According to contextualism about vagueness, the content of a vague predicate is context sensitive. On this view, when item \(a\) is in the penumbra of the vague predicate ‘\(F\),' speakers may (truly) utter ‘\(Fa\),' or they may (truly) utter ‘not-\(Fa\),' without contravening the literal meaning of ‘\(F\).’ Unlike its more popular variants, the version of contextualism I defend rejects the principle of tolerance, a principle according to which small differences shouldn’t affect the applicability of a vague predicate. My goal is to show how such a rejection allows for a plausible treatment of higher-order vagueness, and for a dissolution of paradoxes of higher-order vagueness.
But as one must quickly concede, this picture cannot be sustained, for surely the three-fold classification yielded by a vague predicate isn’t sharp. Since it’s implausible to think that the meaning of a vague predicate determines precise boundaries separating its extension, penumbra and anti-extension, two other sets of cases must be admitted, namely those that are neither clearly in the extension nor clearly in the penumbra, and those that are neither clearly in the penumbra nor clearly in the anti-extension. In other words, the borderline cases of $F$ are not sharply bounded, and there must be borderline borderline cases of $F$.

The problem is that this argument iterates. If a predicate ‘$F$’ is genuinely vague, then there cannot be sharp boundaries around its borderline borderline cases either: there should thus be borderline borderline borderline cases of $F$, and so on. The iteration will continue indefinitely, resulting in an infinite hierarchy, with infinitely many different sets and boundaries. This infinite hierarchy seems unavoidable on this traditional perspective, for it would be arbitrary to admit sharp boundaries at a certain order of borderline cases, while denying such boundaries at lower orders. This commitment to an infinite hierarchy of orders of borderline cases is unsavory. The hierarchy must be such as to categorize every item in a sorites series into the predicate’s extension, anti-extension, or one of the infinite orders of borderline cases of that predicate. But such categorizations go against the very phenomenon of vagueness, for they impose very fine-grained distinctions where there shouldn’t be any.\(^2\)

\(^2\) Sainsbury (1996) makes this point forcefully. I will discuss more formal versions of this problem in section 5.
My goal here is to show how a certain brand of indexical contextualism can avoid this unsavory commitment, as well as other paradoxes of higher-order vagueness. Constraints of space prevent me from offering a full defense of this view. I will instead explain the key aspects of my view, and then tackle the issue of higher-order vagueness. My hope that by showing how attractive a treatment of higher-order vagueness contextualism can offer, I will have provided a further argument in support of this view.

In section 2, I explain my version of contextualism, which I call indexical contextualism. On this view, the content of a vague predicate is context sensitive. A key component of indexical contextualism is the thesis of semantic license, according to which a speaker can truly utter ‘Fa’ or truly utter ‘not-Fa,’ when a is a borderline case of ‘F.’ Another aspect of my view is its rejection of the principle of tolerance, according to which small differences shouldn’t affect the applicability of a vague predicate. I then turn to the phenomenon of higher-order vagueness. In section 3, I give an informal presentation of a well-known problem raised by this phenomenon, and explain how my brand of contextualism avoids it. Section 4 concerns what I call the trickle-down effect, which occurs when higher-order indeterminacies force the introduction of additional truth-values for simple sentences of the form ‘Fa.’ I show that my view doesn’t have this unsavory consequence. Section 5 proposes a more formal treatment of paradoxes of higher-order vagueness. I introduce the D operator and explain how I propose to solve these paradoxes.

2. Contextualism
According to indexical contextualism, the content of ‘F’, like the content of an indexical, varies from one context to another. Vague predicates are not exactly like ordinary indexicals, though. One crucial difference is that unlike the meaning (or character) of an indexical, the meaning of a vague predicate ‘F’ determines what we may call a default extension and a default anti-extension: there are many people to which the vague predicate ‘bald’ applies, and many people to which ‘bald’ fails to apply, regardless of the context. Therefore, sentences of the form ‘Fa,’ unlike sentences containing indexicals, have context-independent truth conditions; however, because of the vagueness of ‘F,’ these truth conditions are partial, that is, they don’t cover all possible cases.

When item a is in the penumbra of ‘F,’ the sentence ‘Fa,’ just like a sentence containing an indexical, isn’t truth-evaluable; its truth-value is unsettled. According to indexical contextualism, this allows speakers to utter (truly and literally) ‘Fa’ and to utter (truly and literally) ‘not-Fa,’ without contravening the meaning of ‘F.’ I will call this thesis semantic license.

Semantic license allows speakers to assign various contents to ‘F’ such that any borderline case a can be called ‘F’ or ‘not-F.’ Hence, on this picture, the meaning of ‘F’

3 Soames (2002, 445-446) advocates this view. Fara (2000), Raffman (1994) and Shapiro (2006, 2008) endorse a slightly different view, which might be described as nonindexical contextualism. See MacFarlane (2009) for a general presentation. I do not have the space here to compare the merits of these two brands of contextualism. But many of the points I make in favor of indexical contextualism may also be made, with appropriate adjustments, in favor of nonindexical contextualism.
and the facts about \( a \) may be such that the sentence ‘\( Fa \)’ is unsettled. But thanks to semantic license, a speaker may attach a content to ‘\( F \)’ such that his utterance of ‘\( Fa \)’ (or ‘not-\( Fa \)’) is true. For this reason, when we talk about the truth-value of ‘\( Fa \),’ we should make it clear whether we are talking about the sentence ‘\( Fa \)’ (with its context-independent, literal meaning) or a particular utterance of ‘\( Fa \)’ (with its context-sensitive content).\(^4\)

Semantic license is not tantamount to a Humpty Dumpty account of meaning. Judgments involving vague words must satisfy certain constraints. First, as I have already noted, sentences that are true (false) according to context-independent truth conditions cannot be truly rejected (uttered) in context. If it is beyond dispute that object \( a \) falls into the anti-extension of ‘\( F \),’ then no (literal) utterance of ‘\( Fa \)’ can be true. Furthermore, the use of vague predicates should respect so-called penumbral

\(^4\) It’s worth noting that some non-contextualist accounts are compatible with semantic license. According to subvaluationism and paraconsistent approaches in general, both ‘\( Fa \)’ and ‘not-\( Fa \)’ are true when \( a \) is a borderline case of ‘\( F \).’ Semantic license should be distinguished from Shapiro’s (2006) open-texture thesis, which is in the spirit of Wright’s claim that borderline cases are “cases about which competent speakers are allowed to differ” (1996a, 244). According to semantic license, two speakers who respectively utter ‘\( Fa \)’ and ‘not-\( Fa \)’ about a borderline case \( a \) “differ” only in a superficial sense: their utterances are merely surface-contradictory, the way the two utterances ‘That’s a ball’ and ‘That’s not a ball’ (made pointing to two different things) are.
connections,⁵ that is, sentences such as ‘If an 85% full glass is almost full, then so is an
86% full glass,’ ‘Anyone older than an old person is also old,’ ‘If Eve is a woman, then Eve
is an adult,’ etc. There is no context in which one can truly reject any of these sentences.

How is the penumbra of a vague predicate fixed? Indexical contextualism
proposes the following constitutive thesis:

An item a counts as borderline case of ‘F’ just in case ‘Fa’ would give rise
to a diversity of verdicts: some (informed and competent) speakers
would assent to ‘Fa,’ some would dissent from ‘Fa,’ and others would
judge ‘Fa’ indeterminate in some sense.⁶

Semantic license is ultimately motivated by a principle of charity. Borderline cases are
those that elicit a diversity of judgments by ordinary speakers, and appealing to
semantic license allows us to respect those judgments.

That said, ordinary speakers should not be deemed infallible in their use of every
vague predicate in every circumstance. Ordinary speakers tend to be ignorant or
mistaken about the underlying facts relevant to the application of natural kind terms,
for example. It’s also arguable that many people’s judgments involving other
theoretically challenging predicates such as ‘is (morally) good,’ ‘is a person,’ ‘can think’
and ‘is a democracy,’ are susceptible to similar mistakes. One may even be informed
about all the morally relevant facts with respect to a particular action, and yet
incorrectly judge the action morally permissible (or impermissible). Semantic license is

⁵ See Fine (1975).

⁶ See Wright (1996a, 244) for a similar criterion.
This thesis, as it applies to ordinary speakers, concerns their use of “mundane” predicates such as ‘heap’ and ‘almost full.’ If an ordinary speaker has access to all the relevant underlying facts about a, such as how many items a contains, how these items are put together, etc., then her judgment that a is a ‘heap’ (or a isn’t a ‘heap’) is true.8

Susanne Bobzien’s (2010) notion of competent rational informed speaker (or CRISP) is useful here. A CRISP is an epistemically maximally qualified individual with respect to whether a is an ‘F’: such an individual is in the best possible position to gather the relevant information, suffers from no linguistic incompetence regarding ‘a’ and ‘F,’ is handicapped-free with respect to logical reasoning, etc. As Bobzien notes, for some technical terms, being a CRISP may be restricted to experts, but for non-technical terms there would be no such restriction: “For instance, in the case of a patch of a pure, opaque, matte red displayed in ordinary lighting conditions without any classificatory restrictions, together with a prompting question whether the patch is red, most

7 And pace Sorensen (2003, 32-33), the same goes for judgments involving predicates that are too complex for ordinary speakers to apply or to employ in reasoning, for example, the predicate obtained by iterating ‘mother of’ a thousand times, or “paradoxical” predicates such as ‘bald barber who shaves all and only those who don’t shave themselves.’

8 Even this weaker claim will have to be qualified. Ordinary speakers occasionally make eccentric uses of mundane predicates that may be deemed incorrect. I will address this in the next section.
speakers of English would be CRISPs; only severely colour-blind, or otherwise relevantly handicapped, people would not count” (2010, 8). We should expect a whole spectrum of predicates between mundane, non-technical predicates, with respect to which almost all of us are CRISPs, and theoretically challenging predicates regarding which very few of us, if any, count as CRISPs.

Now, this doesn’t mean that theoretically challenging predicates require a different theory of vagueness. Semantic license holds that a CRISP can truly utter ‘Fa’ (or ‘not-Fa’) without contravening the meaning of ‘F,’ whether ‘F’ is mundane or theoretically challenging. Hence, the difficulty that theoretically challenging predicates pose is due not to a difference in the nature of their vagueness, but to the fact that it’s difficult to become a CRISP, and to assess whether someone is a CRISP, with respect to such predicates.

Let us now turn to the principle of tolerance, which, from a contextualist perspective, may be formulated as follows:

(T) If one judges that object a is in the extension (or anti-extension) of predicate ‘F,’ then one cannot correctly judge object a’ differently (in the same context), if a’ differs only marginally (in the relevant respects) from a.9

9 See Fara (2000, 57), Raffman (1994, 53), Shapiro (2006, 8) and Soames (1999, 209). Fara (2000, 59) and Soames (1999, 216-217) hold that sharp boundaries are compatible with (T). When a speaker is presented with two adjacent items in a sorites series, she must judge that they’re both ‘F,’ or both ‘not-F’ (or both indeterminate). However, in some other context, when the two items aren’t under consideration, perhaps one item
According to (T), the meaning of a vague predicate prohibits sharp boundaries. Contextualist views that endorse (T) face serious problems, though. Rosanna Keefe (2007) argues that (T) entails contextual shifts where there seem to be none.\footnote{10} A speaker can surely approach a sorites series with the intention of keeping constant the interpretation of the relevant vague predicate. Given that she will judge items at one end differently than those at the other end, the speaker will unavoidably be led to judge some adjacent items differently. The speaker can even say, ‘Item #852 is $F$,’ and, in the same breath, add, ‘but item #853 is not-$F$.’ This, according to (T), isn’t possible: any attempt to judge two adjacent items differently will result in a contextual shift. The changes in interpretation that such contextual shifts produce are thus beyond the speaker’s control. Such changes are even cognitively inaccessible to her, for she may believe that her predicate had the same interpretation throughout the whole process. The ubiquitous and unruly contextual shifts that contextualists endorsing (T) are led to posit are thus highly problematic.

\footnote{10} See Sorensen (1998) for a related objection.
I reject (T). In my view, sharp boundaries are not semantically mandated, but they are semantically permissible. Consider Mark Sainsbury’s (1996) example of the art shop proprietor who labels his tubes of paints for sale. Some of the tubes are labeled ‘red’ and others ‘orange,’ but the difference between the orangest paint marked ‘red’ and the reddest paint marked ‘orange’ is barely detectable. As Sainsbury observes, the proprietor behaves consistently with the nature of the concepts of red and orange in drawing a line between these two items. In other words, a speaker can judge two adjacent items on a sorites series differently without changing the content of the predicate he is using.

One may object that the practice of drawing sharp boundaries involves a stipulative use of vague terms. The proprietor can draw the line where he does only by making some kind of ad hoc stipulation. The only way to accommodate this, the objection goes, is to hold that the proprietor is using not the vague terms ‘red’ and ‘orange,’ but “homophonic substitutes” for such terms that are stipulated to have sharp boundaries. The proprietor’s boundary-fixing should thus not be regarded as entailing anything about the semantics of ‘red’ and ‘orange.’

But my view can respect the intuition that the proprietor’s use of ‘red’ and ‘orange’ is stipulative. The proprietor had no semantic reason to draw the line where he did rather than at another location. Therefore, his use of ‘red’ and ‘orange’ is stipulative,

11 Sainsbury’s example actually involves red and yellow tubes.

12 See, for instance, Keefe (2000, 142), Sorensen (2008, 479) and Wright (1996b, 168-170).
in the sense that it isn’t semantically required, given the facts about the tubes. The
sharp boundary drawn by the proprietor thus involves an ad hoc stipulation, since the
meanings of ‘red’ and ‘orange’ don’t determine such a boundary. It is crucial here to
distinguish what is semantically mandated from what is semantically permissible: the
meaning of ‘red’ doesn’t establish a sharp boundary between its extension and anti-
extension; however, it allows a speaker to use this predicate in a way that does. My
view thus allows for sharp boundaries without invoking any form of epistemicism. Sharp
boundaries aren’t drawn in virtue of some hidden facts. They’re not discovered either.
They’re simply stipulated by speakers in accordance with the meanings of the relevant
expressions.

There are thus (at least) two ways to respect the intuition that the proprietor’s
boundary-drawing is stipulative, and the difference between them is subtle. One view
holds that the meaning of ‘red’ prohibits a sharp boundary between its extension and
anti-extension. Therefore, any use of ‘red’ that draws such a boundary must involve a
change of meaning (or a non-literal use of ‘red’). My view is that the conventional
meaning of ‘red’ permits literal utterances of ‘red’ to draw a sharp boundary between
things that fall into its extension and things that don’t. On neither view are the
standards the proprietor associates with ‘red’ prescribed by the conventional meaning
of ‘red’; however, on my view, the proprietor can attach these standards to ‘red’
without violating this conventional meaning, that is, he can do so while speaking
literally. Given how subtly different these two accounts are, intuition alone doesn’t
favor one over the other. Hence, our inclination to regard the proprietor’s use of ‘red’
and ‘orange’ as stipulative doesn’t count against a contextualist account that rejects tolerance.

3. Higher-Order Vagueness

Recall the problem raised by higher-order vagueness: we’re naturally drawn to admit an infinite hierarchy of borderline cases, leading to very fine-grained distinctions that go against the very phenomenon of vagueness. But the only borderline cases that a meaning account must recognize, according to contextualism\textsuperscript{13}, are the first-order ones. As I am about to explain, an account of the meaning of a vague predicate can and should draw a sharp three-fold partition comprising the predicate’s extension, its anti-extension and a penumbra.

Consider a meaning theorist who puts forward a meaning account for a vague predicate ‘\(F\).’ A meaning theorist, it should be clear, is no random ordinary speaker. We need to assume that she is informed about all the relevant thoughts and practices of ordinary speakers.\textsuperscript{14} Furthermore, since the words she uses (‘truth,’ ‘meaning,’ ‘extension,’ etc.) are theoretically challenging, we must also assume that she is “theoretically enlightened,” that is, she endorses contextualism. This means that her

\textsuperscript{13} For ease of presentation, I am now using ‘contextualism’ to designate the brand of indexical contextualism described in section 2, a view that, among other things, accepts semantic license and rejects the principle of tolerance.

\textsuperscript{14} Raffman (2010, 517) makes this point.
judgments must respect the framework of the present account of vagueness.\textsuperscript{15} In other words, a meaning theorist is a CRISP with respect to predicates such as ‘meaning,’ ‘extension’ and ‘true.’ Call her a CRISP with respect to a meaning theory, or CRISP\textsubscript{MT}.

A CRISP\textsubscript{F} isn’t automatically a CRISP\textsubscript{MT}. A CRISP\textsubscript{F} is a speaker whose use of ‘F’ in simple sentences of the form ‘Fa,’ ‘not-Fa,’ ‘It’s indeterminate whether Fa,’ etc., must be respected by an adequate meaning theory. Such a theory must invoke semantic license to make the various judgments of CRISP\textsubscript{SF} come out true. A CRISP\textsubscript{F} is thus competent in the sense that she uses ‘F’ competently. But a CRISP\textsubscript{F} might not be a competent meaning theorist: she may be misinformed about other speakers’ use of ‘F’; she may hold incorrect theoretical views about vague meaning; etc. For these reasons, a CRISP\textsubscript{F} shouldn’t be granted any authority about the location of the penumbra defined by the conventional meaning of ‘F.’ Such a penumbra is fixed in accordance with the constitutive thesis stated in section 2: an item \( a \) is in the penumbra of ‘F’ just in case ‘Fa’ would give rise to a diversity of verdicts among CRISP\textsubscript{SF}, that is, verdicts such as ‘Fa,’ ‘not-Fa’ and ‘It’s indeterminate whether Fa.’

Let’s come back to our meaning theorist, whom I will assume is a CRISP\textsubscript{MT}. One of her tasks, when dealing with a vague predicate, is to locate its penumbra. (Meaning accounts don’t typically pronounce on all cases, but we’re concerned here with a

\textsuperscript{15} Such an account is of course controversial, and actual meaning theories might well conflict with it. But my point here should be uncontentious: if contextualism about vagueness is correct, then any adequate meaning theory should accord with it. Shapiro (2006, 140) makes a similar point.
meaning theorist who’s forced to march through all the items of a sorites series.) To perform this task, she’ll invoke the constitutive thesis introduced in section 2: borderline cases are those about which there is a diversity of verdicts among CRISPs. This diversity of verdicts is what forces the meaning theorist to recognize a penumbra between the extension and anti-extension of ‘F.’ But there is no similar pressure on the meaning theorist to recognize borderline cases between the extension and the penumbra of ‘F,’ or between the penumbra and the anti-extension of ‘F.’ This is because there’s nothing in CRISPs’ responses that supports the positing of borderline instances of borderline cases. There’s thus no need for the meaning theorist to admit different kinds of penumbra.16

The meaning theorist is thus entitled to draw sharp boundaries between the extension, penumbra and anti-extension of ‘F.’ But the particular locations of these boundaries are, to a certain extent, arbitrary. The question of where exactly to locate the boundaries is tied to the question of which speakers should be considered CRISPs. Unfortunately, as many have noted, there’s no simple and sharp criterion that settles this question.17 The meaning theorist may start by assuming that all speakers who are generally competent at speaking English are CRISPs with respect to mundane predicates. But this assumption will no doubt need to be revised in order to admit the possibility that some generally competent English speakers are not CRISPs. To put the point differently, requiring that an item be called ‘F’ by all fluent speakers in all contexts

16 Raffman (2005, 23) makes a similar point.

in order to be in the extension of ‘F’ seems excessive, even if we consider only speakers who are fully informed about the item in question. The meaning theorist will thus have to draw lines around the penumbra that will count some speakers as non-CRISPs.

Clearly, this decision is, to an extent, arbitrary: exactly which eccentric uses of ‘F’ should be deemed incorrect is indeterminate. This echoes a point made in section 2: almost all of us are CRISPs with respect to, say, ‘red,’ but some of us aren’t. Who exactly? It’s implausible to think that there would be a unique way to demarcate between those who use ‘red’ competently and those who don’t.\(^\text{18}\)

The meaning theorist’s situation is similar to that of a CRISP\(_F\) who must decide which items to call ‘F’ and which to call ‘not-F’: in both cases, boundaries are stipulated to be at particular locations. A key difference is that a CRISP\(_F\) uses the object-language, whereas the meaning theorist uses a metalanguage. For some item \(x_i\) that falls into the penumbra of ‘F,’ the CRISP\(_F\) can truly utter the object-language sentence ‘\(Fx_i\), but not-\(Fx_{i+1}\)’ Similarly, for some \(x_i\), the meaning theorist can truly utter the metalanguage sentence ‘The sentence “\(Fx_i\)’ is true, but the sentence “\(Fx_{i+1}\)’ is unsettled, or not truth-evaluable.’ However, the meaning theorist can add, ‘“\(Fx_{i+1}\)’ can be truly accepted, or rejected.’ Because the predicate ‘true’ is vague, its meaning doesn’t mandate a sharp boundary, but permits one. On the present account, the vagueness of ‘true,’ as applied to sentences, goes hand in hand with the vagueness of ‘CRISP’: the sentence ‘\(Fa\)’ is in

\(^{18}\text{See Raffman (2010, 517-520) and Sainsbury (1991, 177). Shapiro (2006, chap. 5) writes that the second-order vagueness associated with a predicate ‘F’ turns on the first-order vagueness in the expression ‘competent user of the word “F.”’}
the penumbra of ‘is true’ just in case it is in the penumbra of ‘ought to be accepted by a 
CRISPfα.’

To be sure, the meaning theorist isn’t semantically required (that is, forced by 
the meaning of ‘true,’ ‘extension’ and related terms) to draw sharp boundaries. In this 
respect, she’s like a competent speaker who may truly say, when $a$ in the penumbra of 
‘$F$,’ ‘It’s indeterminate whether $F$.’ But this doesn’t entail that it’s acceptable for the 
meaning theorist to admit higher-order penumbras. As we have seen, there are good 
theoretical reasons to reject such penumbras. First, their existence isn’t warranted by 
ordinary speakers’ judgments. And second, the fine-grained distinctions such 
penumbras involve go against the very phenomenon of vagueness. The only 
theoretically motivated penumbra is thus the first-order one. The fact that higher-order 
penumbras aren’t excluded by the meaning of ‘true’ (and related words) strikes me as a 
plausible. After all, we can imagine vague predicates that have such penumbras. The 
problem with higher-order penumbras is rather that as a matter of fact, our own English 
predicates just don’t seem to involve all the finely delineated boundaries that higher-
order penumbras draw.

4. The Trickle-Down Effect

Contextualism, it should be noted, doesn’t do away with all forms of higher-order 
vagueness. Higher-order vagueness comes in different guises, and some of them are 
unavoidable. Consider the perspective of a meta-theoretician who’s reflecting on the
meaning account proposed by a meaning theorist.\textsuperscript{19} While the meaning theorist is concerned with the truth conditions of sentences of the form ‘$Fa$’ and uses metalinguistic sentences of the form ‘The sentence “$Fa$” is true (false, unsettled),’ the meta-theoretician is concerned with the truth conditions of metalinguistic sentences of the form ‘The sentence “$Fa$” is true (false, unsettled),’ and is thus speaking a meta-metalanguage. From the meta-theoretician’s perspective, the precise locations of the particular boundaries drawn by a meaning theorist are arbitrary: an equally adequate meaning theory could have drawn the boundaries at slightly different places.

Although there are items that any adequate meaning theory must place into the extension of a vague predicate ‘$F,$’ and items that it must place into the penumbra of ‘$F,$’ there’s a penumbra between these two sets. Hence, the meta-theoretician admits that for some items $x$, the metalinguistic sentence ‘The sentence “$Fx$” is true’ is unsettled, because of the vagueness of the truth predicate. However, thanks to semantic license, ‘The sentence “$Fx$” is true’ can be truly accepted or rejected by a meaning theorist. Now, just like the first-order penumbra admitted by the meaning theorist, the second-order penumbra admitted by the meta-theoretician may have sharp boundaries. These considerations also apply to higher orders of vagueness: from a meta-meta-theoretical point of view, it should be recognized that the precise locations of the sharp boundaries drawn by the meta-theoretician are arbitrary, and so on.

\textsuperscript{19} For expository purposes, it’s useful to assume that the meta-theoretician and the meaning theorist are two different people. But this assumption is of course not mandatory.
Contextualism thus acknowledges the higher orders of vagueness that unavoidably arise when one ascends to the metalanguages. However, these higher orders of vagueness are much less problematic than those admitted by the traditional picture presented at the beginning of the paper, for they don’t “trickle down” to the first order. According to the traditional picture’s three-fold partition, sentences of the form ‘\(Fa\)’ can be true, false, or neither true nor false. Since the third possibility is due to first-order indeterminacy, let’s abbreviate it as \(\text{Ind}_1\). Now, consider the metalinguistic sentence ‘The sentence “\(Fa\)” is true.’ Since the truth predicate is vague, sentences of this form can also be true, false, or neither true nor false. This second-order indeterminacy forces the introduction of an additional penumbra at the first order: if the sentence ‘The sentence “\(Fa\)” is true’ is neither true nor false, then the sentence ‘\(Fa\)’ is neither true nor \(\text{Ind}_1\) (since if ‘\(Fa\)’ were \(\text{Ind}_1\), ‘The sentence “\(Fa\)” is true’ would be false). Let’s call this new value that trickles down from second-order indeterminacy \(\text{Ind}_2\). Third-order indeterminacy similarly forces the introduction of another value for ‘\(Fa\),’ call it \(\text{Ind}_3\), and so on.\(^{21}\) This leads to the highly unappealing consequence, discussed earlier,

\(^{20}\) ‘\(\text{Ind}_1\)’ indicates either a third truth-value or the lack of a truth-value (or truth-value gap).

\(^{21}\) See Keefe (2000, 120-121), Tye (1990, 554-555) and (Wright (1996a, 232) for a similar picture. As Hyde (2008, 197-201) points out, this doesn’t force one to admit infinitely many truth-values, for one can admit truth-value gaps instead of additional truth-values. However, both options unappealing entail extremely fine distinctions that go against the phenomenon of vagueness.
that the truth conditions of the sentence ‘\(Fa\)’ itself contain an infinite number of penumbras.

Contextualism avoids this unattractive consequence, for it doesn’t let higher-order vagueness trickle down to lower orders. On this view, any sentence that’s unsettled because of semantic indeterminacy can be truly uttered or denied, given semantic license. Although the sentence itself lacks a truth-value, specific utterances of it may have truth-values. To make things vivid, let’s assume the following data:

(i) All speakers would call items lower than #850 ‘\(F\);

(ii) 99% of speakers would call item #850 ‘\(F\);

(iii) 97% of speakers would call item #900 ‘\(F\);

(iv) Between roughly #900 and #1,000, speakers’ judgments are diverse.

Let’s suppose that the cut-offs proposed by meaning theorists for the extension of ‘\(F\)’ are all (roughly) between #850 and #900. Hence, while all meaning theorists would place item #925 in the penumbra of ‘\(F\),’ some would place item #875 in the default extension of ‘\(F\),’ and others would place it in the penumbra of ‘\(F\).’

Consider now the metalinguistic sentence ‘The sentence “Item #875 is \(F\)” is true.’ This sentence is unsettled, that is, it’s in the penumbra of ‘true.’ (This is because, given the constitutive thesis of section 2, an item is borderline ‘\(F\)—in this case, borderline ‘true’—if and only if CRISPs\(_F\) would make different judgments about whether the item is an ‘\(F\).’) But given semantic license, a meaning theorist may either (truly) say, ‘The sentence “Item #875 is \(F\)” is true,’ or (truly) say, ‘The sentence “Item #875 is \(F\)” isn’t true.’ The first option places item #875 in the extension of ‘\(F\)’ and thus deems the
sentence ‘Item #875 is $F$ ‘true.’ The second option places item #875 in the penumbra of $F$ and deems the sentence ‘Item #875 is $F$ ‘unsettled.’ Neither option introduces a new truth-value for the sentence ‘Item #875 is $F$.’

Here’s another way to look at the issue. The vagueness of the predicate $F$ entails that some item, say, #925, is such that the literal meaning of $F$ and the facts about item #925 don’t determine a truth-value for the sentence ‘Item #925 is $F.$’ Item #925 is thus in the penumbra of $F,$ and semantic license allows a speaker to attach a content to $F$ that makes his utterance of ‘Item #925 is $F$’ (or ‘Item #925 is not $F$’) true. Similarly, the vagueness of ‘true’ entails that the literal meaning of ‘true,’ together with the facts about speakers’ use of ‘Item #875 is $F,$’ doesn’t determine a truth-value for the sentence ‘The sentence “Item #875 is $F$” is true.’ This entails that the sentence ‘Item #875 is $F$’ is in the penumbra of ‘true,’ but semantic license allows a meaning theorist to attach a content to ‘true’ such that she can truly utter ‘The sentence “Item #875 is $F$” is true’ (or ‘The sentence “Item #875 is $F$” is not true’). Hence, the indeterminacy of ‘The sentence “Item #875 is $F$” is true’ doesn’t yield a new kind of indeterminacy for ‘Item #875 is $F.$’ More generally, for any $x$ between #850 and #900, the indeterminacy of ‘The sentence “$Fx$” is true’ doesn’t produce an additional penumbra for ‘$Fx.$’

But can’t a meaning theorist say, ‘It’s unsettled (or indeterminate) whether the sentence “Item #875 is $F$” is true,’ in the same way that a CRISP$_F$ can truly say, ‘It’s indeterminate whether item #925 is $F?$’ As I pointed out in the previous section, if ‘Item #875 is $F$’ is in the penumbra of ‘true,’ the meaning of ‘true’ and the facts about speakers’ use of ‘Item #875 is $F$’ don’t force a meaning theorist to decide on a truth-
value for ‘The sentence “Item #875 is $F$” is true.’ However, as I wrote there, the meaning theorist has good theoretical reasons not to deem ‘The sentence “Item #875 is $F$” is true’ ‘unsettled’ and introduce an additional truth-value for the sentence ‘Item #875 is $F$.’ First, this new truth-value isn’t warranted by ordinary speakers’ judgments. Second, the fine-grained distinctions that it draws go against the very phenomenon of vagueness.

A little reflection on the brand of contextualism I’ve defended here shows why this result shouldn’t be surprising. The indeterminacy in the truth conditions of ‘The sentence “Item #875 is $F$” is true’ comes from a recognition that the sharp demarcation drawn by a meaning theorist between the extension of ‘$F$’ and its penumbra is arbitrary: it could have been drawn at a slightly different location. Hence, what the indeterminacy of the sentence ‘The sentence “Item #875 is $F$” is true’ means is that ‘Item #875 is $F$’ may be deemed either ‘true’ or ‘unsettled’ by a meaning theorist. It doesn’t mean that ‘Item #875 is $F$’ should be deemed something other than ‘true’ and ‘unsettled.’ In other words, any reasonable meaning theorist would recognize that the facts about speakers’ use of sentences of the form ‘$Fa$’ don’t determine a sharp boundary between the extension of ‘$F$’ and its penumbra. But this means not that the boundary between the extension of ‘$F$’ and its penumbra is blurry, but that it is arbitrary and (thus) relative to a particular meaning theory. This relativity to a meaning theory is reflected in the fact that the sentence ‘The sentence “$Fx$” is true’ is unsettled, when $x$ is between #850 and #900: to hold that the sentence ‘The sentence “$Fx$” is true’ is unsettled is to hold that it’s up to speakers, i.e., meaning theorists, to utter it or deny it. Hence, second-order indeterminacy doesn’t trickle down and force the introduction of a new penumbra in
the truth conditions of sentences of the form ‘Fx.’ Unlike the traditional picture, contextualism isn’t committed to holding that the truth conditions of ‘Fx’ contain infinitely many penumbras.

5. The D Operator

The D operator, where D stands for ‘definitely’ or ‘determinately,’ is generally regarded as a way of expressing vagueness in the object-language. It may be thought that the introduction of this operator in the object-language would cause problem for contextualism. If any order n of vagueness can be expressed by n iterations of this operator, then it would seem that, after all, contextualism cannot avoid a trickling-down of higher orders of vagueness. In this section, I will show why this isn’t the case. Doing so will also allow for further clarification of the contextualist account I defend.

According to semantic accounts of vagueness such as mine, vagueness is due to semantic indeterminacy. On these views, it’s thus natural to stipulate that ‘DFa’ is true if the meaning of sentence ‘Fa’ and the facts about the world entail that ‘Fa’ is true; otherwise ‘DFa’ is false.22 This entails that if ‘Fa’ is true, then so is ‘DFa’; however, if ‘Fa’ is neither true nor false, ‘DFa’ is false. Now, if a predicate ‘F’ is vague, there shouldn’t be a sharp boundary between things that are definitely F and things that are definitely not F. In other words, there should be no xi such that DFx; and D~Fx_i,1. Or, to put it differently, there should be items x’s such that ~DFx and ~D~Fx. When it contains D, the object-language has the resources to describe items in the penumbra: if a is in the

---

penumbra of $F$, instead of saying, in the metalanguage, that ‘$Fa$’ is neither true nor false, we can say, in the object-language, that $\neg DFa$ and $\neg D\neg Fa$.

But the $D$ operator is typically thought to be vague. This means that there shouldn’t be any sharp boundary between items that are $DF$ and items that are $\neg DF$. In other words, there should be items $x$’s such that both ‘$DFx$’ and ‘$\neg DFx$’ are neither true nor false. This can be expressed in the object-language by saying that there are items $x$’s such that $\neg DDFx$ and $\neg D\neg DFx$. (Similarly, an item $x$ in the penumbra between $D\neg F$ and $\neg D\neg F$ is one such that $\neg DD\neg Fx$ and $\neg D\neg D\neg Fx$.)

More penumbras are introduced when we move to higher orders of vagueness, yielding extremely fine-grained distinctions among borderline cases of different orders that can all be described in the object-language. One way to appreciate the unsavory character of this consequence is to consider an extremely large, but finite sorites. If the series is finite, it will run out of instances of borderline cases between some categories. Hence, for some large value of $n$, there will be no borderline cases between items that are $D^nF$ and items that are $\neg D^nF$. This entails that two adjacent items in the series will be

---

23 This is one way to understand the “no sharp boundaries” thesis. As Wright puts it, “no sharp distinction may be drawn between cases where it is definitely correct to apply such a predicate and cases of any other sort” (1996b, 155). See also Field (2008, 103), McGee and McLaughlin (1995, 228-229), Shapiro (2006, 126-127) and Soames (2003, 136).

24 Keefe (2000, 210) resists this formalization of second-order vagueness into the object-language.
such that one is $D^nF$ and the other is $\sim D^nF$. This means, for example, that if we plucked one hair from the head of a certain man, this man would go from being, say, $\sim D^{1000}\text{bald}$ to being $D^{1000}\text{bald}$. This is very odd.\(^{25}\)

This is, under a different guise, the trickle-down effect discussed in section 4, for it results from the trickling down of higher orders of vagueness into the object language. So the solution I will propose here is in line with what I said in section 4: contextualism isn’t forced to admit infinitely many penumbras expressible in the object-language. Recall how $D$ is defined: the sentence ‘$DFa$’ is true if the sentence ‘$Fa$’ is true; otherwise the sentence ‘$DFa$’ is false. Now, the key question is whether there are, on my brand of contextualism, items that are neither $DF$ nor $\sim DF$. The answer is ‘no.’ As I explained in section 3, a meaning theory can draw a sharp boundary between conditions that make ‘$Fa$’ true and conditions that make ‘$Fa$’ unsettled. And in the same section, I argued that there are good theoretical reasons why a meaning theory should draw such a sharp boundary. This entails that for, say, meaning theory $TM_1$, there’s a sharp boundary between items that are $DF$ and items that are $\sim DF$. In other words, according to $TM_1$, there’s no item $x$ such that ‘$DFx$’ is unsettled: every item $x$ is such that ‘$DFx$’ is either true or false. But since ‘$DDFx$’ is true if ‘$DFx$’ is true, and false otherwise, ‘$DDFx$’ has the same truth conditions as ‘$DFx$.’ And so do ‘$DDDFx$,’ ‘$DDDDFx$,’ etc.

For $TM_1$, there are only three sets of items: $x$’s such that $DFx$—i.e., $x$’s such that ‘$Fx$’ is true; $x$’s in the penumbra, which are such that neither $DFx$ nor $D\sim Fx$—i.e., $x$’s such that ‘$Fx$’ and ‘$\sim Fx$’ are neither true nor false (i.e., unsettled); and $x$’s such that $D\sim Fx$—i.e.,

x’s such that ‘Fx’ is false (and ‘~Fx’ is true). There is a sharp boundary between things that are DF and things that are neither DF nor D~F, and a sharp boundary between items that are D~F and things that are neither DF nor D~F. Hence, for every n, ‘DnFa’ is true iff ‘DFa’ is true, and ‘DnFa’ is false iff ‘DFa’ is false. Higher orders of vagueness are thus not expressible in the object-language.

One might perceive a tension here. It’s implausible to think that for every item x, the thoughts and practices of speakers of the language regarding ‘F’, on which the meaning of ‘F’ supervenes, determine whether the predicate ‘true’ applies to the sentence ‘Fx.’ In other words, there should be items x’s such that it is indeterminate whether the sentence “Fx” is true is true. Call this second-order indeterminacy.26 Shouldn’t second-order indeterminacy entail the existence of a penumbra between items that are DF and items that are ~DF? No. As I wrote in the previous section, second-order indeterminacy entails not that there’s no sharp boundary between items that are DF and items that are ~DF, but that this boundary is relative to a meaning theory.

Consider a meaning theory TM1 that draws a sharp boundary between items that are DF (i.e., x’s such that ‘Fx’ is true) and items that are ~DF (i.e., x’s such that ‘Fx’ is unsettled). But because of second-order indeterminacy, the boundary set by meaning

26 First-order indeterminacy is the fact that it’s not the case that for every item x, the thoughts and practices of speakers of the language determine whether the predicate ‘F’ applies to x; in other words, the fact that there are items x’s such that it’s indeterminate whether the sentence ‘Fx’ is true.
theory \( TM_1 \) is, to an extent, arbitrary. The location of this boundary is stipulated, in the sense that no precise boundary is determined by the meaning of ‘true’ and the thoughts and practices of speakers regarding the predicate ‘\( F \).’ This means that another adequate meaning theory \( TM_2 \) may locate the boundary between items that are \( DF \) and items that are \( \sim DF \) elsewhere. Second-order indeterminacy entails that the location of this boundary is relative to a meaning theory; however, it doesn’t entail that there are items that are neither \( DF \) nor \( \sim DF \). To put it differently, what counts as being determinately \( F \) varies from one meaning theory to another, but each meaning theory determinately fixes what is ‘determinately \( F \).’

The unsavory consequence described above is thus avoided. The argument needed to generate it doesn’t get off the ground. The key premise of this argument, according to which there are items \( x \)’s such that ‘\( DFx \)’ is neither true nor false, is false: relative to any given meaning theory, for every \( x \), ‘\( DFx \)’ is either true or false.

Contextualism also avoids other paradoxes of higher-order vagueness. For example, Crispin Wright (1992, 131) shows that the assumption that there’s no sharp demarcation between items that are \( DDF \) and items that are \( D\sim DF \)\(^{27} \) (together with a number of other assumptions) leads to a contradiction. But I reject this assumption. On my contextualist account, every meaning theory draws a sharp line between items that are \( DF \) and items that are \( \sim DF \), and between items that are \( DDF \) and items that are \( D\sim DF \). Delia Graff Fara’s (2003) argument is similar to Wright’s, and also leads to a

\(^{27}\) More specifically, the assumption that \( D\sim(\exists x)(DDFx_i \& D\sim DFX_{i+1}) \).
contradiction. Her argument assumes higher-order gap principles of the form $DD^nF_{x_i} \rightarrow \neg D^nD_{x_i+1}$. Contextualism is also immune to her argument, for it rejects these principles. For every meaning theory, there’s an item $x_i$ such that both $‘DD^nF_{x_i}’$ and $‘D^nD_{x_i+1}’$ are true. This item is no other than the item $x_i$ for which $‘DF_{x_i}’$ and $‘\neg DF_{x_i+1}’$ are both true. Timothy Williamson (1994, 160-161) argues that even if we suppose that $D$ is vague, we can define an operator $D^*F_a$ as the infinite conjunction $DF_a \& DDF_a \& DDDDF_a \&…$, and show that $D^*$ is non-vague, that is, $D^*F_a \rightarrow D^*D^*F_a$ holds. This argument presents no problem for contextualism, since I deny that $D$ is vague. More specifically, on every meaning theory, $DF_a \rightarrow DDF_a$ holds.

6. Conclusion

The two key components of the indexical contextualist account defended here are its endorsement of semantic license and its rejection of the principle of tolerance. Appeal to semantic license allows us to respect the diversity of responses borderline cases elicit from different speakers. Furthermore, semantic license, together with a rejection of tolerance, lays the ground for a plausible treatment of higher-order vagueness that’s immune to the trickle-down effect and to other paradoxes of higher-order vagueness.

References


---

28 See Shapiro (2006, 125-127) for a similar argument.


