<u>Precise Yet Unknowable</u>

An important concern for the propositional view of language is the issue of vagueness. If sentences are expressing propositions, then every sentence should either be true or false. Yet some notions have borderline cases for which rigid satisfaction conditions aren't possible. Many proposition theorists deal with vague terms by having them take up some sort of more complicated truth value satisfaction. Williamson, however, takes the view that vague terms have inherent precise satisfaction conditions, which are simply not known to the speakers. I will investigate the argument of Williamson that vague terms must have precise meaning in order to be compatible with classical logic. We will find that this reduces to the question of the application of Tarski's disquotational schema to vague predicates. I will then attempt to defend the claim that vague terms are an exception to the schema by appealing to the uncertainty in the boundary of vague predicates, but Williamson will be able to respond to this and restore the objection.

Vague terms are terms expressing properties which admit borderline cases: objects which neither strictly have the vague property nor completely lack it. For example, "red" is a vague term, because it admits borderline cases. That is, it is not clear whether this **color(2)** is red. So that this **color(2)** is a borderline case of red. Unlike this **color(1)**, which we are certain is red, with this **color(2)** we are unsure of redness. So that we will be reluctant to judge this **color(2)** as red, but yet we will be similarly reluctant to judge it as being not red, since it is somewhat red. So, if asked to judge the statement *S*="this **color(2)** is red" we will refrain from calling *S* either true or false, on account of refraining from calling this **color(2)** either red or not red. So that red is then a vague term, since it admits borderline cases, like this **color(2)**.

The problem of vagueness is that in borderline cases vague sentences seem to yield propositions which are neither true nor false, which disobeys the principle of bivalence. That is, one the one hand, it seems we do in fact interpret vague terms propositionally. For example, we still do make judgements about the redness of this **color(2)** as evidenced by the fact that we judge it as more red than this **color(3)**. So that we would judge “this **color(2)** is redder than this **color(3)**“ as a true proposition. Yet we refrain from making a binary judgement about whether this **color(2)** itself is red. There’s therefore a tension between the propositional account and the existence of vague terms. We require a theory which accounts for the evaluation of “red” and other similar vague terms, which in some cases yields a concrete judgement, and in others yields no judgement at all. In particular, how in the first place can the propositional account interpret a sentence which has no truth value?

Williamson’s approach to the problem of vagueness is to remain staunch on the principles of the propositional view of language, and chalk up vagueness to speaker ignorance. Williamson asserts that in fact sentences like *S*=“this **color(2)** is red” do have a definite truth value. In order to account for the fact that we refrain from making a judgement of *S* Williamson says that speakers are ignorant of this fact of the matter, and take the wise route of silence in the case of ignorance. This ignorance is however not about any fact in the world, but rather about a fact of language. We call this the epistemic view, and it is the position that the uncertainty in vague terms is the result of speaker ignorance as to where the border of a property like “red” lies, but that the border of “red” is in truth precisely defined, and there are no objects which are underdetermined occurrences of “red”. So Williamson takes the view that the problem of vagueness doesn’t diminish the rigidity of the classification offered by vague terms such as “tall”, “red” and “bald”, and the uncertainty in borderline cases is only a phenomenon arising from the speakers, but not a feature of the language itself.

I will focus the remainder of the paper on investigating Williamson’s argument against our naïve intuition, and will be entirely ignoring the question of actual use and the possibility of disconnection between speaker intention and meaning.

At first, Williamson takes a purely abstract logical approach to the problem. If it were the case that there were sentences *S* which lacked a classical evaluation in the above fashion, the Tarski disquotational schema would lead us to a contradiction. The Tarski disquotational schema states that for a sentence *S* expressing a proposition *P* to be true just is for *P* to be the case, or rather, a sentence *S* expressing proposition *P* is true if and only if *P*. Sometimes taken as a definition of truth, the idea behind Tarski disquotation is that the truth of a sentence is the truth of that which it asserts. In particular, we use it here to pull the “not” operator out of a sentence.

In borderline cases of vague predicates, intuitively it seems to not be the case that *S*, the sentence expressing the vague predicate *P*, is true, while simultaneously not being the case that ~*S*, the sentence expressing ~P, is true. Williamson argues against this intuition, for if indeed it is not the case that *S* is true, then by Tarski disquotation *P* must be false, yes we similarly have that if ~*S* is not true, then ~*P* is false. So that by neither *S* nor ~*S* being true we will have that it is true that ~*P*, since *S* is not true, and it is false that ~*P*, since ~*S* isn’t true, which is a contradiction. This part of the argument is clearly airtight, for given the Tarski disquotational schema and our intuition which refrains from admitting a truth value for vague predicates, the contradiction follows immediately as a formal consequence.

Williamson takes this as evidence against the intuition that vague sentences have neither classical truth value. Because it is exactly the assumption which Williamson in expressing the epistemic view rejects that leads to the contradiction. By insisting that for a vague predicate *S* it is either the case that *S* is true or the case that ~*S* is true, Williamson escapes the pitfall which our intuitions give rise to.

Williamson however recognizes that there is another way out of the contradiction, namely the denial of the Tarski disquotational schema in vague cases. In particular, our intuition will escape contradiction if *S* can fail to be true without entailing that *P* be false. In fact, there are other cases like this. If *S*=”the dagger is sharp” where “the dagger” has no referent, then we say that *S* fails to be true while its proposition fails to be false. So, in a case where *S* contains a reference failure, we would deny the Tarski disquotation schema. Therefore, a similar denial of Tarski’s disquotation would be possible in cases of vagueness. If Taski’s schema can be denied in vague cases, then Williamson’s contradiction would fail to apply, and our intuition would once again be fine.

Williamson however argues that vagueness is not like reference failure, so that while we can deny Tarski’s disquotation in reference failure cases, no similar move is available for vagueness. To justify this distinction, Williamson points to sentences like *S*=“this **color(2)** is redder than this **color(3)**“, which as explained a few pages ago, is judged as true. Since we give *S* a classical truth value, there would be no reason to deny the application of the Tarski truth schema to it. In fact, it seems intuition would admit disquotation for *S*, and even render it incoherent to deny disquotation in this case. We then know that vague terms are valid constituents of sentences which do obey Tarki’s disquotation. Contrast this to the case of “the dagger" when we have reference failure. Here it does not matter what sentence "the dagger" appears in, it will spoil any sentence it appears in simply in virtue of failing to refer. So that there is no sentence with reference failure which can obey Tarski's disquotational schema. We then come to that while we may state an exception to disquotation in any case where a constituent part of a sentence fails to refer, we need not make similar exception for vague terms.

Williamson goes further, and argues that we in fact must apply Tarski's disquotational schema even to vague terms. The argument is that since we use vague sentences coherently, we must intend them in such a way that Tarski's disquotation will apply to them. This is in contrast with reference failure, where we do not endorse the sentence use, and it is in virtue of improper use that we do not apply disquotation. However, in cases of vagueness, since we do in fact think of vague sentences as meaningful, we are committed to an application of Tarski's schema. For what else could be meant by the predicate "this **color(2)** is red" besides that which will be true when this **color(2)** is in fact red. More specifically, sentences including vague predicates do not become incoherent simply in virtue of vagueness, so that the sentences expressing Tarski's schema for vague statements e.g. "`this **color(2)** is red' is true if and only if this **color(2)** is red" are coherent as well. But instances of the disquotational schema which are not incoherent are immediately true, since Tarski disquotation expresses something trivial. Therefore, we in fact have an argument for the fact that Tarski disquotation manages to hold even in cases of vagueness. Now, since Taski disquotation applies even to vague sentences, in order to avoid contradiction, we must accept that a vague sentence either express truth or its negation does.

However, our intuition can be recovered, and Tarski's schema rejected for vague sentences, using the fact that vague predicates do not have obvious boundaries. In particular, I will suggest an alternate version of Tarski's schema for vague sentences, so that an argument could be made for there being more to the truth of a vague sentence than its content obtaining. It is then possible that a vague sentence will fail to be true without indicating that the proposition it expresses is false. The idea is that when a borderline case of a vague predicate is accepted as true, in addition to that fact in itself, a judgement about the vague term itself is also made. This is motivated by the fact that if we accept the truth of "this **color(2)** is red", we suddenly also expect the truth of "this **color(4)** is red". More precisely, admitting a borderline case redefines the vague notion in question by indicating something about its border. Since there is the additional bit of information included in the truth of a sentence expressing a vague predicate, Tarski's schema for vague predicates will then read: a sentence *S* expressing proposition *P* asserting vague property *V* of borderline case *B* is true if and only if *P* is true and the boundary of *V* lies beyond *B*. Given this version of the disquotational schema, a vague sentence *S* failing to be true does not suffice to render its proposition *P* false. For it may well be the case that *P* is true, but *S* still isn't true because the boundary of *V* does not lie beyond *B*. This means that we can without contradiction deny both a vague sentence and its negation, since the denial of a vague sentence will not entail the negation of the proposition it expresses.

In order for the modification of Tarski's schema for vague cases to go through, and thus to defend intuition against Williamson's contradiction, we must argue for the possibility of *P* in a case where the boundary of *V* doesn't lie beyond *B*. Here our case is simple, although the reconstruction and defense is more involved, we can have *P* without the boundary of *V* lying beyond *B* when *B* is itself the boundary of *V*, so that everything being less *V* than *B* does not have property *V*, but *B* itself does. In such a case we will have the truth of *P*, but not the truth of *S*.

The claim to examine then is that in a case where *B* lies exactly on the boundary of *V*, the sentence *S* will not be true, but the proposition *P* it expresses will be. The idea is the there is a presupposition which is an artifact of speaking the sentence, and relies on the context, specifically on the fact that the sentence was spoken. The proposition however lives in an abstract realm which does not concern itself with anything strictly outside of what it in fact expresses. Then the additional information communicated by a vague <u>sentence</u>, in virtue of the fact that the sentence is vague, is that the object in question is a typical example of the vague property.

We then need something to be expressed specifically by the fact that a statement was spoken which is not expressed by its proposition, this will be a presupposition, namely that the object *B* the vague property *V* is being expressed about is typical of the property *V*, rather than the defining boundary of *V*. To use our example of redness again, saying "this **color(2)** is red" fails to express that this **color(2)** is the boundary between what is red and what is not. So that if it were the case that this **color(2)** was definitive of red, the speaker would be expected to have said so. However, a statement of the form "this **color(2)** is red" merely expresses that this **color(2)** is red, which is naturally interpreted as this **color(2)** being a typical instance of the property of redness, and not saying that this **color(2)** is the boundary of redness. Nevertheless, strictly speaking, the proposition expressed makes no judgement of the typicality of this **color(2)** as an example of something red. This then again allows us to judge vague sentences as not having a truth value, while not being committed to the lack of truth of a vague sentence being identical to the negation of the proposition it expresses, thus escaping the objection Williamson raised.

But then we can wonder whether Williamson's objection can be again applied to the question of whether the boundary of *V* lies beyond *B*, and when we do so we discover that it does not. First, let us note that the boundary of *V* lying beyond *B* implies that *B* itself is an instance of *V*, so that *P* holds. So then the right hand side of Tarski's schema for vague sentences states simply that the boundary of *V* lies beyond *B*. If vague *S* is not true, we then get that the border of *V* does not lie beyond *B*. On the other hand, if we simultaneously judge ~*S* as not true, we have that the border of ~*V* does not lie beyond *B*. One case which demonstrates that this can be consistent is if *B* itself is the border where *V* and ~*V* meet, with say *B* itself being an instance of *V*. Therefore, when considering a particular vague sentence, we can judge that the sentence itself may not have any truth value, and so we needn't reject our intuition.

Williamson can recover the objection by insisting that there is never an instance which is perfectly definitive of the border of a vague predicate. That is, Williamson can claim that for every borderline case *B* satisfying vague predicate *V* there exists some borderline case *B'* which satisfies *V* less strongly than *B* yet still manages to satisfy *V*. If this is true, then the Tarski disquotational schema for vague predicates is identical to its typical form, for whenever *P* holds it will also be true that the border of *V* lies beyond *B*, since it also includes *B'*. So that once again *S* is true exactly when *P* is, and our intuition is contradictory. It seems that the same intuition which Williamson is trying to reject, namely the intuition that there is no precise border, will also manage to defend that there isn't an instance which is itself exactly the precise border of a vague predicate. Williamson will then have made the case that our intuition is self-defeating and contradictory.