Epistemic Two-Dimensionalism and Arguments from Epistemic Misclassification

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Epistemic Two-Dimensional Semantics (E2D) claims that expressions have a counterfactual intension and an epistemic intension. Epistemic intensions reflect cognitive significance in such a way that sentences with necessary epistemic intensions are a priori. In this paper, we defend E2D against an influential line of criticism: arguments from epistemic misclassification. We focus in particular on the arguments of Speaks [2010] and Schroeter [2005]. Arguments of this kind infer that E2D is mistaken from (i) the claim that E2D is committed to classifying certain sentences as a priori and (ii) the claim that such sentences are a posteriori. We aim to show that these arguments against E2D are unsuccessful as (i) and (ii) undercut each other. One has to distinguish the general framework of E2D from a specific implementation of it. The general framework of E2D is flexible enough to avoid commitment to the apriority of any particular sentence; only specific implementations of E2D are so committed. Arguments from epistemic misclassification are therefore better understood as arguments for favouring one implementation of E2D over another, rather than as refutations of E2D.

1 Introduction

Epistemic Two-Dimensionalism (E2D) states that in addition to ordinary counterfactual intensions expressions are associated with epistemic intensions. While the counterfactual intension of an expression captures its modal profile, its epistemic intension reflects the expression’s cognitive significance. Epistemic intensions are functions from scenarios, or ways the world might be for all we know a priori, to extensions. For instance, the fact that Hesperus is Phosphorus is metaphysically necessary suggests that the counterfactual intensions of Hesperus and Phosphorus are identical, while the fact that
the sentence is cognitively significant and *a posteriori* suggests that their epistemic intensions are different. According to the Core Thesis of E2D, a sentence is *a priori* if and only if it is epistemically necessary, or true in all scenarios.

Fully competent speakers—those who associate expressions with the right epistemic intensions—know how an expression’s extension is determined by the features of a scenario. Given sufficient information about what obtains at a scenario, they can infer *a priori* what their expressions refer to in the scenario (if anything). For example, given sufficient information about the distribution and behaviour of H$_2$O molecules in one’s environment, competent speakers are in a position to *a priori* infer that ‘water’ refers to H$_2$O. And given sufficient information about a scenario in which XYZ molecules play this role, one is in a position to *a priori* infer that ‘water’ refers to XYZ.

E2D therefore seems committed to the *apriority* of sentences which make these inferences explicit, such as conditionals with scenario descriptions in their antecedents, and identity claims in their consequents, identifying the extension of the relevant expression with something explicitly mentioned in the scenario description. Furthermore, it might be that an expression’s extension at every scenario is determined by the instantiation of a finite set of specific properties, which we may call *reference-fixing properties*. In that case, E2D seems committed to the *apriority* of sentences that attribute such reference-fixing properties to the expression’s referent. An influential line of criticism to this consequence takes the following form:

- **Premise 1**: E2D entails that sentence S is *a priori*.
- **Premise 2**: S is not *a priori*.
- **Conclusion**: E2D is mistaken.

We call arguments of this form *arguments from epistemic misclassification*. Examples can be found in the works of Speaks [2010] and Schroeter [2005]. In this paper we respond to Speaks and Schroeter and in the process we hope to show that arguments from epistemic misclassification cannot work because they are self-undermining. The two premises undercut each other: inasmuch as the first premise is plausible, the second becomes implausible and *vice versa*. Hence, there is no instance of an argument from epistemic misclassification where both premises are plausible.

Why do the two premises undercut each other? The general framework of E2D does not associate any specific intension with a given expression. An *implementation* of E2D takes a stand on this issue, thereby giving a semantics for that expression. But the question of which implementation of E2D correctly applies to an expression depends in part on the epistemic status of sentences using the expression. An adequate implementation of E2D will respect our considered judgements about *apriority*. Hence, if the relevant sentence S is not in fact *a priori* (i.e., if Premise 2 is plausible), an implementation of E2D which predicts that it is *a priori* is inadequate. We therefore have no reason to accept the corresponding Premise 1: E2D is flexible enough that there are a range of implementations available that can account for S’s not being *a priori*. And conversely: if an implementation of E2D is adequate and is committed to the *apriority* of S, then

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1For a detailed exposition of E2D, see [Chalmers 2004].
we have reason to reject Premise 2, since an adequate implementation of E2D must be in line with what sentences are a priori.

To illustrate, let S be ‘Gödel is the inventor of the incompleteness theorem’. In his epistemic argument Kripke [1972] made the case that S is not a priori. But it would be wrong to take this as an argument against E2D as such. Rather, it is better seen as an argument for implementations of E2D that associate ‘Gödel’ with an epistemic intension that does not pick out the inventor of the incompleteness theorem in every scenario. In this case, the plausibility of premise 2 undercuts the plausibility of premise 1.

Our defence of E2D is in the spirit of the response Frank Jackson [1998] has given to Kripke. Jackson’s idea is to interpret Kripke’s arguments not as a refutation of the claim that names have a descriptive sense, but rather as an elucidation of what descriptive sense they in fact have. In the same way, we can understand Schroeter’s and Speaks’ arguments not as refutations of E2D, but rather as suggestions for favoring certain implementations of E2D over others.

We first examine Speaks’ argument, which concludes that E2D is committed to treating a particular set of sentences as a priori (§2). In response, we will define several implementations of E2D that avoid the kind of classification that Speaks argues is problematic (§3). Then we present an implementation that entails the apriority of Speaks’ sentences (§4.1). This implementation of E2D may nonetheless be plausible, as Speaks’ case for the aposteriority of the sentences is unsuccessful (§4.2). With these resources in place, we respond to Schroeter’s argument in a similar manner (§5).

2 Speaks’ Argument from Epistemic Misclassification

Speaks uses the name ‘Mick Jagger’ as an example to launch an argument from epistemic misclassification against E2D. He supposes that the epistemic intension associated with the name ‘Mick Jagger’ is such that its reference at each scenario is determined by the instantiation of a set of specific properties. We will refer to this set of reference-fixing properties as Γ. It includes such things as being the lead singer on Sympathy for the Devil and being a member of the greatest band of the 1960s, and so on. Speaks [2010: 67] notes that we can divide this set into two conjunctions of properties, F and G, such that ‘[e]very property I attribute to Mick Jagger is included in one of the two, and many are included in both’.

Speaks’ argument requires that both F and G are individually rich enough to fix a referent for ‘Mick Jagger’. It is also important that there is a rough parity between the two as regards the number of properties in the two conjunctions and the centrality of those properties to my conception of Mick Jagger’ [loc. cit.: 67]. In other words, each of F and G hold roughly equal weight regarding our deliberations on what to call ‘Mick Jagger’.

2 The notion of a property being ‘rich enough for reference-determination’ can be clarified as follows: where Γ is set of reference-fixing properties for ‘n’ and property P is one of its decompositions, P is rich enough for reference-determination, if, upon learning that P is instantiated but the rest of Γ is uninstantiated, we would still judge that n exists.
Speaks’ idea is that E2D must classify certain sentences involving the name ‘Mick Jagger’ and the properties $F$ and $G$ as a priori—we will call these sentences the Mick Jagger sentences. An example is ‘If Mick Jagger exists and he is the $F$ but not $G$, then nothing is the $G$’. Speaks claims that the Mick Jagger sentences are not plausibly a priori:

**Premise 1**: E2D entails that the Mick Jagger sentences are a priori.  
**Premise 2**: The Mick Jagger sentences are not a priori.  
**Conclusion**: E2D is mistaken.

We will outline Speaks’ argument for Premise 1 in a moment. Premise 2 makes appeal to a limitation principle on a priori knowledge and inferences, principle [A]:

[A] On the basis of the knowledge that some particular thing $n$ is $F$, you can’t know a priori whether some other thing exists which instantiates some other property $G$, if the two properties are independent. [loc. cit.: 60]

The principle crucially depends on the notion of independence, which Speaks characterises as follows:

 [...] two properties, $F$ and $G$, are independent if and only if (1) $F$’s being instantiated is compossible both with $G$’s being instantiated and its being uninstantiated [and vice versa], and (2) $F$’s being instantiated does not a priori entail either $G$’s being instantiated, or $G$’s being uninstantiated [and vice versa]. [loc. cit.: 60]

Given the prima facie plausibility of [A], E2D would seem to be in trouble if it stands in conflict with this principle.

Let us call a scenario in which a name fails to refer an empty scenario for that name. As E2D holds that competent speakers are able to a priori determine the reference of a name at a scenario, they will be in a position to a priori recognize empty scenarios. Speaks’ argument for Premise 1—we’ll call it the Empty Scenario Argument—uses this supposed ability to derive the Mick Jagger sentences.

The first important step of Speaks’ Empty Scenario Argument takes the independence of $F$ and $G$ to imply that there is at least one scenario where the following is true:

[1] Something is the $F$, and something else is the $G$.

The second step of the argument uses parity reasoning to argue that E2D has to count scenarios in which [1] holds as empty scenarios [loc. cit.: 68]. Since the properties $F$ and

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3 Speaks also mentions three other limitation principles. We will not be concerned with these principles here, as all of the relevant issues can be framed in terms of [A].

4 We have added the ‘and vice versa’ clauses in order to make independence a symmetrical relationship. For some properties $F$ and $G$—for instance, where $F$ is being a turtle and $G$ is being a red turtle—the instantiation of $F$ may fail to metaphysically and epistemically necessitate the instantiation of $G$, whereas the instantiation of $G$ will both necessitate and a priori entail the instantiation of $F$. 

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G have equal weight as potential reference-determiners for ‘Mick Jagger’, in scenarios where [1] holds there seem to be (at least) two equally good candidates for the name. But in such scenarios, ‘Mick Jagger’ must deliver no reference, since there is no reason to attach that name to one candidate over the other.\(^5\) (Following Speaks, we will require that a name can only have a single referent at a scenario.) Hence it seems that according to E2D, a competent user of ‘Mick Jagger’ is in a position to know \textit{a priori} that if [1] is true (i.e., if an empty scenario obtains), then Mick Jagger does not exist. This suggests that the following sentence is \textit{a priori}:

\[ \text{[2]} \text{ If something is the } F, \text{ and something else is the } G, \text{ then it is not the case that Mick Jagger exists.} \]

And given the \textit{apriority} of [2], its contraposition [3] will be \textit{a priori} as well:

\[ \text{[3]} \text{ If Mick Jagger exists, then it is not the case that something is the } F, \text{ and something else is the } G. \]

And this is not all we can know—from [3], we can derive [4]:

\[ \text{[4]} \text{ If Mick Jagger exists and he is the } F \text{ but not } G, \text{ then nothing is the } G. \]

This is because the existence of Mick Jagger entails that \textit{either} (i) nothing is the \textit{F}, or (ii) nothing is the \textit{G}, or (iii) the \textit{F} is the \textit{G}. But the fact that Mick Jagger is the \textit{F} and is not \textit{G} rules out both (i) and (iii). We are therefore left to conclude that (ii) must be true: nothing can be the \textit{G}.

Sentences [2]–[4] are the Mick Jagger sentences, and the above suggests that E2D has to count them as \textit{a priori}. But according to Speaks, this is in conflict with plausible limits on \textit{a priori} knowability. About sentence [3], Speaks [2010: 68] writes that ‘given knowledge that Mick Jagger exists, one cannot deduce \textit{a priori} that it is not the case that one thing is \textit{F}, and something else is \textit{G}’.\(^6\)

Moreover, saying that [4] is \textit{a priori} brings E2D into direct conflict with principle [A]. We can make the conflict explicit by letting property \textit{H} equal \textit{being the F and not G}, and property \textit{I} equal \textit{being the G}. Then \textit{H} and \textit{I} would seem to be independent in the defined sense (at least insofar as \textit{F} and \textit{G} are independent). But in that case, if [4] is \textit{a priori} then from knowledge that some particular thing (Mick Jagger) is \textit{H}, we can infer \textit{a priori} that nothing can be \textit{I}—which is exactly what [A] tells us we cannot do.

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\(^5\) Strictly speaking, what we can know given [1] is that nothing is both \textit{F} and \textit{G}, so we know that nothing satisfies \textit{all} of \textit{Γ} at such scenarios. But we have not yet been given enough information to rule out the instantiation of \textit{other} ways of dividing up \textit{Γ} which could provide us with \textit{better} candidates for the name than either the \textit{F} or the \textit{G}. It is possible to avoid this issue, however, if we require that the only kind of thing which could be a \textit{better candidate(s)} than the \textit{F} or the \textit{G} would be something which is both \textit{F} and \textit{G}. In that case, the existence of any better candidates than either the \textit{F} or the \textit{G} will be impossible where [1] is true.

\(^6\) More precisely, what [3] tells us is that we can deduce that it’s not the case that something is \textit{the F}, and something else is \textit{the G}. 
In the following section, we discuss Premise 1 of the argument and whether E2D is committed to the apriority of sentences like \([2]–[4]\), where the instances of \(F\) and \(G\) in those sentences are reference-fixing properties that are independent (in the appropriate sense). We argue that E2D is not so committed. Then, in §4, we turn to Premise 2 and the question of whether the Mick Jagger sentences really ought to be counted as \textit{a posteriori}. We argue that Speaks’ case for treating them in this way is unsuccessful.

### 3 Discussion of Premise 1

#### 3.1 Independence and Uniqueness

Speaks’ case for Premise 1 is the Empty Scenario Argument. An initial problem with this argument is that its very first step is invalid. From the fact that \(F\) and \(G\) are independent properties, it does not follow that there is a scenario in which something is the \(F\) and something else is the \(G\).

Amongst the set of properties \(\Gamma\) that Speaks includes as being associated with the name ‘Mick Jagger’ are such things as \textit{being the lead singer on Sympathy for the Devil} and \textit{being the star of Freejack}. The usage of the definite article implies uniqueness. Now suppose the following:

\[
\begin{align*}
F &= \text{being the tallest person in the world and rich} \\
G &= \text{being the tallest person in the world and tidy}
\end{align*}
\]

In this case, \(F\) and \(G\) are independent: the supposition that Charlie is the tallest person in the world and rich neither necessitates nor \textit{a priori} entails whether or not there exists something which is the tallest person in the world and tidy. However, if we know that something is the tallest person in the world and rich, we \textit{can} infer \textit{a priori} that nothing else can be the tallest person in the world and tidy—for at most one thing can be the tallest person in the world. The mere independence of \(F\) and \(G\) is insufficient to establish that there is a scenario in which \([1]\) is true.

Worse still, the same sort of reasoning allows us to generate counterexamples to principle \([A]\) using uniqueness properties. For instance, just by knowing that Charlie is \textit{the tallest person in the world and rich} \((F)\), we can infer \textit{a priori} that no one else can be \textit{the tallest person in the world and tidy} \((G)\), despite the independence of \(F\) and \(G\). \([A]\) states that this is impossible.

This suggests that the definition of independence needs to be updated to rule out these clear counterexamples to \([A]\). We can do this by adding to the definition of independence mentioned in §2 the further clause that \(F\) and \(G\) must be able to be instantiated by \textit{different} things (at the same time and at the same world). Let us refer to this updated notion as \textit{independence*}. Our question now is: will we be able to divide the set of reference-fixing properties for ‘Mick Jagger’ into conjunctive properties \(F\) and \(G\), such that \(F\) and \(G\) are both rich enough for reference-determination and independent*?  

In the following, we discuss two types of implementation of E2D under which such divisions are impossible, and a third that allows this kind of division but in a way that
nonetheless blocks Speaks’ argument.⁷

3.2 The Common Element Theory

Speaks’ argument does not apply to any implementation of E2D which implies the following: any decompositions $F$ and $G$ of $\Gamma$ that are each rich enough for reference-determination will include a common reference-fixing property of the form being the unique $P$. This is because $F$ and $G$ would then fail to be independent*, as we have just demonstrated in the previous section.

It is not implausible to think that an adequate semantics for proper names would have this consequence. Two important factors in the determination of a name’s reference are how the relevant community uses that term, and the causal chains that link the usage of that name to the world. So for example, we might have an implementation of E2D which implies that for a given name $n$, when determining reference we always include as a reference-fixing element some meta-linguistic property, such as being the most natural object at the causal origin of a representational practice with tokens of ‘$n$’. Another possibility might be being the referent of my community’s usage of the term ‘$n$’. That we had better include some such common element among the reference-fixing properties is a lesson many have drawn from [Putnam 1975] and [Burge 1979].⁸

We can call this kind of implementation a Common Element theory. Common Element theories will block Speaks’ argument in its early stages. Such implementations will imply that [1] is epistemically impossible, because the $F$ and the $G$ are not independent*. Sentences [2]–[4] then come out a priori. But this commitment should not be considered problematic. Speaks argues that the Mick Jagger sentences are not plausibly a priori because he supposes that the reference-fixing properties $F$ and $G$ that figure in those sentences are independent. For the appropriate notion of ‘independence’, this assumption fails: the sentences that a Common Element theory is committed to classifying as a priori are not the problematic sentences that Speaks requires for his argument.

3.3 The Simple Property Theory

A second type of implementation which is immune to the Empty Scenario Argument appeals to what we might call a Simple Property theory. Speaks’ argument presupposes that the property which determines the reference of ‘Mick Jagger’ is highly complex (or that it is a set containing numerous properties). According to Simple Property theory, however, the associated reference-fixing property is relatively simple. Even though we can allow for a minimal degree of complexity, the relevant property will be such that no

⁷ For the most part, we follow Speaks in working with an intuitive notion of property.

⁸ As we discuss in §5, Schroeter [2005] argues that E2D is committed to something like these suggestions, before arguing that E2D therefore misclassifies a posteriori sentences as a priori.
part of it is by itself rich enough for reference-determination.\textsuperscript{9} If such an implementation were correct, then we cannot divide this property into an $F$ and a $G$ where each can individually pick out Mick Jagger, and we will not be able to construct the corresponding empty scenarios. It is worth noting here that many of the actual proposals that have been made by proponents of two-dimensional semantics have used simple properties in this sense: Chalmers [2006: §3.4] and Jackson [2010] suggest deferential properties, while Kroon [1987] and Lewis [1997] argue for causal meta-linguistic properties.\textsuperscript{10}

For both Common Element and Simple Property theories, there can be no divisions of $\Gamma$ into two different properties, which are independent* and rich enough to fix the reference of ‘Mick Jagger’. For this reason, they are not committed to the apriority of any sentences like [2]–[4] containing corresponding $F$s and $G$s. On the other hand, Common Element and certain Simple Property theories have to confront Kripke’s epistemic argument. However, this argument is best understood as an attack on so-called ‘famous deeds’ versions of descriptivism [Lewis 1997], or certain naive theories about what properties determine reference. It is far from clear that Kripke has shown that the sentences which the mentioned Common Element and Simple Property implementations treat as a priori are in fact a posteriori—in fact, Kripke’s own armchair methodology suggests that they are not [Jackson 1998]. However, E2D as such is not committed to the apriority of any such sentence, as we shall now show.

3.4 The Non-Descriptivist Theory

Speaks [2010: 60] stresses that he is arguing against non-descriptivism. A non-descriptivist E2Dist allows that the properties which determine the reference of a name can differ from scenario to scenario: ‘It is worth emphasizing that the relevant [reference determining] description will typically vary between different scenarios’ [loc. cit.: 67].

For some scenarios, for example, we may have to decide if something is $F$ or $G$ (or both) to settle the name’s reference. But for other scenarios, perhaps only $F$ is considered, or $G$, or even some completely different property $E$ (and so on). There may be no finite set of properties that we use to determine reference—each individual scenario might in principle be coupled with its own unique method for reference-determination.

Once descriptivism is off the table, it is no longer clear how to derive the contested claims a priori. Is the non-descriptivist E2Dist committed to the apriority of [2]? It does not appear so. Given that we might sometimes use property $E$, say, to fix the reference of ‘Mick Jagger’, it is rather easy for [2] to come out a posteriori. All we need for [2]’s apriority to fail is for there to be some scenario in which [1] is true, and in which Mick Jagger is identified as the $E$ instead. The fact that in this scenario something is the $F$ and something else is the $G$ then does not entail Mick Jagger’s non-existence, as

\textsuperscript{9} That is, there are no ways in which we could decompose a simple property $S$ into parts, which will be rich enough for reference determination, since we would judge that Mick Jagger does not exist if we were to learn that only a part of $S$ is instantiated.

\textsuperscript{10} Chalmers’ considered view appears to be a non-descriptivist implementation of E2D, which we present in the next section.
he is the E there. We see no reason why there should not be such a scenario. In fact it would be rather surprising if there wasn’t—given that we have alternative means of determining reference, it is only to be expected that we take advantage of them when F and G fail to deliver a referent. As [2] is false in this scenario, it does not hold in every scenario. As such, the non-descriptivist E2Dist is not committed to its apriority, nor to the apriority of [3] and [4].

Let us sum up: arguments from epistemic misclassification against E2D are better seen as arguments for favouring certain implementations of E2D over others. Any adequate implementation of E2D will have to account for our considered judgments about apriority. The relevant judgments need not be our quick everyday judgments, but may involve the assessments of an ideally rational subject. And if we judge a sentence S as not being a priori, then we consider its negation to be an epistemic possibility, i.e. there will be a scenario which falsifies S. So if these judgements are accurate, we cannot accept as adequate any implementation of E2D that assigns S a semantic value under which S is true in every scenario. As such, if a certain implementation of E2D is in conflict with our considered judgments about a sentence’s epistemic status, all this tells us is that we have a strong reason to think that the implementation in question is not adequate.

In this section we have assumed the plausibility of Premise 2 of Speaks’ argument (the claim that the Mick Jagger sentences are not a priori). It turned out that on this supposition, Premise 1 (the claim that E2D is committed to their apriority) becomes implausible: there are several implementations of E2D which become preferred candidates for being the correct implementation as a consequence of correctly classifying the sentences as not being a priori. In the next section, we will reverse things. We first present an implementation of E2D which entails the apriority of the sentences, even when F and G are reference-fixing independent* properties. We then defend this implementation against Speaks’ argument. We conclude that, assuming its adequacy (and hence Premise 1 of Speaks’ argument), Premise 2 looks implausible.

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11 A non-descriptivist implementation of E2D is not committed to the apriority of any such sentence using ordinary natural language predicates. It will treat as a priori an infinitely long claim of the form: ‘Mick Jagger, if he exists, is the P and such that scenario 1 obtains, or is the R and such that scenario 2 obtains, or is the S and such that scenario 3 obtains, or . . . ’. The labels scenario 1, scenario 2, . . . stand for (potentially infinite) descriptions of entire scenarios. One might then construct corresponding predicates F and G from this sentence, e.g. let F equal being the P and such that scenario 1 obtains and G equal being the R and such that scenario 2 obtains. However, the corresponding predicates cannot be used to mount an argument from epistemic misclassification. Since F and G are now relativised to specific scenarios the corresponding Mick Jagger sentences will uncontroversially come out a priori. For instance, for the above F and G, it will be a priori that [1] is false—we can a priori exclude the joint existence of the F and the G, as one requires scenario 1 to obtain, while the other requires scenario 2 to obtain. We can then also infer [2]–[4] a priori.
4 Discussion of Premise 2

4.1 The Unique Best Deserver Theory

What must an implementation of E2D look like to validate the Empty Scenario Argument? The argument appears to suppose the following four assumptions:

1. It is possible to split $\Gamma$ into two sets of independent* properties, $F$ and $G$.

2. Candidate referents are weighted as better or worse by some function, and reference goes to the best candidate.

3. At all scenarios where [1] is true, the $F$ and the $G$ are plausible and equally good candidates for being the referent of ‘Mick Jagger’.

4. At all scenarios where [1] is true, ‘Mick Jagger’ cannot refer to both the $F$ and the $G$.

The first assumption is denied by Common Element implementations; while the third assumption is denied by Simple Property implementations. Non-Descriptivist implementations are also in a position to deny the third assumption.

In light of this, it seems that Speaks is ascribing to the E2Dist something at least very similar to what we will call a Unique Best Deserver theory. This theory states that for a given name $n$, the set $\Gamma_n$ of reference-fixing properties that are associated with $n$ can be divided up into different potential candidates (like the $F$ and the $G$), which can be weighted as better or worse reference determiners, by some function. Reference will then go to that thing which uniquely satisfies both (a) being a sufficiently good deserver of the name, and (b) being such that there are no better deservers of the name. If nothing satisfies both (a) and (b) at a scenario, or more than one thing does, then the name has no reference at that scenario.

So, for example, a Unique Best Deserver theory states that the following sentence can be known solely on the basis of fully understanding its meaning: ‘If Mick Jagger exists, then Mick Jagger is the unique best deserver of $\Gamma$’. Suppose for simplicity that $\Gamma$ contains just three properties, $R$, $S$ and $T$, and that only property count matters when weighing potential candidates. According to a Unique Best Deserver theory, it would then be a priori for competent speakers that ‘Mick Jagger’ refers (if at all) to either that which is the ‘perfect deserver’, $P$ (i.e., $R$, $S$, and $T$), or if no $P$s exist, at most one of the $F$ ($R$ and $S$) or the $G$ ($S$ and $T$) or the $H$ ($R$ and $T$), where $F$, $G$ and $H$ are all equally good ‘near-perfect’ deservers. For larger sets of associated properties, there might also be ‘near-near-perfect’ deservers, and so on.

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12 Speaks [2010: 69] allows that this assumption can be weakened. In that case, he argues, E2D would need to treat as a priori a different set of sentences, which are equally problematic.

13 We will presume that the properties $F$ and $G$ are independent* for the following discussion. A Unique Best Deserver theory is not committed to this, however. It is consistent with the theory that all potential candidates for the name ‘Mick Jagger’ will fail to be independent*, in which case the apriority of [2]–[4] follows unproblematically for the reasons discussed in §3.2.
Consider an agent who knows that \( \Gamma \) is the relevant set of properties to consider when determining the reference of ‘Mick Jagger’. What could such an agent know \textit{a priori}? Well, under a Unique Best Deserver theory, the Empty Scenario Argument drops out as a simple matter of logical consequence. According to that theory, all of the information that we need to tease out \([2]–[4]\) is contained in the proposition expressed by ‘Mick Jagger exists’. A fully competent speaker could not have knowledge that ‘Mick Jagger exists’ without knowing that there is only a single thing which is a sufficiently good deserver of \( \Gamma \), and for which nothing else is a better deserver of \( \Gamma \). But even with this knowledge we can infer some interesting consequences: if the \( F \) and the \( G \) are equally good near-perfect deservers, then we can rule out scenarios where \([1]\) obtains—for in those scenarios there are two equally good candidates for the name, and no better candidates. Sentences \([2]–[4]\) then follow straightforwardly. So there is an implementation using independent\* properties which entails that the Mick Jagger sentences are \textit{a priori} and so conflicts with Speaks’ principle.

4.2 The Limitation Principle on A Priori Knowledge

The crucial question is whether commitment to the \textit{apriority} of \([2]–[4]\) is problematic. Speaks argues that it is, since it conflicts with his limitation principle \([A]\). However, not only are there counterexamples to the principle formulated with the notion of ‘independence’ (as discussed in §3.1), there also appear to be counterexamples to the principle formulated with the improved notion of ‘independence\*’. The updated principle reads

\[ [A^*] \text{ On the basis of the knowledge that some particular thing } n \text{ is } F, \text{ you can’t know } a \text{ priori } \text{ whether some other thing exists which instantiates some other property } G, \text{ if the two properties are independent*}. \]

Consider the following case: ‘We hereby dub Julius to be the man who invented the zip (if there is one)’. Consider the properties \textit{being the unique man} and \textit{being the unique inventor}. Even though these properties are not the stipulated reference-fixers for ‘Julius’ (\textit{being the unique inventor} is not shorthand for \textit{being the unique inventor of the zip}) they are nonetheless independent*. Now suppose that we are given the knowledge that the sentence ‘Julius exists’ is true. From this, we can deduce that it’s certainly not the case that there’s only one man in the world such that this man is not identical to the only inventor. So we know the following conditional: ‘If Julius exists, then it is not the case that there’s something that’s the man, and something else which is the inventor’. But this sentence is formally identical to \([3]\), and is plausibly \textit{a priori}.

And just as we can stipulate what ‘Julius’ refers to in order to generate a plausibly \textit{a priori} truth analogous to \([3]\), so too can we make stipulations that generate plausibly \textit{a priori} truths analogous to \([4]\) which yield counterexamples to \([A^*]\). Let ‘Cobber’ refer to whoever does my laundry, or whoever cooks my dinner; but if someone does my laundry while someone else cooks my dinner, then ‘Cobber’ will not refer. Now suppose I come to know that Cobber cooked my dinner but did not do my laundry. It seems I can infer from this knowledge that no one did my laundry. And I don’t need to empirically check that my clothes are clean to justifiably infer this. I simply need to reason that
since Cobber cooked my dinner and did not do my laundry, then no one could have done my laundry, since otherwise Cobber wouldn’t have existed. As being the person who cooked my dinner and did not do my laundry and being the person who did my laundry are independent* properties, we have a plausible counterexample to [A*].

So in spite of the prima facie plausibility of [A*], it does not appear to stand up to scrutiny. There are some key things to keep in mind when assessing this limitation principle. Firstly, the principle concerns which propositions we are in a position to infer a priori from ‘knowledge that some particular thing n is F’. The principle does not impose any restriction on which names can go in for n. As such, an opponent cannot reject the above discussion as irrelevant by arguing that ordinary proper names are not like stipulated names. Cobber is a counterexample regardless of whether it is a stipulated name.

Secondly, there are two readings of the crucial phrase ‘knowledge that some particular thing n is F’: a de re and a de dicto reading. Even the E2Dist can accept the principle on a de re reading. For example, it is possible that someone who has never heard the name ‘Mick Jagger’ may know of Mick Jagger that he’s the F and not G (for example, by observing a stranger who happens to be Mick Jagger), without thereby being in a position to know that nothing is the G. Speaks has given us no reason for thinking that any implementation of E2D is committed to saying that [A*] is a priori:

[5] If something is the F and is not G, then nothing is the G.

In fact, [5] cannot be a priori insofar as [1] is epistemically possible, because [1] states that something could be the F and something else could be the G. So E2D only conflicts with [A*] under a de dicto reading.

The correctness of the principle then depends on the question of which proposition is picked out by the phrase ‘n is F’. Which proposition that is crucially depends in turn on what the correct semantics for the name n is. The principle may be plausible if one assumes a direct reference semantics for the name, on which the phrase expresses a singular proposition. However, if one is to use [A*] in an argument against certain implementations of E2D, one obviously cannot assume a reading of the principle which presupposes such a semantics without begging the question. Different implementations of E2D will assign n different intensions—and if a Unique Best Deserver theory is true of n, then knowing that n is F may well allow us to infer that nothing else is G, even if F and G are independent*. Of course, it might be the case that our considered intuitions strongly suggest that [4] in particular is not a priori, and the principle just helped to bring this out. But, as we’ve noted above, this would only mean that a Unique Best Deserver theory is not an adequate implementation, and the E2Dist would then be wise to opt for an alternative.14

14 Speaks might deny that we can so easily opt for an alternative by asserting that any other implementation would fail to capture his ‘methods for identifying reference’ [2010: 68]. That is, Speaks might concede that [2]–[4] hold in every scenario, and so are epistemically necessary, but deny that they are a priori on the basis of principle [A*]. In fact Speaks concludes with such a maneuver [loc. cit.: 76–77]. However, there is at least a very close connection between epistemic necessity and
So it is not obvious that a conflict with \([A^*]\) should be considered problematic for any implementation of E2D. Premise 2 therefore requires further argument: a Unique Best Deserver theory—with the help of some uniqueness clauses and simple logic—seems to provide a perfectly good explanation of how knowledge of the proposition expressed by ‘Mick Jagger exists’ puts fully competent speakers in a position to derive the contested sentences \(a\ priori\). Thus, there are a wide range of implementations that avoid Speaks’ argument in various ways.

5 Schroeter’s Argument from Epistemic Misclassification

Speaks [2010: 66] states that his argument is a generalisation of the argument of Schroeter [2005]. For the most part their arguments take the same form, except for two main differences. The first difference is that Schroeter argues that E2D must accept a particular implementation, whereas Speaks simply assumes a specific implementation for his argument. Regarding the second difference, Schroeter does not appeal to a limitation principle to show that the implementation she considers misclassifies certain sentences as \(a\ priori\). Instead, she appeals directly to the reader’s intuitions about the relevant sentences to gather agreement that they are not \(a\ priori\).

Schroeter argues that E2D must accept a particular implementation, according to which meta-linguistic properties are necessary for determinate reference in scenarios—such that without knowledge of their instantiation, one cannot know whether a name (or natural kind term) has reference at all. As she [2005: 337] notes, our commonsense interpretative intuitions suggest that we need to ‘take into account how a token of a word like ‘water’ is causally related to a particular temporally-extended representational practice within the world to be considered as actual’. From this, Schroeter infers that at scenarios in which there is no such history of representational practice, it will be indeterminate whether terms like ‘water’ and ‘language’ have reference at all.

Schroeter then argues that this implies that ‘language exists’ and ‘if water exists then language exists’ come out \(a\ priori\) according to E2D. If we must know what meta-linguistic properties (e.g. properties regarding our community’s usage of ‘language’) are instantiated in order to determine the reference of ‘language’ at a scenario, then ‘language’ will have no determinate reference at scenarios in which those properties are not instantiated. But then, the only scenarios in which ‘language exists’ has a determinate truth value will be those scenarios in which there is language. So, ‘language exists’ will be true at all scenarios where it has a determinate truth-value, and so it must

\(apriority\) traditionally conceived. For example, if \([2]–[4]\) are epistemically necessary then they hold come what may (and so cannot be refuted by experience). Furthermore, it is possible to know them without appeal to experiences of the actual world: an ideal reasoner with the capacity to conceive all scenarios can just ignore the way the actual world is and evaluate \([2]–[4]\) at every scenario in thought. This allows a UBD theory E2Dist to withhold her scepticism of \([A^*]\) and simply respond by distinguishing two notions of \(apriority\): \(apriority_1\) (epistemic necessity) and \(apriority_2\) which obeys \([A^*]\). Both parties can then just agree that \([2]–[4]\) are \(a\ priori\) but not \(a\ priori\).
be *a priori*. Similarly, if ‘water’ only has a determinate extension in worlds in which certain meta-linguistic properties are instantiated, then one will be able to infer the existence of language *a priori* from knowledge of the existence of water. But, intuitively, ‘language exists’ and ‘if water exists then language exists’ are not *a priori*. This is Schroeter’s argument against E2D. ¹⁵

However, insofar as the *apriority* of these sentences seem implausible, that merely suggests that the associated reference-fixing properties are more complex than what Schroeter argues. While it may certainly be the case that we take such meta-linguistic considerations into account when considering worlds in which there is a history of linguistic practice, it also seems plausible that there are other factors that might come into play—particularly if we were to consider scenarios in which there is no history of linguistic practice. For example, given a non-descriptivist implementation of E2D, the properties we use to determine reference in scenarios where there is a history of linguistic practice are likely to differ from those we use in scenarios without such practices. In such scenarios, perhaps we revert to intrinsic structural or functional properties to determine what the reference of ‘water’ is, for example. Similarly for a Unique Best Deserver implementation: perhaps meta-linguistic considerations carry a lot of weight when we are considering reference at a scenario, but there may also be other properties that we might use even when there is no history of representational practice to appeal to.

To bring out the role of non-meta-linguistic properties in the determination of reference we consider two scenarios: one in which the meta-linguistic facts obtain but are overridden by more important factors for reference determination, and another in which there is no history of representational practice yet we have determinate reference. Consider a scenario in which our community uses the term ‘water’ to refer to all and only the fluffiest unicorns. Should we say that *our* usage of ‘water’ refers to the fluffiest unicorns at that scenario? It would seem not. Rather, if that scenario turned out to be actual, it would be intuitive to think that we simply mean something different by ‘water’ than the rest of our community. It seems, then, that our own rich conception of what water is plays at least some role in reference determination. ¹⁶

Now consider a solipsistic scenario in which nothing exists except one’s own subjective experiences. Is there water at this scenario? The answer seems to be, *determinately,*

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¹⁵ We find Schroeter’s argument, that terms whose reference is fixed only by meta-linguistic properties have indeterminate referential status in scenarios without such meta-linguistic properties, problematic. Furthermore, it is not obvious that E2D is committed to *apriority* being truth in all scenarios *where it has determinate truth value*, as opposed to being truth in all scenarios *simpliciter*. However, we will grant these points for present purposes.

¹⁶ The point we make here seems plausible for ‘water’, but perhaps it will not work for terms for which we do not have a rich conception. For example, imagine we just heard the utterance ‘there is gzorply’. Intuitively, for scenarios where our community uses ‘gzorply’ to refer to fluffy unicorns, we would say that our usage of ‘gzorply’ refers to fluffy unicorns. So perhaps, given that we know nothing non-meta-linguistic about the term, we will judge the sentence ‘if gzorplies exist then language exists’ to be true in every scenario where it’s defined. But it it not obvious that this sentence is *a posteriori*, in the same way that ‘if water exists then language exists’ clearly is.
no. We do not need to appeal to a community within the scenario to tell us this. All we need is competence with ‘water’. Indeed, if someone was unsure as to whether water obtained at this simple scenario, that would be a sure sign that they have either not fully grasped the meaning of ‘water’ or have not fully understood the scenario. On the other hand, if one confidently insisted that there can be no determinate reference for ‘water’ in this scenario in virtue of there being no communal usage of the term, then perhaps they use ‘water’ slightly differently from us—such that ‘if water exists then language exists’ really is \textit{a priori} when it is interpreted in accordance with their deviant usage of ‘water’. Either way, the two key premises of Schroeter’s argument undercut each other:

\textbf{Premise 1}: E2D entails that ‘language exists’ and ‘if water exists then language exists’ are \textit{a priori}.

\textbf{Premise 2}: These sentences are not \textit{a priori}.

\textbf{Conclusion}: E2D is mistaken.

Insofar as premise one is plausible, premise two is implausible. And insofar as premise two is plausible, premise one is implausible. Schroeter’s argument, like Speaks’, is an argument against E2D from epistemic misclassification. Such arguments, we have argued, are self-undermining.

\section{Conclusion}

We have argued that Speaks’ and Schroeter’s attempts to show that E2D misclassifies certain sentences as \textit{a priori} has failed. We can draw at least two philosophically significant morals. Firstly, it is important to distinguish the general framework of E2D from specific implementations. We have shown that E2D is a highly flexible framework that is consistent with numerous different ways of implementing it in the context of providing a semantics for natural language. Thus, any argument against E2D that relies on a specific implementation should be treated with suspicion. Secondly, we have shown that objections to E2D that rely on specific implementations, particularly objections that try to bring those implementations into conflict with our considered intuitions about what sentences are \textit{a priori}, are better reformulated as arguments for favouring one implementation over another. The correct implementation of E2D will be the one that captures all of our idealised judgements regarding \textit{apriority}. While we have not here argued for a specific implementation, we nonetheless hope to have provided some resources to help discover the correct one.

\section{References}


