

# Contextualism, Safety and Epistemic Relevance \*

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**Abstract.** The paper discusses approaches to *Epistemic Contextualism* that model the satisfaction of the predicate ‘know’ in a given context *C* in terms of the notion of belief/fact-matching throughout a contextually specified similarity sphere of worlds that is centred on actuality. The paper offers three counterexamples to approaches of this type and argues that they lead to insurmountable difficulties. I conclude that what contextualists (and Subject-Sensitive Invariantists) have traditionally called the ‘epistemic standards’ of a given context *C* cannot be explicated in terms of a contextually specified similarity sphere that is centred on actuality. The mentioned accounts of epistemic relevance and thus the corresponding accounts of the context-sensitivity (or subject-sensitivity) of ‘knows’ are to be rejected.

**Keywords:** knowledge, contextualism, epistemic relevance, epistemic standards, sensitivity, safety

## 1. Epistemic Strength

One of the most fully developed and influential accounts of *Epistemic Contextualism* in the literature, viz. Keith DeRose’s account, is guided by the intuitive idea that whether one satisfies ‘knows *p*’ in a given context *C* partly depends on both the “strength of one’s epistemic position”<sup>1</sup> with regard to *p* and certain features of the conversational context *C*. To be more precise, DeRose claims that a subject satisfies ‘knows *p*’ in *C* iff she “has a true belief that *p* and is in a *good enough* epistemic position with respect to *p*”,<sup>2</sup> where what counts as a good enough epistemic position may vary with the context of utterance. To fully appreciate the details of the approach at issue, it is instructive to take a closer look at the notion of strength of epistemic position. Here is DeRose:

“[B]eing in a strong epistemic position with respect to *p* is to have a belief as to whether *p* is true match the fact of the matter as to whether *p* is true, not only in the actual world, but also at the worlds sufficiently close to the actual world. That is, one’s belief should not only be true, but also should be non-accidentally true, where this requires one’s belief as to whether *p* is true to match the fact of the matter at nearby worlds. The further away one gets from the actual

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\* Thanks to Brain Ball, Stewart Cohen, Dorothy Edgington, Tim Williamson and Ralph Wedgwood.

<sup>1</sup> DeRose (1995), p. 201.

<sup>2</sup> See DeRose (1992), p. 922 (DeRose’s emphasis).

world, while still having it be the case that one's belief matches the fact at worlds that far away and closer, the stronger a position one is in with respect to  $p$ .”<sup>3</sup>

To further illustrate this notion of epistemic strength, let me introduce the concept of a *similarity sphere*. According to prevailing orthodoxy, a possible world  $w$  is closer to  $w'$  than it is to  $w''$  iff  $w$  resembles  $w'$  more than it resembles  $w''$ : talk about the distance between worlds is disguised talk about relations of comparative similarity between worlds.<sup>4</sup> If we assume, for the moment, that degrees of similarity between worlds can be measured on a scale from 0 to 1, 0 expressing total dissimilarity and 1 qualitative (and therefore in the case of possible worlds numerical) identity,<sup>5</sup> then we can let ' $S_w^d$ ' denote the sphere of all possible worlds that are similar to  $w$  to at least degree  $d$ , where  $0 \leq d \leq 1$ .<sup>6</sup> Figure 1 illustrates the notion of a similarity sphere:

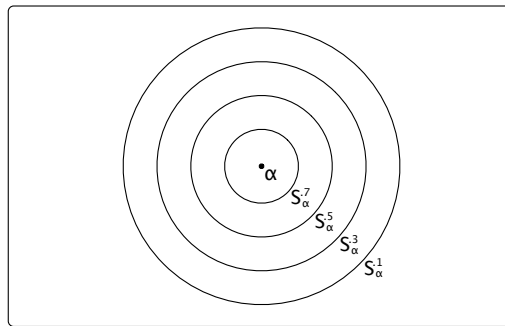


Figure 1. Similarity spheres centred on actuality ( $\alpha$ )

Thus, on DeRose's view, the further out in modal space one's belief as to whether  $p$  matches the facts, or, alternatively, the greater the similarity sphere throughout which one's belief as to whether  $p$  matches the facts, the greater the respective belief's epistemic strength.

## 2. The Rule of Sensitivity

How epistemically strong must a true belief be for it to qualify as 'knowledge' in a given context  $C$ ? According to DeRose, this depends on certain features of the conversational context  $C$ , such as the speakers' practical interests, their

<sup>3</sup> DeRose (1995), Section 11, p. 204 (symbolism adjusted).

<sup>4</sup> See Lewis (1973), pp. 8-15 and Lewis (1986), p. 24.

<sup>5</sup> Actuality is the world that is closest to itself, resembling itself more than any other world resembles it.

<sup>6</sup> See Lewis (1973), pp. 50-2 for discussion of whether the similarity between worlds can be measured numerically.

intentions and the goal of their conversation.<sup>7</sup> Thus, a given true belief  $p$  may be epistemically strong enough to count as ‘knowledge’ in a context  $C$ , while at the same time failing to be epistemically strong enough to count as ‘knowledge’ in a relevantly different context  $C'$ . In such a situation, the conversational context  $C'$  comprises, as DeRose puts it, *higher epistemic standards* than  $C$  does, since for one to satisfy ‘knows’ in  $C'$ , one’s true beliefs have to match the facts throughout a larger similarity sphere than is necessary for one to satisfy ‘knows’ in  $C$ . DeRose:

“Context [...] determines how strong an epistemic position one must be in to count as knowing. Picture this requirement as a contextually determined sphere of possible worlds, centered on the actual world, within which a subject’s belief as to whether  $p$  is true must match the fact of the matter in order for the subject to count as knowing. [C]all this sphere the sphere of *epistemically relevant worlds*. As the standards for knowledge go up, the sphere of epistemically relevant worlds becomes larger—the [belief/fact-matching] of one’s belief must extend further from actuality for one to count as knowing.”<sup>8</sup>

Summing up, we can paraphrase DeRose’s account of the satisfaction of ‘knows’ as follows:

- (D)  $x$  satisfies ‘knows  $p$ ’ in  $C \leftrightarrow x$ ’s belief  $p$  matches the facts throughout  $C$ ’s similarity sphere of epistemically relevant worlds.<sup>9</sup>

Now, assuming that a given conversational context  $C$  is assigned a particular standard for ‘knowledge’, the question arises as to how such epistemic standards are shifted from one context to another: exactly which contextual changes bring about the enlargement or the reduction of a context’s similarity sphere of epistemically relevant worlds? DeRose does not address the issue of what triggers downwards shifts of epistemic standards, but concerning the dynamics of upward shifts he introduces his famous *Rule of Sensitivity*:

<sup>7</sup> See DeRose (2004), pp. 33-5.

<sup>8</sup> DeRose (1995), p. 206 (symbolism adjusted, my emphasis). DeRose uses the phrase ‘truth-tracking’ instead of ‘belief/fact-matching’. See Section 3 for a discussion of the interrelations between sensitivity accounts of knowledge and DeRose’s contextualist approach. See also Mark Heller (1989, 1999), who takes a very similar approach to EC and epistemic relevance as DeRose’s does.

<sup>9</sup> Since, on DeRose’s view, a context’s similarity sphere of epistemically relevant worlds is centred on actuality, actuality is epistemically relevant in every context. Thus, no false belief can be ‘knowledge’ and it would therefore be redundant to add a truth-condition to (D).

“When it’s asserted that  $x$  knows (or doesn’t know) that  $p$ , then, if necessary, enlarge the sphere of epistemically relevant worlds so that it at least includes the closest worlds in which  $p$  is false.”<sup>10</sup>

Thus, if I assert ‘I know that my bike is parked outside the Radcliff Camera’, the similarity sphere of epistemically relevant worlds extends so that it at least includes the closest worlds in which my bike is not parked outside the Radcliff Camera. Similarly, if I assert ‘I don’t know that I’m not a brain in a vat’, the similarity sphere of epistemically relevant worlds extends so that it at least includes the closest worlds in which I am a brain in a vat (henceforth ‘biv’). Now, assuming that worlds in which I am a biv are considerably farther away from actuality than worlds in which my bike is not parked outside the Radcliff Camera, it follows that assertions of the type ‘I know that my bike is parked outside the Radcliff Camera’ have, usually, considerably less potential to raise one’s context’s epistemic standards than assertions of ‘I don’t know that I’m not a biv’.

### 3. Sensitivity and Safety

Before moving on to a more critical discussion of the views just explicated, it is worthwhile comparing the approach at issue to both safety and sensitivity accounts of knowledge. Firstly, consider the familiar *Sensitivity Principle* as defended by (Nozick 1981):

(SENS)  $Kp \rightarrow (\neg p \Box \rightarrow \neg Bp)$ .<sup>11</sup>

According to (SENS), one only knows  $p$  if one’s belief  $p$  matches the facts in the closest  $\neg p$ -worlds.<sup>12</sup> Clearly, this principle is incompatible with DeRose’s contextualist account. Consider, for illustration, the proposition that you are not a biv. According to (SENS), you never know that proposition, for your belief as to whether you are a biv fails to match the facts in the closest worlds in which you are a biv: in the closest worlds in which you are a biv, you believe falsely that you are not a biv. DeRose’s account, however, entails that you do ‘know’ that you are not a biv in contexts with quotidian epistemic standards, for in such contexts the far away worlds in which you are a biv are well outside the contextually specified similarity sphere of epistemically relevant worlds. Thus, for one to ‘know’ that one is not a biv in quotidian

<sup>10</sup> Ibid., p. 206 (symbolism adjusted). The normative tone of this formulation is, of course, misleading.

<sup>11</sup> I use ‘ $\Box \rightarrow$ ’ to express the counterfactual conditional.

<sup>12</sup> Translated into natural language, (SENS) claims that if one knows  $p$ , then if  $p$  had not been the case, one would not have believed  $p$ .

contexts, one's belief that one is not a biv does not need to match the facts in the closest biv-worlds.<sup>13</sup>

Next, consider the *Safety Principle* as defended by (Sosa 2000) and (Williamson 2000):

(SAFE)  $Kp \rightarrow (Bp \Box \rightarrow p)$ .

According to (SAFE), one only knows  $p$  if one's belief  $p$  matches the facts in all nearby worlds. In other words, (SAFE) demands that one's belief be safe in the sense that it could not have been false easily.<sup>14</sup> Note that DeRose's account bears an interesting similarity to safety accounts: both types of account claim that, for one to 'know'  $p$  in a context  $C$ , one's belief  $p$  has to match the facts throughout a given similarity sphere. The crucial difference between the two accounts, however, is that DeRose identifies the relevant similarity sphere contextually, while the safety theorist does so by means of the counterfactual conditional in the consequent of (SAFE). Now, despite this important difference, it is illuminating to rephrase DeRose's view in terms of safety: on DeRose's account, a true belief has to be safe in order to qualify as 'knowledge' in a given context  $C$ , while the exact degree of safety required may vary from context of ascription to context of ascription.<sup>15</sup> Thus, DeRose's account can be conceived of as a contextualised safety account of 'knowledge'.<sup>16</sup>

<sup>13</sup> It is, of course, this feature of DeRose's account that allows him to retain a contextualised version of closure.

<sup>14</sup> In natural language, (SAFE) claims that if one knows  $p$ , then if one were to believe  $p$ , then  $p$  would be the case. Note that (SAFE) and (SENS) place different constraints on knowledge: while (SAFE) demands that one's belief could not have been false easily, (SENS) demands that one would not have believed  $p$ , if  $p$  had not been the case. Counterfactual conditionals do not contrapose.

<sup>15</sup> I assume that DeRose would consider belief/fact matching throughout the similarity sphere picked out by the counterfactual conditional in (SAFE) a minimal condition on the satisfaction of 'know' for any given context, the contextualist point being that the sphere of epistemically relevant worlds is, in some contexts, larger than the minimal one required for all contexts. I ignore cases that turn out problematic for DeRose and (SAFE), such as Harman's assassination case (see Harman (1973), pp. 142-54).

<sup>16</sup> In his (1995, p. 207) DeRose claims, with reference to Nozick's tracking theory of knowledge, that "[t]he notion of sensitivity [...] finds its happier home in our contextualist account of how the standards for knowledge are raised." This is, of course, a misrepresentation of his own views, and the term 'Rule of Sensitivity' is, strictly speaking, a misnomer: DeRose's account is not a "contextualised tracking account of knowledge". It should be noted here, however, that DeRose himself has pointed out in more recent writings that his account is a contextualised *safety* account (see, for instance, DeRose (2004)).

#### 4. Counterexamples

Let us now turn to a more critical discussion of the view under consideration. As I shall argue in this section, the above-sketched approach to the context-sensitivity of ‘knows’ is too restrictive and renders false many ‘knowledge’-attributions that we would ordinarily judge to be true. To illustrate this difficulty, consider the following dialogue between Vladimir and Gogo in front of the zebra pen of an imaginary zoo:

*Vladimir and Gogo (V&G):*

G: Is it true that nothing can travel faster than light?

V: Yes, that’s true.

G: I didn’t know that. (*silence*) but Vladimir. . .

V: What is it?

G: I know that that’s a zebra! See the black and white stripes?

V: (*angrily*) Everybody knows that that’s a zebra!

The crucial datum with regard to V&G is that competent speakers of English have clear and precise intuitions that all assertoric sentences uttered in V&G—including Gogo’s fourth assertion of ‘I know that that’s a zebra’—express truths.<sup>17</sup> DeRose’s account, however, conflicts with this rather obvious datum.

To see why this is so it is worthwhile introducing a few abbreviations: let  $w$  be the closest world to actuality (henceforth ‘ $\alpha$ ’) in which things can travel faster than light and let  $w'$  be the closest world to  $\alpha$  in which the animals in the pen are cleverly painted mules. Which world is closer to  $\alpha$ ,  $w$  or  $w'$ ? Intuitively, it seems fair to claim that  $w'$  is closer:  $w$  is, after all, a world in which the laws of nature differ from the actual laws of nature, which presumably entails that  $w$  is overall rather wildly different from  $\alpha$ .  $w'$ , on the other hand, comprises exactly the same laws of nature as  $\alpha$  does, the only difference between  $w'$  and  $\alpha$  being that the animals in the pen are cleverly painted mules rather than zebras (and all that this entails). Let us thus assume that  $w$  is, from the point of view of  $\alpha$ , further out in modal space than  $w'$ .<sup>18</sup>

Next, consider Gogo’s third assertion in V&G, i.e. his utterance of the sentence ‘I didn’t know that [nothing can travel faster than light]’. According to the Rule of Sensitivity, this assertion enlarges the similarity sphere of

<sup>17</sup> I assume that V&G takes place in a perfectly ordinary zoo in which the animals in the zebra pen are in fact zebras and that the quantified noun phrase in Vladimir’s last assertion is appropriately contextually restricted.

<sup>18</sup> Cf. Cohen (1999), p. 72 for the view that the actual laws of nature fail only in rather distant worlds. Lewis (1979), p. 468 does not agree that worlds in which the laws of nature are *violated* are inevitably far away from actuality. According to Lewis, worlds in which two ‘miracles’ occur, i.e. minute violations of the laws of nature that cancel each other out, can be relatively close. As will become obvious later, the assumption that worlds with different laws of nature are farther away from  $\alpha$  than  $w'$  is not essential to my argument.

worlds that are epistemically relevant in V&G (henceforth ' $S_r$ ') so that it at least includes  $w$ . Thus, after Gogo's third assertion, the radius of  $S_r$  must be at least as great as the distance between  $\alpha$  and  $w$ . Moreover, considering that  $w'$  is closer to  $\alpha$  than  $w$ , it follows that  $w'$  is, after Gogo's third assertion, within  $S_r$ . Figure 2 illustrates the situation, the dashed circle delimiting  $S_r$  after Gogo's third assertion.

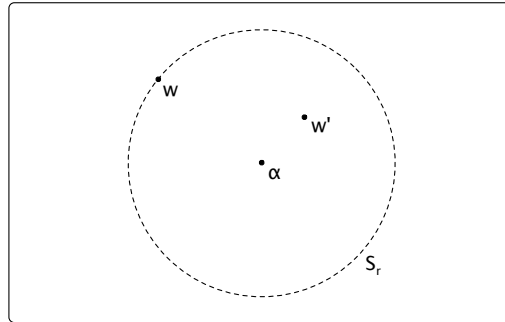


Figure 2.  $S_r$  after Gogo's third assertion in V&G

Now, if I am right and  $w'$  is, after Gogo's third assertion, within  $S_r$ , then, after Gogo's third assertion, his belief that the animals in the pen are zebras has to match the facts in  $w'$  in order to count as 'knowledge' in V&G's context. Gogo's belief that the animals are zebras, however, fails to match the facts in  $w'$ , for in the closest worlds in which the animals in the pen are cleverly painted mules, Gogo believes falsely that the animals are zebras. Thus, DeRose's account entails the implausibility that Gogo speaks falsely when asserting 'I know that that's a zebra' and this is surely a cost to the view.<sup>19</sup>

Let me emphasise at this point that the problem hinted at by my counterexample is not as local as it may seem at first sight. To see how my objection generalises, let us take a closer look at the distance between  $\alpha$  and the closest world to  $\alpha$  in which Gogo is a biv (henceforth ' $w_{biv}$ '). Is  $w_{biv}$  closer to  $\alpha$  than  $w$  and thus within  $S_r$  after Gogo's third assertion? Considering that only  $w$  and

<sup>19</sup> It might be argued that Gogo's last assertion triggers a downwards shift in epistemic standards, and that his assertion therefore comes out true. Such a strategy, however, is troubled by conjunctive 'knowledge'-ascriptions such as 'Gogo knows both that nothing travels faster than light and that the animals in the pen are zebras'. On the view at issue, such assertions must turn out false, which is certainly absurd enough for a *reductio*. Another important problem that the defender of DeRose's approach needs to address concerns knowledge of necessary truths. If a speaker ascribes or denies 'knowledge' of the necessary proposition  $p$ , do all possible worlds become epistemically relevant, simply because there is no closest  $\neg p$ -world? And which effect have assertions of the form ' $x$  knows that actually  $p$ ', where  $p$  is contingent while actually- $p$  is necessary?

$\alpha$ , but not  $w_{biv}$  and  $\alpha$ , differ with regard to their respective laws of nature, it seems fair to assume that  $w_{biv}$  is closer to  $\alpha$  than  $w$ . However, if  $w_{biv}$  is closer to  $\alpha$  than  $w$ , then it follows that  $w_{biv}$  is, after Gogo's third assertion, within  $S_r$  and Gogo's beliefs have to match the facts in  $w_{biv}$  in order to qualify as 'knowledge'. Now, considering that most of Gogo's beliefs about the external world fail to match the facts in  $w_{biv}$ , DeRose is forced to accept the rather bizarre conclusion that, after his third assertion in V&G, Gogo fails to 'know' most of the propositions that we intuitively expect him to 'know'. In fact, if DeRose is right, then Gogo fails, after his third assertion in V&G, to 'know' the proposition that he has hands.

Of course, it might be objected to the above line of reasoning that it is not at all clear that  $w_{biv}$  is closer to  $\alpha$  than  $w$  and that it is therefore not at all clear that  $w_{biv}$  is within  $S_r$  after Gogo's third assertion. However, even granting that  $w_{biv}$  is farther away from  $\alpha$  than  $w$ , it is nevertheless fairly obvious that another sceptical world, viz. the closest world to  $\alpha$  in which Gogo is dreaming (henceforth ' $w_d$ '), is closer to  $\alpha$  than  $w$  and therefore, after Gogo's third assertion, within  $S_r$ : considering that Gogo sometimes has realistic dreams in  $\alpha$ , there surely are worlds relatively close to  $\alpha$  in which Gogo merely dreams that he is standing in front of a zebra pen.<sup>20</sup> Thus, since  $w_d$  is, after Gogo's third assertion, within  $S_r$ , it follows that, after his third assertion, Gogo's beliefs have to match the facts in  $w_d$ . Since many of Gogo's beliefs, however, do not match the facts in  $w_d$ , DeRose is again forced to accept the implausible conclusion that Gogo does not 'know', after his third assertion in V&G, many of the propositions we would ordinarily have thought him to 'know'. For instance, on the account at issue, Gogo fails to 'know', after his third assertion, that he is visiting the zoo with Vladimir.

## 5. Responses

In defence of DeRose's account it might be suggested that his notion of closeness to  $\alpha$  is not the standard notion of closeness to  $\alpha$  that is defined in terms of a world's *overall similarity* to  $\alpha$ . Rather, it might be claimed that not all but only some respects of similarity matter with respect to the relevant notion, so that DeRose is, eventually, not talking about overall closeness to  $\alpha$  but rather about closeness to  $\alpha$  in some particular respect. Let us call this special

<sup>20</sup> Ernest Sosa emphasised in his 2005 Locke Lectures that worlds in which one dreams are rather close to  $\alpha$ . But if you are still unconvinced that  $w$  is farther away from  $\alpha$  than my sceptical worlds, we could construe other examples in which Gogo asserts, for instance, 'I (don't) know that nobody can freeze objects by blowing on them when thinking of a white bear' instead of 'I didn't know that [nothing can travel faster than light]'. Surely the closest world in which people can freeze objects by blowing on them when thinking of a white bear are farther out in modal space than any of the sceptical worlds  $w'$ ,  $w_{biv}$  or  $w_d$ .



type of closeness ‘closeness<sub>D</sub>’. Could there be such a non-standard notion of closeness<sub>D</sub> that would allow us to avoid my counterexamples? Could the defender of DeRose’s views argue, for instance, that the notion of closeness<sub>D</sub> is itself context-sensitive, and that  $w$  becomes ‘close to  $\alpha$ ’ in the context of V&G as soon as Gogo asserts ‘I didn’t know that [nothing can travel faster than light]’?

Note that a strategy that introduces a new notion of closeness<sub>D</sub> can only succeed if it entails that, for all contexts  $C$ , all worlds that are intuitively epistemically relevant in  $C$  (such as  $w$  in V&G) are close<sub>D</sub> to  $\alpha$  in  $C$  while all worlds that are intuitively epistemically irrelevant in  $C$  (such as  $w'$ ,  $w_{biv}$  and  $w_d$  in V&G) aren’t: otherwise the account would still be subject to counterexamples. If it is necessarily the case, however, that all and only worlds that are intuitively relevant in  $C$  are close<sub>D</sub> to  $\alpha$  in  $C$ , then the notion of closeness<sub>D</sub> in  $C$  is necessarily coextensive with our intuitive notion of epistemic relevance in  $C$  and therefore simply collapses into that latter notion. But such a collapse of the former notion into the latter is problematic: the point of the Rule of Sensitivity was precisely to provide an account of what is epistemically relevant in a given context  $C$  and not to presuppose such an account.<sup>21</sup> Thus, the idea that the notion of closeness employed in the Rule of Sensitivity is defined non-standardly, in a way that avoids my counterexamples, does not fit DeRose’s project and is therefore to be abandoned.

Here is another way in which one might attempt to avoid my counterexamples.<sup>22</sup> Instead of assigning spheres of epistemically relevant worlds to entire conversational contexts, one might propose a more fine-grained account of the satisfaction of ‘knows’, viz. an account on which any proposition  $p$  in a given context  $C$  is assigned its own sphere of epistemically relevant worlds. To avoid my counterexamples this new account would then have to be supplemented with the idea that asserting ‘ $x$  knows  $p$ ’ (or its negation) enlarges the spheres of only those propositions  $q$  that entail  $p$ . Let me explicate this idea in a bit more detail. Firstly, note that the approach at issue requires replacing (D) with a new account of the satisfaction of ‘knows’. Here is (D\*):

(D\*)  $x$  satisfies ‘knows  $p$ ’ in  $C \leftrightarrow x$ ’s belief  $p$  matches the facts throughout the sphere of worlds that are epistemically relevant *with regard to*  $p$  in  $C$ .

In addition to (D\*) we then need, on the approach at issue, a new Rule of Sensitivity. Here is (RS\*):

(RS\*) When ‘ $x$  knows  $p$ ’ (or its negation) is asserted in  $C$ , then, for all propositions  $q$  that entail  $p$ , enlarge the sphere of worlds that are epistemically

<sup>21</sup> If giving an account of closeness<sub>D</sub> amounts to giving an account of epistemic relevance, this renders superfluous the Rule of Sensitivity.

<sup>22</sup> I am grateful to Stewart Cohen here, who drew my attention to the response discussed in the following paragraphs.

relevant *with regard to*  $q$  in  $C$  so that it at least includes the closest  $\neg p$ -worlds.

Even though the conjunction of (D\*) and (RS\*) differs in some crucial respects from DeRose's initial account (on the new approach there is, for instance, more than one epistemic standard at a context) it is worthwhile noting that this new account does in fact avoid my counterexamples.

To see this in detail remember that the biv-hypothesis ('*biv*') expresses the proposition that one is a biv being stimulated to think that various propositions  $p_1, \dots, p_n$  are true when in fact they are false. Now, if one asserts ' $x$  knows  $\neg biv$ ' (or its negation) in  $C$ , then, according to (RS\*), the sphere of epistemically relevant worlds for  $p_1, \dots, p_n$  (and any proposition that entails  $\neg biv$ ) in  $C$  is expanded out to the nearest *biv*-world. This has the desired sceptical result that in  $C$ , one fails to satisfy 'knows  $p$ ' for any member of the sequence  $p_1, \dots, p_n$ . In my counterexample (V&G), however, the sphere of relevant worlds will be expanded out to  $w$ , the closest world to actuality in which things can travel faster than light, *only* for those propositions that entail that nothing can travel faster than light. But since the proposition expressed by 'That's a zebra' in V&G does not entail this, its sphere of relevant worlds remains the smaller default sphere of relevant worlds that does not include worlds at which the animals are painted mules. As a result, the conjunction of (D\*) and (RS\*) avoids the above counterexamples.

Even though this amended version of DeRose's approach may initially seem promising, it is worthwhile noting that it is ultimately itself subject to counterexamples. To get a grasp on the type of example I have in mind here, we need to take a closer look at the notion of belief/fact-matching employed in both (D) and (D\*). Thus far, I have assumed that DeRose's notion of belief/fact-matching is identical to the notion implicitly employed in (SAFE). Here is (M):

(M)  $x$ 's belief  $p$  matches the facts in  $w \leftrightarrow (x \text{ believes } p \text{ in } w \rightarrow p \text{ in } w)$ .

On this interpretation of belief/fact-matching, however, both (D) and (D\*) are troubled by knowledge of necessary truths: since a necessary truth  $p$  is true in all possible worlds, one's belief  $p$  will, as a matter of necessity, match the facts in all possible worlds and thus match the facts throughout all similarity spheres of possible worlds: combining (D) or (D\*) with (M) has the counterintuitive consequence that all beliefs in necessary truths—no matter how irrational—are knowledge.<sup>23</sup> The notion of belief/fact-matching explicated in

<sup>23</sup> DeRose might be willing to bite the bullet here, individuate propositions coarsely (in terms of sets of possible worlds) and claim that there is only one necessary proposition which is, as Lewis puts it, "known always and everywhere" (Lewis (1996), p. 223). Such a response, however, would still be insufficient, for accounts pairing the conjunction of (D\*) and (RS\*) with (M) are also troubled by examples such as Harman's assassination case, where  $p$  is true

(M) is thus surely not the notion that we want to make use of in explicating (D) or (D\*). But if (M) is not the right account of belief/fact-matching, which account is?

In response to this question, it could be pointed out that the above problem concerning ‘knowledge’ of necessary truths can be avoided rather easily, viz. by interpreting the notion of belief/fact-matching in a more robust way. Here is (M\*):

(M\*)  $x$ 's belief  $p$  matches the facts in  $w \leftrightarrow$   
 $((x \text{ believes } p \text{ in } w \rightarrow p \text{ in } w) \wedge (x \text{ believes } \neg p \text{ in } w \rightarrow \neg p \text{ in } w)).^{24}$

Surely, on this more robust interpretation of belief/fact-matching the above problem of ‘knowledge’ of necessary truths does not arise: if  $p$  is a necessary truth that one does not ‘know’, then, according to the conjunction of (D\*) and (M\*), one either does not believe  $p$  or there is a sufficiently nearby world in which one falsely believes  $\neg p$ . Supplementing (D\*) with (M\*) avoids the discussed problem concerning ‘knowledge’ of necessary truths.

However, by amending DeRose’s account along the lines just sketched we have still not found a way out of the trouble generated by my initial examples: supplementing the conjunction of (D\*) and (RS\*) with (M\*) leads to yet further problems. Consider, for instance, the following sentence:

(1) I know that nothing can travel faster than light.

Intuitively, it seems as if there are—or at least could be—true assertions of (1). According to the amended DeRosean account, however, assertions of (1) can never express truths, and this is simply so because in asserting (1) speakers extend the sphere of worlds that are epistemically relevant with regard to the proposition that nothing can travel faster than light (henceforth ‘ $\neg sol$ ’) out to  $w$ , the closest world in which things can travel faster than light. The sphere of worlds associated with  $\neg sol$  in contexts in which (1) has been asserted will thus be the extremely wide sphere  $S_r$  (as depicted in Figure 2 on p. 7).

The problem for the account at issue, however, is now that  $S_r$  includes numerous worlds in which one believes  $sol$  falsely. For instance,  $S_r$  includes worlds in which one believes  $sol$  falsely because one misunderstood one’s physics teacher in high school or presumably even worlds in which one believes  $sol$  falsely because one is a biv that is stimulated in the appropriate way. If  $S_r$  contains worlds in which one believes  $sol$  falsely, however, then—according to (M\*)—one’s belief  $\neg sol$  fails to match the facts throughout  $S_r$ , in all nearby worlds but it is only by a fluke that one does not encounter the misleading counterevidence which could so easily have led one to give up one’s belief (see Harman (1973), pp. 142-54).

<sup>24</sup> In fact, this is the notion that DeRose’s formulation suggests when he claims that epistemically strong beliefs “match the fact of the matter *as to whether p is true*, not only in the actual world, but also at the worlds sufficiently close to the actual world.” (DeRose (1995), p. 204 (my emphasis)).

which—according to the conjunction of (D\*) and (RS\*)—means that one fails to satisfy ‘knows  $\neg sol$ ’ in all contexts in which (1) has been asserted: to borrow David Lewis’s (1996) phrasing, one’s ‘knowing’  $\neg sol$  is, on the account at issue, ‘elusive’ in the sense that it vanishes as soon as it is articulated. Considering the implausibility of this position, I think we ought to give up on the idea that DeRose’s account of ‘knowledge’ and epistemic relevance can be safeguarded from my initial counterexamples by means of the amendments proposed under (D\*) and (RS\*).<sup>25</sup>

## 6. Conclusion

Let me sum up the discussion. What my counterexamples have shown is that the semantics of ‘knows’ cannot be modelled by means of the Rule of Sensitivity and, more generally, that the notion of epistemic relevance in a given context  $C$  cannot be modelled by means of the notion of a similarity sphere: it is simply not the case that all and only those worlds that are intuitively epistemically relevant in a context  $C$  are members of one and the same similarity sphere that is centred on actuality. Figure 3 illustrates this circumstance with regard to V&G, where the sphere centred on  $\alpha$  (S) represents the set of worlds that are epistemically relevant due to their closeness to  $\alpha$  (the ‘safety-zone’), and where the sphere centred on  $w$  (S’) represents a second sphere of epistemically relevant worlds, viz. the set of relevant worlds in which things can travel faster than light.

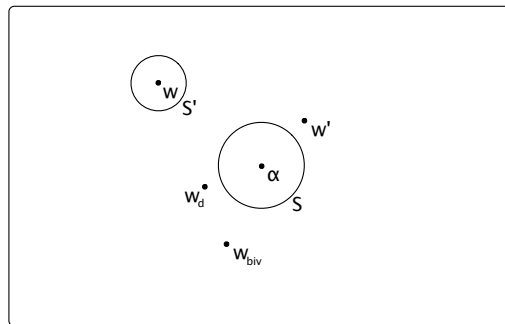


Figure 3. Epistemically relevant worlds in V&G (=SUS')

<sup>25</sup> Consider also the proposition that you are a biv with hands ( $biv_h$ ). If you assert the sentence ‘I don’t know  $\neg biv_h$ ’, your assertion does not, according to (RS\*), change the sphere of worlds associated with the proposition that you have hands ( $h$ ), since  $h$  does not entail  $\neg biv_h$ . Thus, you can truthfully assert: ‘I don’t know that I’m not a biv with hands, and that’s why I don’t know that I have feet, legs, a nose or ears; but, thank God, I know that I have hands’.

As Figure 3 suggests, the set of worlds that are epistemically relevant in V&G equals the union of  $S$  and  $S'$ , the crucial point being that the members of this set do not form a unified similarity sphere that is centred on  $\alpha$ . As a consequence, we have to abandon the idea that similarity spheres can play the role DeRose wants them to play in a contextualist account of epistemic relevance.

What does the failure of DeRose's version of contextualism mean for the contextualist programme in general? Considering that DeRose's approach is the most influential contextualist account in the literature, its failure is surely bad news for contextualism. However, it needs to be emphasised here that there are other accounts of contextualism that are not subject to my objections. Firstly, there is David Lewis's (1996) approach, which resembles DeRose's in modelling the satisfaction of 'knows' in terms of possible worlds, while departing from it in its definition of epistemic relevance: Lewis defines the notion of epistemic relevance by means of seven rules of "proper ignoring" that are not subject to my objection. Secondly, there is Stewart Cohen's (1988, 1999) internalist approach to the context-sensitivity of 'knowledge'-ascriptions, which altogether drops the idea of modelling the semantics of 'knows' in terms of possible worlds and instead explicates the notion of epistemic strength in terms of an internalist conception of justification. Surely, each of these accounts has its own benefits and downsides.<sup>26</sup> However, on the basis of the above examples these alternative approaches seem more suited to account for our intuitions about 'knowledge'-ascriptions than DeRose's.

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<sup>26</sup> See Williams (2001) for criticism of Lewis's account and Pritchard (2002, p. 229) for criticism of Cohen's.

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