1. The no-no paradox.

Consider the following sentences:

\[\text{The neighbouring sentence is not true.}\]

\[\text{The neighbouring sentence is not true.}\]

Call these the no-no sentences. Symmetry considerations dictate that the no-no sentences must both possess the same truth-value. Suppose they are both true. Given Tarski’s truth-schema—if a sentence \(S\) says that \(p\) then \(S\) is true iff \(p\)—and given what they say, they are both not true. Contradiction! Conclude: they are not both true. Suppose they are both false. Given Tarski’s falsity-schema—if a sentence \(S\) says that \(p\) then \(S\) is false iff not-\(p\)—and given what they say, they are both true, and so not false. Contradiction! Conclude: they are not both false. Thus, despite their symmetry, the no-no sentences must differ in truth-value. Such is the no-no paradox.\(^1\)

Sorensen (2001, 2005a, 2005b) has argued that: (1) The no-no paradox is not a version of the liar but rather a cousin of the truth-teller paradox. (2) Even so, the no-no paradox is more paradoxical than the truth-teller. (3) The no-no and truth-teller sentences have groundless truth-values—they are bivalent but give rise to “truthmaker gaps”. (4) It is metaphysically impossible to know these truth-values. (5) A truthmaker gap response to the no-no paradox provides reason to accept a version of epistemicism.

In this paper it is shown that a truthmaker gap solution to the no-no and truth-teller paradoxes runs afoul of the dunno-dunno paradox, the strengthened no-no paradox, and the strengthened truth-teller paradox. In consequence, the no-no paradox is best seen as a form of the liar paradox. As such, it cannot provide a case for epistemicism.

2. Two dimensions of paradoxicality.

The no-no paradox is generated from the following theses: (1) The no-no sentences both express propositions (in the same context of utterance), (2) Classical logic and classical semantics are both valid. (3) The no-no sentences are (relevantly) symmetrical, and (4) If the no-no sentences are symmetrical then they must possess the same truth-value. Call this last thesis “The Symmetry Thesis”. Sorensen assumes that the (1) – (3) are valid but that the Symmetry Thesis fails. Without this thesis, the contradiction does not arise and so Sorensen does not take the no-no paradox to be a version of the liar but rather a version of the truth-teller.

The truth-teller sentence “This sentence is true” has two pathological features. Firstly, unlike the liar sentence, it can consistently possess either truth-value and yet there seem to be no grounds which determine that it has one truth-value rather than the other. Secondly, there seems to be no way of finding out the truth-value of the truth-teller sentence—either via proof or empirical investigation. Although Sorenson assumes that the no-no paradox is akin to the truth-teller, he takes the latter to be less paradoxical:

In the standard liar paradox, the problem is that there is no consistent assignment of truth-values. In the truth-teller paradox, the problem is that there are too many consistent assignments. […] The no-no paradox shares this feature but poses the further problem of assigning asymmetrical truth-values to symmetrical sentences. The no-no paradox has two dimensions of arbitrariness (2001, p.167).

And so we have two dimensions of paradoxicality to contend with:

**Dimension One**: A pair of sentences is paradoxical if the sentences are (relevantly) symmetrical but differ in truth-value (relative to the same circumstances of evaluation).

**Dimension Two**: A sentence (or sentence pair) is paradoxical if there are too many consistent assignments of truth-value (relative to the same circumstances of evaluation) whereby there is nothing to determine which is the correct assignment.

It’s worth noting at the outset that it is a mistake to take the no-no sentences to be more paradoxical than the truth-teller. Consider the following sentence tokens:

*This sentence is true.*

*This sentence is true.*

Call these tokens the truth-teller sentences. Despite their symmetry, the truth-teller sentences can be consistently assigned different (or indeed the same) truth-values, though there seems to be no grounds which determine which assignment is correct. Such is, what may be termed, the double truth-teller paradox.

This paradox is simply derived from the truth-teller paradox: if the same truth-teller token can be consistently assigned different truth-values, then two truth-teller tokens can be consistently assigned different truth-values. Since the truth-teller paradox effectively entails the double truth-teller paradox then the truth-teller sentence exhibits just the same two dimensions of paradoxicality exhibited by the no-no sentences. The difference between the truth-teller and no-no sentences is that the latter *must* take different truth-values, while the former merely *can* take different truth-values—but that hardly marks a difference in degree of paradoxicality.
3. A truthmaker gap theory of indeterminacy.

Sorensen’s basic idea is that the no-no sentences exhibit a particular kind of indeterminacy such that these sentences have *groundless* truth-values. One way to express this idea is to say that these sentences are bivalent but there is nothing in the non-linguistic world, or in language, which makes them have the truth-value that they have. Thus, Sorensen rejects the following truthmaker principle:

(TM1) If a sentence \( S \) says that \( p \) then \( S \) is true only if something makes \( p \) true.\(^3\)

Sorensen nonetheless allows that: “Truthmakers are a sufficient condition for truth, not a necessary condition” (2001, p. 77). So, the following remains valid:

(TM2) If a sentence \( S \) says that \( p \) then something makes \( p \) true only if \( S \) is true.

Failure of TM1 is both necessary and sufficient for the presence of indeterminacy only if there are truthmakers for necessary truths, general truths, and negative truths. Since it is controversial that such truths have truthmakers then a more neutral way of expressing Sorensen’s idea is to say that a sentence \( S \) is indeterminate in truth-value just in case the following supervenience principle fails for the sentence in question:

(SUP) The truth-value of \( S \) supervenes upon what things there are and how those things are,

where “\( S \)” ranges over only those sentences which express a contingent proposition (Sorensen 2001, pp. 173-4).\(^4\) SUP allows that there can be truthmaking without truthmakers: if \( S \) is true in world \( W \)

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\(^3\) Like Sorensen, I remain neutral as to the nature of the primary truthmakers and the truthmaking relation. 

\(^4\) Sorensen is only interested in the indeterminacy of metaphysically contingent propositions (Sorensen 2001, p. 177). As a referee has pointed out to me, that overlooks the interesting possibility that the truth-teller sentence, while logically
but not in V, that need not entail a difference in population between W and V, but simply a
difference in the pattern of instantiation of the fundamental properties and relations.\(^5\) On this
interpretation, a sentence is indeterminate in truth-value just in case it gives rise to truthmaking,
rather than truthmaker, gaps. There are thus three classes of (contingent) sentences: those whose
truth-values are supervenient and true, those whose truth-values are supervenient and false, and
those that fall in the truthmaking gap, as it were, such that their truth-value does not supervene upon
what things there are and how those things are.\(^6\)

In what follows, I will simply speak of Sorensen’s “truthmaker–truthmaking” gap theory
and will help myself to both ways of making sense of his view. For the purposes of this paper,
nothing of substance hangs on this.

4. Groundlessness, the truth-teller and no-no paradoxes.

Recall that the first feature of the truth-teller sentence is that it is bivalent but that there seem to be
no additional facts which determine just which truth-value the sentence has. Sorensen takes such
appearances at face value—there \(\textit{are}\) no additional facts. In terms of truthmaking gaps, there is a
world W and a world V, such that the truth-teller sentence is true in W but not in V, and yet W and
V do not differ in respect of what things there are and how those things are: the truth-teller sentence
has a groundless truth-value.

Is failure of the Symmetry Thesis the key to understanding why the no-no sentences have
ungrounded truth-values?\(^7\) Consider the following kind of example:

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non-trivial then truth cannot be a fundamental property (cf. Lewis 2001, pp. 613-4).

\(^6\) Certain forms of Presentism posit groundless truths about the past/future. So, if failure of SUP is to be sufficient for
indeterminacy then Sorensen must show either that Presentism is committed to some form of SUP after all or that truths
about the past/future are indeterminate in truth-value (see Keller 2004, and XXX for relevant discussion).

\(^7\) Sorensen is not clear on this matter.
(1) \(2\) is false

(2) If \(2\) is false then \(1\) is false.\(^8\)

The only consistent assignments of truth-value are: T-F, F-T. Moreover, there seems to be nothing to determine which of these assignments is the correct one. On a truthmaker–truthmaking gap conception, these appearances are taken at face value. In terms of truthmaking gaps, there is a world \(W\) and a world \(V\), such that \(1\) is true in \(W\) but false in \(V\), and \(2\) is false in \(W\) but true in \(V\), and yet \(W\) and \(V\) do not differ in respect of what things there are and how those things are. However, these sentences are not symmetrical, and so the Symmetry Thesis remains valid. So, a fully general explanation of why the no-no sentences, and all their kin, have groundless truth-values must appeal to the second (truth-teller) dimension of paradoxicality encountered above, and not the first dimension under which the Symmetry Thesis fails.

5. *Epistemic islands.*

For Sorensen, the truth-teller and no-no sentences are “epistemic islands”—they have absolutely unknowable truth-values. Sorensen means by this that it is metaphysically impossible to know their truth-values.\(^9\) Such epistemic isolation is due to their groundlessness. He says:

A contingent statement that does not owe its truth-value to anything else is epistemically isolated. When the truth of a statement rests on further facts, then I can gain evidence by examining those further facts. But when the truth-value is possessed autonomously, then there is no trail of truthmakers (2001, p.177).

Sorensen is, in effect, assuming something like the following principle:

\(^8\) Armour-Garb and Woodbridge (2005, p. 698) were the first to note the possibility of such asymmetric cases.

\(^9\) Sorensen is thus committed to restrict God’s omniscience such that God cannot know all truths, just those truths which it is metaphysically possible to know.
(K1) If \( S \) says that \( p \), then if it is metaphysically possible to know whether or not \( S \) is true then either something exists which makes it true that \( p \) or something exists which makes it false that \( p \).

From K1, plus TM2, it follows that:

(K2) If \( S \) says that \( p \), then if it is known that \( S \) is true then something makes it true that \( p \).

(K3) If \( S \) says that \( p \), then if it is known that \( S \) is false then something makes it false that \( p \).

6. The no-no paradox and the sorites paradox.

Sorensen (2001, pp.13-14) also alleges that Williamson’s form of epistemicism is entirely misconceived because Williamson (1994, p. 212) leaves it open that an omniscient being could know the cut-offs drawn by vague predicates. For Sorensen, the matter is closed: no metaphysically possible being can know the truth-values of vague sentences—vagueness also gives rise to “absolute ignorance”. Consider the following sorites paradox:

(1) 1 second after noon is noonish
(2) For all \( n \), if \( n \) seconds after noon is noonish then \( n+1 \) seconds after noon is noonish
(3) 10,000 seconds after noon is noonish.

Sorensen then motivates his theory as follows:

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10 The truthmaking gap version of K1 is: If \( S \) says that \( p \), then if it is metaphysically possible to know whether or not \( S \) is true then the truth-value of \( p \) supervenes upon what things there are and how those things are.
The believer in the truthmaker gap solution to the no-no paradox is poised, on independent grounds, to join the epistemicist in rejecting the second premise. The negation of the second premise implies that there is a value for $n$ at which ‘$n$ seconds after noon is noonish’ is true and ‘$n+1$ seconds after noon is noonish’ is false. Most people find this assignment implausible because of the nearly perfect symmetry between the sentences. […] They dismiss the suggestion that there could be a value for $n$ at which the first is true and the second is false: ‘What could make the first true and the second false?’

The believer in the truthmaker gap solution to the no-no paradox has already accepted a T-F assignment for a perfectly symmetrical pair of sentences. Hence he will not oppose the possibility that a particular threshold for ‘noonish’ groundlessly exists. Just as there is absolutely no way to know which no-no sentence is true, the threshold for ‘noonish’ is absolutely unknowable (2001, p. 176).

Just as the no-no sentences have ungrounded truth-values, by analogy, the sentences which mark the cut-off in the sorites series do too. Given K1, this explains why it is not metaphysically possible to know these truth-values, and thus why it is not metaphysically possible to know the cut-off.

So much for Sorensen’s truthmaker–truthmaking gap theory of the truth-teller, no-no, and sorites paradox. What are the problems?

7. The dunno-dunno paradox.

Consider the following sentences:

\[ \text{The neighbouring sentence is not known.} \]

\[ \text{The neighbouring sentence is not known.} \]

Call these the dunno-dunno sentences. Suppose these sentences are both known. Given factivity, they are both true. Given what they say, and given Tarski’s truth-schema, they are both not known.
Contradiction! Conclude: there are three remaining assignments of *epistemic-value* to the dunno-dunno sentences: K-~K, ~K-K, and ~K- ~K. So, given what they say, the dunno-dunno sentences must take one the following assignments of truth-value: T-F, F-T, T-T. Since the dunno-dunno sentences are symmetrical then, given the Symmetry Thesis, these sentences cannot take different truth-values. Only one assignment remains: the dunno-dunno sentences must both be true. But if the Symmetry Thesis is known then, by the closure of knowledge, the dunno-dunno sentences are both known. Given factivity, they are both true. Given what they say, and given Tarski’s truth-schema, they are both not known. Contradiction! Such is the dunno-dunno paradox.¹¹

Recall that the no-no paradox consists of a proof which shows that the no-no sentences must differ in truth-value. The Symmetry Thesis is *not* used in the proof but merely reveals that the result of the proof is paradoxical. In contrast, (knowledge of) the Symmetry Thesis is employed in the dunno-dunno proof. If one has already rejected the Symmetry Thesis because of the no-no paradox, then the dunno-dunno paradox appears to pose no additional problem. However, to accommodate the second (truth-teller) dimension of paradoxicality, Sorensen, as we saw above, posits that the no-no sentences have groundless truth-values. With respect to the dunno-dunno sentences, these sentences exhibit the first dimension of paradoxicality once we escape from the paradox via a denial of the Symmetry Thesis. But that still leaves *three* possible assignments of truth-value: T-F, F-T, T-T. So, the dunno-dunno sentences also exhibit the second dimension of paradoxicality. Given Sorensen’s truthmaker-truthmaking gap solution to the truth-teller, he must treat the dunno-dunno sentences as also having groundless truth-values. But then a problem emerges.

Suppose that one dunno-dunno sentence is known. Given K2, this sentence *is* truth-made. Contradiction! Thus, the dunno-dunno sentences cannot take the asymmetrical assignments T-F, F-T. Only one assignment remains: the dunno-dunno sentences must both be true. But then the dunno-dunno sentences are not truth-teller like at all and Sorensen loses his explanation as to why these sentences have groundless truth-values! Much worse, we have *proved* that the dunno-dunno

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¹¹ Sorensen (2002, p. 549) gives a version of this paradox, though he doesn’t realise how problematic this paradox turns out to be for his truthmaker–truthmaking gap theory.
sentences are both true. Given knowledge of K2, and knowledge of a truthmaker–truthmaking gap solution to the truth-teller, then, via closure, it follows that the dunno-dunno sentences are both known. Given factivity, they are both true. Given what they say, and given Tarski’s truth-schema, they are both not known. Contradiction!

It doesn’t look like Sorensen can reject closure in such a context. Nor can he forego knowledge of the truthmaker–truthmaking gap solution to the truth-teller while retaining a belief in such a solution—that would result in a Moorean paradox for in asserting his theory he presents the theory as known. Nor can he reject K2/K1 because that would undercut his new theory of vagueness—the main theme of his 2001 book is that vague sentences give rise to absolute ignorance. One obvious option remains: hold that the dunno-dunno sentences, unlike the standard truth-teller sentence and the no-no sentences, are simply akin to the liar sentence in that they have no consistent assignment of truth-value. We shall address this option in §11.

8. The strengthened no-no paradox.

Consider the following sentences:

The neighbouring sentence is not truth-made.

The neighbouring sentence is not truth-made.

(where a sentence is truth-made iff there exists something which makes it true). Call these sentences the SNN sentences. Symmetry considerations dictate that the SNN sentences must both possess the same truth-value. Suppose they are both true. Given what they say, and given Tarski’s truth-schema, they are both not truth-made. Given TM1, it follows that they are both not true. Contradiction! Conclude: they are not both true. Suppose they are both false. Given what they say,
and given Tarski’s falsity-schema, they are both truth-made. Given TM2, it follows that they are both true. Contradiction! Conclude: they are not both false. Thus, despite their symmetry, the SNN sentences must differ in truth-value. Such is the strengthened no-no paradox.\textsuperscript{12}

If one accepts TM1 and TM2 then there is no extensional difference between the no-no sentences and the SNN sentences. Unlike the dunno-dunno paradox and the no-no paradox, however, TM1 is used to derive the contradiction. Given that Sorensen has already rejected TM1 then this strengthened paradox appears to present no additional problem—he can simply treat the proof as a reductio of TM1. However, a problem remains.

Suppose the SNN sentences are false. Given what they say, and given Tarski’s falsity-schema, they are both truth-made. Given TM2, they are both true, and so they are both not false. Contradiction! The SNN sentences thus take one of the three assignments: T-T, T-F, F-T. But now there seem to be no grounds to determine which is the correct assignment. So, the SNN sentences exhibit the second dimension of paradoxicality and so, for Sorensen, they have groundless truth-values. However, now the asymmetrical assignments are ruled out since these assignments entail that one of the sentences is truth-made. Hence, the SNN sentences must be both true. But now the SNN sentences are not truth-teller like at all and Sorensen loses his explanation of why they have groundless truth-values! Much worse, we have \textit{proved} that they are both true. Given knowledge of a truthmaker–truthmaking gap solution to the truth-teller, and closure, the SNN sentences are both known to be true. Given K2, the SNN sentences are truth-made. Given TM2 they are both true. Given what they say, and given Tarski’s truth-schema, they are both not truth-made. Contradiction!

Just as with the dunno-dunno paradox it seems that the only option for Sorensen, if he is to retain K2/K1, is to take the SNN sentences to be akin to the liar.

\textsuperscript{12} Cf. \textit{the definite no-no paradox} in Sorensen (2003).
Armour-Garb and Woodbridge (2005), hereafter ‘AGW’, briefly consider whether the strengthened no-no paradox is a problem for Sorensen. As it turns out, they underestimate how problematic the strengthened no-no paradox proves to be. Their presentation is as follows (where I follow their numbering):

(7) (8) has no truthmaker.

(8) (7) has no truthmaker.

AGW (2005) say:

If (7) and (8) were both false then each would have a truthmaker and, thus, would be true. So, to maintain consistency, they cannot both be false. Ascribing divergent truth-values staves off inconsistency, but [...] there are two ways of doing this, with nothing favouring one over the other. The problem for Sorensen is that if one of these sentences is true and the other is false, then the true one—whichever it is—has a truthmaker. But it is utterly indeterminate which of these sentences is the true one. Of course, Sorensen can consistently claim that both (7) and (8) are true—and, as such, without truthmakers—but this appears to undermine the motivation for positing truthmaker gaps in the first place, since they were introduced as a means for resolving, consistently, the indeterminacy of both the open-pair and the sorites.

(where the name ‘open-pair’ is the name AGW use for the no-no sentences). As I read them, AGW are posing Sorensen two problems. The first is that (7) and (8) are epistemically indeterminate in that they have unknowable truth-values (that’s what AGW mean when they say “But it is utterly indeterminate which of these sentences is the true one.”). Yet, if (7) and (8) take different truth-values, then one sentence is true and so has a truthmaker. But then how can Sorensen explain why the true sentence of the pair has an unknowable truth-value if it has a truthmaker? The second is that
it would be illegitimate to accept that T-T is the only remaining assignment on the grounds that a
truthmaker–truthmaking gap theory cannot properly account for the epistemic indeterminacy
exhibited by (7) and (8) when these sentences have divergent truth-values.

The second problem only emerges if the first problem proves to be intractable. As it turns
out, Sorensen (2005b) thinks that AGW “only cleanly exclude the F-F assignment”. Is he right?
With respect to the first problem, Sorensen thinks that (7) and (8) are epistemically symmetrical:
they are both known/knowable or both not known/knowable. But he also thinks that epistemic
symmetry does not entail truth-value or truthmaker symmetry. In fact he conjectures that (7) and (8)
do take different truth-values, such that one is truth-made the other is not:

But having a truthmaker is only a necessary condition for knowability. If (8) is unknowable
(because it has no truthmaker) then its perfect resemblance to (7) renders (7) unknowable.
Having planted the seed of absolute unknowability through a truthmaker gap, we can grow
further unknowables amongst neighbouring truths that do have truthmakers. Ignorance can
spread without perfect symmetry (2005b). \(^{13}\)

One way to unpack what Sorensen is really after here is to make use of a version of the following
safety principle on knowledge: one knows that \(p\) only if one couldn’t easily have been wrong. \(^{14}\) In
more detail:

\[(\text{SAF})\text{ If the method one has used to form one’s true belief that } p \text{ could easily have produced a false belief then one’s true belief that } p \text{ is not knowledge.}\]

Suppose that (7) is true and (8) is false. Suppose one forms a belief, via method M, that (7) is true.
Thus one’s belief is both true and is made true (since what (8) says is not the case). Since method M
could just have easily have produced the (different but symmetrical) belief that (8) is true, and since

\(^{13}\) Indeed, he adds that all of AGW’s further examples “feature structurally asymmetric sentences that are still epistemically symmetrical”.

\(^{14}\) See Sainsbury (1997). Whether this principle is defensible lies beyond the scope of this paper.
(8) is false, then one could easily have formed a false belief. Hence, given SAF, one’s belief that (7) is true is not knowledge, despite the fact that (7) has a truthmaker. Furthermore, since no method could distinguish between the truth-status of (7) and (8) then one’s belief that (7) is true cannot be knowledge—again, despite the fact that (7) has a truthmaker. Thus, AGW’s first problem has been answered and so the second problem does not arise.\textsuperscript{15}

Still, both AGW and Sorensen fail to spot that the asymmetric assignments are ruled out on different grounds. As we have seen, if the assignments T-F and F-T are both consistent, and if a truthmaker–truthmaking gap solution to the truth-teller is correct, then (7) and (8) must lack truthmakers. But if (8) is false, then (7) has a truthmaker. Contradiction. Inconsistency is a good reason to show that the only remaining assignment is T-T. But, as we have also seen, we have proved this to be the case on (putatively) known assumptions. So, via closure, (7) and (8) are known, and so, via K2, are truth-made. But if they are truth-made then, via TM2, they are true. Given that they say, and given Tarski’s truth-schema, they are not truth-made. Contradiction!

As it turns out, Sorensen is wary that (7) and (8) may, after all, yield a contradiction:

Suppose Woodbridge and Armour-Garb came up with a formal refutation of the T-F assignments. That very refutation would become a premise for the back-up position of declaring the T-T assignment correct by a process of elimination.

I even have a back-up to this back-up. Suppose Woodbridge and Armour-Garb somehow go on to eliminate the T-T assignment. (A T-T assignment can be eliminated by adding “and the other statement is false” to (7) and (8).) That refutation would give me the second premise needed to activate my last resort: declaring (7) and (8) meaningless. After all, if the pair is meaningful, there is some way to consistently assign them truth-values. If there is no such way, then these sentences must get the same “last ditch” treatment as the liar paradox (2005b).

\textsuperscript{15} In fact Sorensen has a ready reply to the second problem since he allows that it is perfectly legitimate to allow purely “formal considerations” to rule out all but one assignment. Take the list A, which is composed of the sentences: “The sentences on list A have the same truth-value”, “The sentences on list A have the same truth-value”. The only consistent assignment is T-T.
It’s worth noting that the augmented sentences Sorensen alludes to above do not give rise to a strengthened paradox. Consider these sentences:

*The neighbouring sentence is not truth-made and is false.*

*The neighbouring sentence is not truth-made and is false.*

Call these sentences the Sorensen sentences. The T-T and F-F assignments are inconsistent. With respect to the asymmetric assignments: if one Sorensen sentence is true then the other is both not truth-made and false, and if one Sorensen sentence is false then the other sentence is either truth-made or not-false. Since there are no grounds to prefer one asymmetric assignment over the other, then the Sorensen sentences are akin to the truth-teller. Thus, for Sorensen, they have groundless truth-values. But that is consistent with one being both not truth-made and false and the other being either truth-made or not false. The Sorensen sentences only give rise to a paradox if one accepts the Symmetry Thesis—a thesis which Sorensen has already rejected. Thus, the Sorensen sentences are no more and no less paradoxical than the standard no-no sentences and do not constitute a strengthened paradox.


Consider the following sentence:

*This sentence is truth-made.*

Call this the STT sentence. If one accepts TM1 and TM2 then there is no extensional difference between the standard truth-teller sentence and the STT sentence. However, even if TM1 is rejected,
the STT sentence is problematic. Note that the prima facie data concerning STT is such that: (1) STT is semantically on a par with the standard truth-teller in that it can consistently possess either truth-value—yet there seem to be no grounds which determine that it has one truth-value rather than the other. (2) STT is epistemically on a par with the standard truth-teller in that it is not known to be true and not known to be false (and indeed that we have no way of finding out its truth-value).

Given this data, we can then reason as follows: If a truthmaker gap solution to the truth-teller paradox is correct then, given (1), Sorensen must claim that the STT sentence has a groundless truth-value. But then if the STT sentence is not truth-made then, given what it says of itself, it is false. Moreover, (1) is known to be the case and so we know that STT is akin to the standard truth-teller. If a truthmaker–truthmaking gap solution to the truth-teller is itself known to be true then, given closure, we know that the STT sentence is false. Result: the STT sentence is known to be false but has a groundless truth-value and so is not false-made. But now we have two (related) problems: Firstly, if the STT sentence is known to be false but is not made false then we have a counterexample to principle K3, and so a counterexample to K1. Again, Sorensen cannot reject K3/K1 without losing his explanation of how truth-maker gaps give rise to absolute ignorance. Secondly, and worse still, even if K3 (and so K1) are rejected, the following conjunction is still inconsistent: (2), knowledge of (1), closure, and knowledge of a truthmaker gap solution to the truth-teller. The inconsistency arises because (2) entails that STT is not known to be false, while the other conjuncts together entail that STT is known to be false.16

16 One can raise similar problems via what may be termed the fact-fact paradox—the paradox which consists of a pair of symmetrical sentences which say of each other that they are made true.
11. Sorensen’s last resort.

Is it possible, as a last resort, to hold that the STT sentence, the SNN sentences, the dunno-dunno sentences (and their nearest ilk) are liar-like? This would be to offer a non-uniform solution to all paradoxes considered. On the one hand, the standard truth-teller, the no-no, and kindred paradoxes (such as the yes-yes paradox) are to be treated via a theory of truthmaker gaps. On the other, the strengthened truth-teller, the strengthened no-no, the dunno-dunno, and kindred paradoxes (such as the unprover-unprover paradox) are to be treated as liar-like. Sorensen’s favoured solution to the liar is a no-proposition solution. His reason to endorse such a solution is roughly as follows: since the liar sentence cannot be assigned a consistent truth-condition then it has no truth-conditions proper and so it fails to represent the world as thus and so.

Is this last resort adhoc? On the face of it, perhaps not. Sorensen has provided us with a clear rationale to distinguish those sentences which are akin to the truth-teller (and so, for Sorensen, groundless in truth-value) and those which are akin the liar (and so, for Sorensen, meaningless). Crucially however, the strengthened truth-teller sentence, the strengthened no-no sentence, and the dunno-dunno sentences, only give rise to a contradiction under the supposition that Sorensen’s truthmaker–truthmaking gap solution to the truth-teller paradox is itself known to be true. Sorensen can save his theory of indeterminacy for the truth-teller only by persuading us that these problematic sentences are liar-like. But to do that he has to assume the very thing he sets out to show, namely that there is good reason to believe his theory of indeterminacy with respect to the truth-teller. But that is the very theory whose credentials are being questioned. We thus lack an independent and prior reason to accept his broad solution to the truth-teller. Consequently, we have been given no persuasive reason to think that the problematic sentences in hand are indeed liar-like (and so, for Sorensen, meaningless). Rather, in the absence of such a reason, we should, given the

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17 The yes-yes paradox consists of two sentences which say of each other that they are true.
18 The unprover-unprover paradox consists of a pair of symmetrical sentences which say of each other that they are not provable.
19 Equally, one might be persuaded by Sorensen’s truthmaker gap solution to the truth-teller and no-no paradoxes, but defend some other solution to the liar paradox.
existence of the problematic sentences, conclude, by reductio, that his solution to the truth-teller is just unworkable. Despite the initial attractiveness of a truthmaker–truthmaking gap solution to the truth-teller, the paradox is still with us.

A question remains: Should we treat the no-no as on a par with the truth-teller or as on a par with the liar? Sorensen’s truthmaker–truthmaking gap theory yields two reasons to reject the Symmetry Thesis and so treat the no-no sentences as unlike the liar. Firstly, the no-no proof itself provides such a reason. Secondly, the solution to the truth-teller already gives us a reason to reject SUP and if SUP fails then the Symmetry Thesis ought to be invalid too. But now that we have been given no good reason to accept Sorensen’s truthmaker–truthmaking solution to the truth-teller, then this second reason lapses. Moreover, the first reason alone is now insufficient to demonstrate that the Symmetry Thesis is false. Result: the no-no paradox is just a more complicated version of the liar paradox.

Given that Sorensen’s truthmaker–truthmaking solution to the truth-teller and no-no paradoxes is unworkable, then even if there is a tight analogy between the sorites paradox and the no-no paradox, there is no reason to think that vague predicates draw sharp but groundless boundaries and thus no reason to think that it is metaphysically impossible to know the whereabouts of such boundaries. The main argument for Sorensen’s form of epistemicism thus lapses too. That does not mean that a truthmaker–truthmaking gap theory of indeterminacy cannot illuminate the nature of vagueness via some alternative route or indeed illuminate other species of indeterminacy—such as the nature of incomplete definitions, or the indeterminacy exhibited by the open future. But these remain issues for another day.20

20 Acknowledgments …
REFERENCES


Goldstein, L. (1992): “‘This Statement is Not True’ is Not True”, *Analysis*, 52.1, pp. 1-5.


