this. If Oscar believes that the actual author of The Conscious Mind is a philosopher then-following the standard account-he believes, of the actual world, that $i t$ is such that the actual author of The Conscious Mind is a philosopher. ${ }^{18}$ This is a belief about the actual world, and moreover a belief that is directly about the actual world-the belief does not descriptively identify the actual world. As we just saw, it would be natural for Chalmers to hold that one can think directly about inner particulars: token beliefs and concepts. Now, perhaps a case can be made that acquaintance with an object is necessary in order to think about it directly, and if so that would explain why we cannot think directly about Bismark, despite being able to think directly about token beliefs and concepts. However, since we are not acquainted with the actual world (on anyone's view), this cannot help with the present problem. It remains entirely obscure why, if we can think directly about the actual world, we cannot think directly about Bismark. ${ }^{19,20}$
two propositional contents (thoughts, in the sense of the first paragraph of this comment) is about Chalmers.
${ }^{17}$ In fact, there is a suggestive footnote in CC (the first one in §4) that hints that the concession might not have to be made.
${ }^{18}$ I do not mean to suggest that this claim is irresistible. However, if it is denied, we are owed an alternative semantics.
${ }^{19}$ Here is an alternative interpretation of Chalmers' views about subjunctive content. When Oscar believes that Chalmers is a philosopher he believes that the author of The Conscious Mind is a philosopher, but (contra the interpretation in the text) he does not also believe that the actual author of The Conscious Mind is a philosopher. Neither does he believe the Russellian
proposition <Chalmers, being a philosopher>. Oscar cannot believe those propositions-at least strictly speaking-because he isn't acquainted with their constituents: he doesn't know which propositions they are, in some very demanding sense of 'knowing which'. However, Oscar does believe a proposition that picks out the Russellian proposition descriptively, and predicates truth of it: the proposition that the Russellian singular proposition whose first member is the author of The Conscious Mind, and whose second member is the property of being a philosopher, is true. Call that descriptive proposition ' P '. Then (on this alternative interpretation), Oscar does believe-loosely speaking-the singular proposition <Chalmers, being a philosopher>, because that just is to believe-strictly speaking-the descriptive proposition P. That is the sense in which beliefs have "subjunctive content".

On this alternative interpretation the difficulties mentioned in the final two paragraphs do not arise, because it is not being claimed that Oscar believes-strictly speaking-that the actual author of The Conscious Mind is a philosopher. Further, this interpretation brings Chalmers even closer to Russell. "We can thus describe the proposition we would like to affirm, namely 'B was an astute diplomatist,' where B is the object which was Bismark. If we are describing Bismark as 'the first Chancellor of the German Empire,' the proposition we should like to affirm may be described as 'the proposition asserting, concerning the actual object which was the first Chancellor of the German Empire, that this object was an astute diplomatist'" (Problems, p. 39).

In fact, the interpretation brings Chalmers too close to Russell for comfort, because it has Chalmers rejecting the claim that we can think about objects like Bismark, and offering some poor-quality surrogate instead.
${ }^{20}$ Many thanks to Jim Pryor and Robert Stalnaker for discussion.


[^0]:    ${ }^{1}$ The Problems of Philosophy, (Dover, 1999), p. 39.

[^1]:    ${ }^{2}$ Thoughts also have "world-to-mind direction of fit" (see §2). (All references are to sections of Chalmers' paper "The Nature of Narrow Content", unless noted otherwise. Chalmers' paper "The

[^2]:    Components of Content", <www.u.arizona.edu/~chalmers/papers/content.html>, is referred to as ' CC '.)
    ${ }^{3}$ To accommodate indexical thoughts, Chalmers takes scenarios to be "centered" worlds-worlds togther with a pair of an individual and a time (§3).

[^3]:    ${ }^{4}$ Or-what for present purposes we can assume is equivalent-one "should rationally reject" notT (§2).
    ${ }^{5} \mathrm{~A}$ complication best ignored.

[^4]:    ${ }^{6}$ Cf. Chalmers' remarks about Oscar's belief that water is XYZ. Perhaps (to a first approximation) Oscar's belief is verified by worlds in which "the environment contains XYZ in the oceans and lakes" (§2). Or perhaps Oscar's belief is verified by worlds in which "the clear drinkable liquid in common use" is XYZ (§5).
    ${ }^{7}$ I am here completely ignoring Chalmers' strong claims about the minimal resources needed to provide the "neutral" descriptions (see $\S 3$, on "PQTI").
    ${ }^{8}$ That is, the proposition that the author of The Conscious Mind is a philosopher is true at exactly those worlds that are members of the epistemic content.
    ${ }^{9}$ Chalmers emphasizes that descriptive sentences may only specify epistemic contents "roughly" (§5). I take him to be making a point about natural languages like English or Spanish: descriptive sentences drawn from a suitably rich language would specify epistemic contents exactly.

[^5]:    ${ }^{10}$ For the sake of the argument, Chalmers' talk of the "conjunction" of a scenario and a thought, and the "negation" of a thought, is taken as unproblematic. But it is not completely straightforward, in part because of Chalmers' technical use of 'thought' (see section 2 above).

[^6]:    ${ }^{11}$ See CC in particular; for criticism, see A. Byrne and J. Pryor, "Bad Intensions".
    12 "On Sense and Reference", footnote B. See also Russell, Problems, p. 37: "[T]he thought in the mind of a person using a proper name correctly can generally only be expressed explicitly if we replace the proper name by a description. Moreover, the description required to express the thought will vary for different people, or for the same person at different times."

[^7]:    ${ }^{13}$ See also Chalmers' remarks about 'water' in $\S 5$, and 'elm' in $\S 6$.

[^8]:    ${ }^{14}$ If Oscar could only think of his concept DAVID CHALMERS as the F, and does not know for sure that there is exactly one thing that is F, then (presumably) he would fail to be acquainted with the concept. The "guarantee" of successful reference is supposed to exclude this sort of case. ${ }^{15}$ So, on this view, the "neutral vocabulary" could include names of beliefs and concepts (although not of Bismark and Chalmers).
    ${ }^{16}$ Some terminological clarification: Oscar's belief that Chalmers is a philosopher (a propositional attitude token, or thought in Chalmers' sense) is about Chalmers because one of its

