

## 1: CiteSeerX " Contextual Effects on Vagueness and the Sorites Paradox: A Preliminary Study

*In the s, vagueness and the Sorites paradox came to be perceived as a central problem in metaphysics, and received growing attention in the philo- sophical literature.*

Curiously, the paradox attracted little subsequent interest until the late 19th century. Marxist philosophers in the neo-Hegelian tradition, like Plekhanov [ In this way some Marxists sought to establish the triumph of the dialectic. Meanwhile, in Anglo-American philosophy, formal logic regained its central place, and its classical formalisation left no room for the vagueness of natural language. Vagueness and the associated paradox were seen as lying beyond the scope of logic and so posing no challenge to it. Different Formulations of the Paradox At least three conditions must be met for an argument to be an instance of the sorites paradox. An incremental difference is supposed to guarantee that if a vague predicate applies to one of a pair of neighbors, it applies equally to the other. The paradox is often presented in the conditional form discussed above. Then the paradox can be represented most simply this way, using Modus Ponens: Another version of the puzzle is a variant of the inductive form. Then we can schematize the latter reasoning this way: For convenience in what follows, most of the examples are framed in terms of the conditional or inductive forms of the paradox. Of course, an adequate resolution of the sorites will presumably need to disarm all versions of it. Here it is framed in terms of the hypothetical classifications that would be made by a competent speaker proceeding step by step along a sorites series. As will emerge, the forced march sorites plays an important role in several treatments of the paradox. It is worth noting that the popular definition of vagueness in terms of soriticality e. If the sorites is a resolvable fallacy, as most theorists of vagueness believe, then vagueness is not after all a source of paradox. Maybe someone will say that even after the correct diagnosis of the puzzle has been discovered, the argument will remain a paradox because it will still appear to consist in unimpeachable reasoning from true premises to a false conclusion. But such a view makes vagueness far too contingent a property; for all we know, once we have discovered the proper solution to the puzzle, the major premise will no longer appear true. It may appear true to the uninitiated, but this too would be a dubious way to define vaguenessâ€™viz. If a sorites argument is a fallacy, a vague predicate cannot be correctly employed in it. Is the criterion supposed to be that a vague predicate is a term which, when employed incorrectly, appears temporarily to the uninitiated? Responses to the Paradox As with any paradox, four broad types of response appear to be available. Alternatively, one might accept that the paradox is a legitimate argument to which logic applies, but then deny its soundness by either rejecting some premise s , or The most drastic response would be to embrace the paradox and conclude that vague terms are either incoherent or vacuous. In what follows, we consider the major philosophical treatments of the sorites and the ways in which they have employed these strategies to dissolve the puzzle. A key attribute of the ideal language is said to be its precision; hence the vagueness of natural language, including all soritical terms, is a defect to be eliminated. Logic simply does not apply to them. However, with the demise of ideal language doctrines and subsequent revival of interest in ordinary language, vagueness was no longer regarded as a superficial or easily dispensable feature. If logic was to have teeth, it had to apply to natural language as it stands; soritical expressions are unavoidable and the paradox must be faced head on. Responses of type 2 do just this and are the most common family of responses. Logic is seen as applicable to natural language, in particular to the paradoxical argument, and the latter is diagnosed as resting on a faulty premise. In contrast, epistemicists think that vagueness is just a form of ignorance: In fact, heaps are sharply divided from non-heaps, and tall heights are sharply divided from average ones, but we cannot discover where those divisions lie e. On this view, the sorites paradox is dispatched immediately: And bivalence is preserved: What facts about the world or natural language or competent speakers could serve to fix sharp boundaries for vague words? According to Williamson e. Insofar as the use of a vague term varies across time, its boundaries may be unstable. Another possible route to knowledge of the boundary locations is blocked by the fact that our knowledge of the application of a vague term is inexact. Inexact knowledge is governed by margin for error principles, viz. Consequently, if we classify the former shade as blue, that classification is correct by luck, and so does not constitute knowledge. On the plausible assumption that seeing

that something  $x$  is blue is sufficient for knowing that  $x$  is blue, it follows that some blue things are such that we cannot see that they are blue, even under ideal viewing conditions. The virtues and the appeal of the epistemic theory are significant, and it has earned its share of supporters. At the same time, the view may be hard to accept. Even its proponents grant that epistemicism is intuitively implausible; and it seems to multiply mysteries. As a first approximation, the epistemicist says that vague terms have unknowable sharp boundaries that are fixed by an unknown function of their unknowable  $i$ . However, it seems that the function too must be unknowable, not just unknown; for how could we recognize it if we came across it? Graff Fara defends a different strain of epistemicism Graff , Fara As Stanley puts it, when we look for [a] boundary of the extension of [a vague term] in its penumbra, our very looking has the effect of changing the [extension] of the vague expression so that the boundary is not where we are looking. Retention of classical logic and bivalence is supposed to be a chief advantage of the epistemic approach over other views  $e$ . Indeed, because bivalence is widely supposed to entail sharp boundaries, many theorists of vagueness believe that, for all intents and purposes, epistemicism is the only theory that can employ a bivalent semantics  $e$ . Starting in the later part of the 20th century, a number of non-classical logics and semantics have been developed for vague terms, each advancing its proprietary resolution of the sorites paradox. The extent of the proposed logical innovation varies. Most semantic theories of vagueness and treatments of the sorites conceive of the application of a vague term as indeterminate in a certain range of cases. In what follows we review some of the major semantic treatments of the paradox. As a result, it endorses a non-bivalent logic that, at least on the face of it, retains the classical consequence relation and classical laws while admitting truth-value gaps. On this view, the challenge posed by the sorites paradox can be met by logical revision in the metatheory alone, and a type 2 response is advocated. Unlike the epistemic conception of vagueness, a semantic conception will treat the apparent semantic indeterminacy of vague predicates as real. The positive extension of a predicate is given by those values to which the predicate definitely applies, the negative extension by those values to which the predicate definitely does not apply, and the remaining penumbral cases are values to which the predicate neither definitely does, nor definitely does not, apply. Consistently with a view of vagueness as a semantic deficiency  $e$ . Applying the predicate to something in its positive extension results in a super-true sentence, while applying it to something in its negative extension results in a super-false sentence. Equating super-truth with truth simpliciter and super-falsity with falsity simpliciter then results in a non-bivalent logic with borderline cases giving rise to truth-value gaps. With validity then defined in the usual way as preservation of truth simpliciter , the supervaluationist account of validity coincides with classical validity. In particular, treating laws as zero-premise arguments, supervaluationism preserves all classical laws. Thus, despite its abandonment of bivalence, supervaluationism validates the law of excluded middle. As a consequence, supervaluation semantics is not truth-functional. It countenances instances of true disjunctions neither of whose disjuncts is super true. Conjunction and the conditional exhibit analogous non-classical features. Since all of the forms taken by the sorites paradox are classically valid, they are also supervaluationally valid. The conclusion of the conditional form using Modus Ponens is resisted by noticing that some conditional premise fails to be true; though, admittedly, none is false. The conditional sorites is valid but unsound. More revealing is the diagnosis of the version employing a universal major premise. This version is also deemed unsound due to the failure of one of the premises—the universal premise. The universally quantified conditional is not true; in fact it is false. While there is no one conditional premise that is false, it is nonetheless true according to supervaluation theory that some conditional is. What supervaluation semantics claims to provide is a formal account of how, contrary to appearances, such a conclusion could be true; it is true since true no matter how one resolves the indeterminacy of the vague term involved  $i$ . In this way the sorites paradoxes are said to be defused. With vagueness viewed as a semantic phenomenon, classical semantics is no longer appropriate as a semantics of vague language and supervaluation semantics is proposed in its place. One immediate concern facing this solution is the fact that it ultimately treats the mathematical induction and line-drawing forms of the sorites in the same manner as the logically conservative epistemic theory does. Supervaluationists respond by denying that the conclusion of the line-drawing sorites expresses the existence of a sharp boundary. Whilst it is true that there is some cut-off point, there is no particular point of which it is true that it is the cut-off point. Since

only the latter sort of cut-off point is taken to be a sharp boundary, no commitment is made to such a boundary of which we are ignorant contra the epistemic theorist. With this explanation, however, doubts arise as to the adequacy of the logic. In effect, the counterintuitive aspects of the epistemic theory are avoided only at a cost to other intuitions. At this point the supervaluationist might seek to explain these semantic anomalies by showing how they are mandated by a proper understanding of the underlying phenomenon of vagueness. More exactly, the suggestion is that a view of vagueness as merely semantic, not reflecting any underlying phenomenon of metaphysical vagueness. Fine appears to promote this representational view when defending the law of excluded middle, for example, and Varzi amongst others also defends supervaluationism in this way. If successful, such a defense would also provide a principled justification of the common de facto linkage of supervaluation theory and a representational view of vagueness. If this explanation is to be pursued, then the formal machinery of supervaluationism solves the paradox only in conjunction with a denial of metaphysical vagueness. The metaphysical debate is ongoing. Keefe, on the other hand, opts for a risky pragmatic defense: Williamson points to two further problems apparently afflicting the supervaluationist account. The logic of the extended language is decidedly non-classical. Dummett [] offers an alternative definition of validity that does not encounter this problem, but Williamson raises other objections to it. However, Graff Fara [] shows that if we strengthen the notion of consequence to penumbral consequence, we get failures of these principles even in the absence of a determinately operator. Second, problems arise also with regard to the phenomenon of higher order vagueness. In accommodating higher order vagueness, the supervaluationist must admit that his proffered concept of truth, viz. Contrary to claims by supervaluationists, then, truth is not super-truth see Keefe for a rebuttal. For discussion and criticism from a supervaluationist perspective see Keefe

*vagueness-logics are theoretically superfluous for natural language semantics. Vagueness, as we shall see, is a straightforward consequence of context-dependence of interpretation and.*

Probabilistic semantics and pragmatics: Uncertainty in language and thought by Noah D. Language is used to communicate ideas. Ideas are mental tools for coping with a complex and uncertain world. Thus human conceptual structures should be key to language meaning, and probability—the mathematics of uncertainty—should be indispensable for describing both language and thought. Indeed, probabilistic models are enormously useful in modeling human cognition Ten-enbaum et al. With a few early exceptions e. Adams, ; Cohen, b , probabilistic tools have only recently been used in natural language semantics and pragmatics. In this chapter we synthesize several of these modeling ad-vances, exploring a formal model of interpretation grounded, via lexical se-mantics and pragmatic inference, in conceptual structure. Flexible human cognition is derived in large part from our ability to ima-gine possibilities or possible worlds. A rich set of concepts, intuitive theories, and other mental representations support imagining and reasoning about pos-sible worlds—together we will call these the conceptual lexicon. We posit that Show Context Citation Context There are several related approaches that have been discussed in previous work. Much previous work in probabilistic semantics has a strong focus on vagueness and degree semantics: There are also well-known probabilistic semantic theories of isolated phenomena such as Adjectival vagueness in a Bayesian model of interpretation. Goodman , " Abstract We derive a probabilistic account of the vagueness and context-sensitivity of scalar adjectives from a Bayesian approach to communication and interpretation. We describe an iterated-reasoning architecture for pragmatic interpretation and illustrate it with a simple scalar implicature exampl We describe an iterated-reasoning architecture for pragmatic interpretation and illustrate it with a simple scalar implicature example. The Bayesian approach has a number of explanatory virtues: Edgington , proposes an attractive unified approach to the Sorites, Lottery, and Preface paradoxes. According to Edgington, these puzzles are all explained by a generalization of classical logic which has the formal structure of the probability calculus, with an accompanying generalized notion of valid reasoning. She gives a number of strong arguments to the effect that a degree-based theory of vagueness with the formal structure of probabilities is preferable to one with the structure of classical fuzzy logic. Please do not cite or quote without permission. It is taken for granted in much of the literature on vagueness that semantic and epistemic approaches to vagueness are fundamentally at odds. Conversely, if an epistemic explanation suffices, then there is no reason to depart from the familiar simplicity of classical bivalent semantics. I question this assumption, showing that there is an intelligible motivation for adopting a many-valued semantics even if one accepts a form of epistemicism. The resulting hybrid view has advantages over both classical epistemicism and traditional manyvalued approaches. Thus, while an epistemic approach to vagueness is not logically incompatible with the view that truth comes in degrees, it is usually assumed that there could be no motivation for combining the two. Show Context Citation Context It is far from clear that this can be done. Sorites without vagueness I: Classificatory sorites by Ehtibar N. Dzhafarov - Theoria , " An abstract mathematical theory is presented for a common va-riety of soritical arguments, treated here in terms of responses of a system, say, a biological organism, a gadget, or a set of normative linguistic rules, to stimuli. If stimulus effects are properly defined i. Nor can it be formulated if the response properties considered are not true effects, i. This paper addresses the question why language is vague. A novel answer to this question is proposed, which complements other answers suggested in the literature. It claims that vagueness can facilitate search, particularly in quasi-continuous domains such as physical size, colour, or tem To the extent that it supports degreebased models, ranging from Fuzzy Logic or probabilistic logic e. Vagueness has always been a problem for philosophers. This is true in a number of ways. One obvious way is that the vagueness inherent in much philosophical discourse has always lead to problems in the interpretation and criticism of philosophical arguments. This is a way in which the vagueness of l This is a way in which the vagueness of language Measuring and modeling truth by Nicholas J. Philosophers, linguists and others interested in problems

concerning natural language frequently employ tools from logic and model theory. The question arises as to the proper interpretation of the formal methods employed of the relationship between, on the one hand, the formal languages and their set-theoretic models and, on the other hand, the objects of ultimate interest: Two familiar answers to this question are descriptivism and instrumentalism. More recently, a third answer has been proposed: This paper seeks to clarify and assess this view of logic. The conclusion is that we can successfully adopt the modeling perspective on a given piece of logical machinery only if we have to hand some other machinery to which we take the descriptive attitude. Thus, *The Semantics and Metaphysics of Vagueness: A Contextualist Approach* by Michael J. Vagueness is blamed for the Sorites Paradox. But the nature of vagueness is not well understood. However, it is unclear what kind of semantic theory of vagueness is immune to this charge. I explore the boundary metaphor and find that vague predicates enjoy a peculiar kind of context-sensitivity. This leads to a distinction between m-boundaries and c-boundaries. Vague predicates cannot draw m-boundaries but can draw c-boundaries. This result, along with appreciating the peculiar sense in which vague predicates are context-sensitive, clears the road for a sketch of a solution to the Sorites Paradox: Finally, the question of whether there is worldly vagueness in addition to representational vagueness is explored. It is found that puzzles purportedly concerning worldly vagueness can be resolved in just the way puzzles involving representational vagueness can.

## 3: CiteSeerX Citation Query Vagueness by degrees

*The Sorites Paradox Resolved* In this section we want to demonstrate for the case of the Sorites paradox that seeming vagueness can be accounted for in terms of context-dependence. For the advantage of greater clarity we shall consider the Sorites in the following form and not in the classical formulation of Eubulides: premisses: (i) 1 is a.

Vagueness and Linguistics by Robert Van Rooij " An expression is vague, if its meaning is not precise. For vagueness at the sentence-level this means that a vague sentence does not give rise to precise truth conditions. This is a problem for the standard theory of meaning within linguistics, because this theory presupposes that each sentence has a precise meaning. This is a problem for the standard theory of meaning within linguistics, because this theory presupposes that each sentence has a precise meaning. Implicit versus explicit comparatives by Robert Van Rooij " It is natural to assume that the explicit comparative "John is taller than Mary" can be true in cases the implicit comparative "John is tall compared to Mary" is not. This is sometimes seen as a threat to comparison-class based analyses of the comparative. In this paper it is claimed that the distinction between explicit and implicit comparatives corresponds to the difference between strict weak orders and semi-orders, and that both can be characterized naturally in terms of constraints on the behavior of predicates among different comparison classes. This paper brings together several approaches to vagueness, and ends by suggesting a new approach. The common thread in these approaches is the crucial role played by context. In Section 2, we treat game-theoretic rationales for vagueness, and for the related concepts of ambiguity and generality. This paper gives a preliminary report on one part of a larger project to develop a dynamic treatment of certain types of vagueness see Barker to appear. Although many people have studied how vague expressions depend on context for their interpretation, comparatively few have studied how the use of a vague expression modifies the context against which future expressions get evaluated. In recent years, however, dynamic theories of context update have made considerable progress in describing and explaining complex phenomena such as presupposition and anaphora. I will argue that extending an explicitly dynamic perspective to the domain of vague predicates can lead to significant new insights into the nature of vagueness in general and the semantics of gradable adjectives and their modifiers in particular. Forthcoming in Philosophical Topics by Delia Graff " Saul Kripke pointed out that whether or not an utterance gives rise to a liar-like paradox cannot always be determined by checking just its form or content. Something similar may be said about the sorites paradox. Formal semantic analysis aims to address two related questions. One is the question of semantic representation. That is, how can we represent the meaning of a sentence to capture native speaker intuitions about truth conditions, entailment, anaphora, contextual felicity, coherence, etc? The other is the question of semantic composition. That is, how is the semantic representation of a sentence as a whole to be composed from the semantic representations of its parts? This question, in turn, falls into at least three sub-questions. First of all, what is the input structure to compositional rules? e. Or does the syntax first have to parse the whole sentence into a logical form, which only then can serve as the input to compositional rules indirect composition? Secondly, given the relevant input structure, how can we represent the semantic contribution of each lexical item to the semantic representation of the sentence as a whole? And finally, what are the compositional rules that assign semantic representations to syntactic phrases up to and including sentences based on the Show Context Citation Context

## 4: Sorites Paradox and Its Solutions (The Paradox of the Heap)

*Want to learn more about the Sorites Paradox? Check out my interview with philosopher and logician Graham Priest.. The "sorites paradox", or paradox of the heap ("sorites" = "heap" in Greek), goes as follows: imagine we have 0 grains of sand.*

Peter Bosch published in: A Solution to the Sorites Paradox Peter Bosch Department of Philosophy Nijmegen University It is argued in this paper that the vagueness of natural language predicates arises from the fact that they are learned and used always in limited contexts and hence are incompletely defined. A semantics for natural language must take this into account by making the interpretation of predicates context-dependent. It is shown that a context dependent semantics also provides the means for an account of vagueness. These notions are first developed and argued for in abstract terms and are then applied to a solution of the prototype of vagueness puzzles: Introduction For all we know, it was Eubulides the Megarian who invented the well-known paradox of the heap, which may be put as follows<sup>1</sup>: Suppose there is a heap of grain. And suppose that it is true of any heap of grain that it remains a heap after one grain has been removed. If we grant these two premisses, however, we will also have to grant that there is still a heap of grain when, after all grains have been removed one by one, not a single grain is left. This conclusion is plainly unacceptable though both of the premisses would seem to be true and also the rule of modus ponens would seem beyond doubt. But if this reaction in turn leads to the conclusion that formal reasoning in the presence of vague predicates would have to be abandoned, it will be hard to settle for it. In this paper, we do not want to discuss any quarrels one might have with logics of vagueness. Instead, we want to turn to a number of questions which vagueness-logics have turned away from and which are in danger of being obscured: As it happens, one of the results of these considerations will be that vagueness-logics are theoretically superfluous for natural language semantics. Vagueness, as we shall see, is a straightforward consequence of context-dependence of interpretation and can be accounted for by the same means that account for the context-dependence of interpretation in natural language semantics. Nonetheless, as we shall see, there remains an important practical role for vagueness-logics. The Root of Vagueness is Incomplete Definition We may help ourselves to the essential ingredients for a treatment of vagueness from the semantics of Gottlob Frege. The sort of things he attributed impreciseness to are concepts. And concepts, for Frege, are functions from things into the truth-values. Concepts are also the referents *Bedeutungen*, as Frege has it of predicate-expressions. Now, a concept is imprecise or as we shall prefer vague, if and only if it is not defined for each and every argument. When Frege proposed this notion of vagueness But he clearly had a more general conception of vagueness in mind. He wrote, for instance: But Frege not only provides us with a clear notion of vagueness, he also gives us a good idea as to the origin of the disease. He complains about the regrettable habit of mathematicians who define their concepts piecemeal, e. Contradictions thus cannot, in principle, be excluded. Again, we are not in the first instance worried about the actual. Also in the acquisition of our native language we get started with partial explanations of the use of words; in the extreme case, these partial explanations are ostensive definitions<sup>2</sup>. We are shown positive and negative instances and we are told: Rather, we have to pick up the use of an expression from the various accidental concrete applications we happen to come across. Now, these are always applications to a limited number of things, always in different contexts. In response, we build up, as rationalists would probably have it, a system of definitions that can form the basis for our own use of the expressions. And the very fundamental revision of the Frege-Carnap tradition in semantics that is called for in order to account for ostension concepts as the core of natural language is a task that lies still ahead. Bit by bit, we might say, the child who is exposed to those partial explanations witnesses the growth of something more appropriately called a jungle of definitions: Still, as long as we move in our jungle, somehow we seem to be doing alright, communication flows uninhibited. Only when we find ourselves unexpectedly in one of the deserts or are driven out into the ocean, we stand speechless: Take for instance the notorious table that used to haunt Oxford discussions: Do they still fall under our concept of cats? The intuition seems clear: Still, we find this distinction rather too accidental in order to accept it as the basis for a conceptual distinction, and we

would insist that also open texture should fall under the notion of vagueness: But is there not another difference between vagueness and open texture that has to do with the mere limitation of our senses? And should not rather this lack of discriminability be made the basis of vagueness, whereas incomplete definition would rather be what is at the roots of open texture? Now this suggestion would seem to imply that concepts that are tied up immediately with sense-experience are vague by necessity, whereas concepts that are not directly linked to sense-experience are not vague in ordinary use but may have an open texture. Michael Dummett has argued, however, that there can be concepts, immediately linked to sense-experience, that are still not vague. We might construe, for instance, a comparative concept of something being blue by saying that anything is to count as blue that is not discriminably different from the colour given by a particular sample from a particular colour chart. Either, one should think, we can discriminate the colour of a particular surface from the one on our chart, or we cannot. There is no third possibility. With the naked eye or with auxiliary devices? And if without auxiliary devices: If they are, how about the man who is almost blind without them? If glasses are not auxiliary devices, where is the borderline to a magnifying glass or a microscope? Still, we may solve this problem in one or the other pragmatic fashion. Let us suppose we have already done that, in order to take a look at another difficulty that will then arise immediately and that is more important in our present context of discussion. Again, it may only seem a pragmatic problem that, in order to have even quite a small language of comparative predicates and to be able to talk about only very simple things in very simple situations, we would have to carry truckloads of samples with us. But there is more than a pragmatic problem in carrying a copy of the universe with us in order to be able to talk about anything we please. All our concepts would be precise, but we would have to have infinitely many. In fact, we would have to be omniscient: Hence we take it that it is not any limitation of our senses which lies at the roots of vagueness, nor anything that would be specific to experience. Here, as elsewhere, the common problem is that we do not possess complete knowledge of the domain of arguments for which our concepts are to be defined, and thus we cannot provide a complete definition of our concepts. We would thus be relieved from the hypocrisy of having to claim professionally that natural language is inevitably vague, while in every day life we proceed as if all was well and simply rely on precise communication. How then can we account for precise communication? We said earlier that concepts should be regarded as the referents of predicate-expressions. Let us now add that the reference of predicate-expressions is to be seen as depending on the context; i. This view should be plausible already in its own right, independent of any facts about vagueness. When I say that the traffic lights are red I am certainly not using the same concept of being red as in a situation where I say that a tomato is red. Let us further assume that for each concept there is at least one context for which it is completely defined. One such context would ordinarily be the context in which the concept has first been acquired. Bosch for further discussion. Nor would anybody try to introduce a child to the notion of a heap in view of a situation where there are objects ranging from mountains to single grains of sand. But apart from actual introductory contexts there are certainly more contexts for each concept where it is completely defined, i. To assume this is only reasonable, since there are plainly many contexts in which a particular concept could have been acquired by a particular person, next to the context in which that person actually did acquire the concept. Also, there are infinitely many contexts that are identical in all relevant respects to any particular learning context but that differ from the learning context in other respects, irrelevant for the concept at issue. In fact, what matters for the completeness of definition is not the actual context in rebus but the way the speakers and listeners see the context: Objects that are in fact in the actual context but that are not noticed or are not paid attention to by speaker and listener, i. The next assumption we have to make concerns the notion of understanding. Hence they must be employing context-models in respect of which the predicates they are using yield concepts that are completely defined in those context-models. In any ordinary kind of context- model we can imagine for that sort of situation, there would not be one unique object to qualify as a chair. Or, suppose, I ask someone to get a book from my desk, which I left there, and I describe the book as red. If he comes back with three books in various shades of red, plainly, something has gone. Hence, ordinarily, when we find that someone said something vague, we may well not have found the right context-model, that is the one his utterance was assuming. Our context-model would then differ from his in that there are objects represented in our model that

are not is his and with respect to which the relevant concept turns out to be vague. For there is no particular thing, *i*. It is an interactive process and also demands that the speaker adjusts to his audience. If he knows sufficiently well what he is talking about, *i*. He may, for instance, add specifications to his predicates in order to bar the listener from selecting particular unintended concepts that might be a likely choice in view of the situation if the specification 5 is absent. In some places one must add, when ordering a whisky: And in some places one has to add this specification even when one orders a brandy. Note that the above description of vagueness arising in ordinary communication and the corresponding description of how precise communication is possible strictly rest on the assumption of concepts being defined for the limited domain of a particular model at issue. According to the currently still wide-spread view that; concepts should be defined universally and once-and-for-all, precise communication must remain a complete mystery and there would have to be vagueness everywhere. Such is the price one has to pay for complete generality and aprioricity. When speaker and listener have all relevant parts of their context models in common, a fairly ordinary situation in everyday communication, then completely precise communication is possible: Another matter, however, is the question whether a concept turns out vague with respect to a context the speaker did not foresee, *i*. This, we should think, is hardly a matter of precision or vagueness of communication, but rather a matter of. Vagueness Reconstructed as Context-Dependence After the above considerations it would not be very reasonable to insist that concepts, *i*. But since we have explained vagueness, following Frege, as resting on incomplete definition, and since we also have another kind of function, namely predicate-expressions, it might be rather inviting now to swap the claim of vagueness of concepts for the claim that it is predicate-expressions, rather than concepts, that are vague. For somehow, the notion that communication in natural language is vague would seem not to be entirely unfounded. Predicate-expressions would then be incompletely defined in the sense that a predicate does not yield a concept as its value for each and every context. And this claim is indeed correct.

### 5: Sorites Paradox (Stanford Encyclopedia of Philosophy)

*Context is a prominent theme in accounts of the semantics of vagueness. Contextual theories of vagueness have been motivated in part by a desire to disarm skeptical arguments that make use of.*

An interest-relative theory of vagueness by Delia Graff - Philosophical Topics , " Please quote or cite page numbers from published version only. Saul Kripke pointed out that whether or not an utterance gives rise to a liar-like paradox cannot always be determined by checking just its form or content. Something similar may be said about the sorites paradox. An expression is vague, if its meaning is not precise. For vagueness at the sentence-level this means that a vague sentence does not give rise to precise truth conditions. This is a problem for the standard theory of meaning within linguistics, because this theory presupposes that each sentence has This is a problem for the standard theory of meaning within linguistics, because this theory presupposes that each sentence has a precise Against Truth-Value Gaps by Michael Glanzberg , " Many things are neither true nor false: But these things are neither true nor false because they are not the kinds of things that can be either. There are also some things that are apt for being true or false. Preferences vary on exactly what these t Preferences vary on exactly what these things are. Common candidates include utterances, interpreted sentences paired with contexts, and propositions. Can there be something that is apt to be true or false, but fails to be either? This is the question of whether there are substantial truth-value gaps. It has been a persistent idea in the philosophy of language that there are substantial truthvalue gaps. This view was held, at some moments, by Strawson<sup>1</sup> and by Frege. In its own right, the question is deeply involved with some of the very basic issues in the philosophy of language: In this essay, I shall argue that there are no substantial truth-value gaps. Vagueness is standardly opposed to precision. But what does it mean for But what does it mean for these latter expressions to be precise? On first thought it just means that they have an exact mathematical definition. However, if we want to use these terms to talk about observable objects, it is clear that these mathematical definitions would be useless: For this reason, one allows for a margin of measurement error, or a threshold, in physics, psychophysics and other sciences. The assumption that the predicates we use are observational predicates gives rise to another consequence as well. Thus, although by Thomas Bittner, Maureen Donnelly "

### 6: Hold the Context Fixed, Vagueness Still Remains | Patrick Greenough - [www.enganchecubano.com](http://www.enganchecubano.com)

*Abstract. Abstract. Context is a prominent theme in accounts of the semantics of vagueness. Contextual theories of vagueness have been motivated in part by a desire to disarm skeptical arguments that make use of vagueness; another motive is the hope that they might help to resolve the Sorites Paradox.*

Oddly enough, defenders of Contextualism have said very little in reply. Proponents of the objection have tended to assume that this is because no reply is in the offing—the simple objection is taken to be unassailable. In this short paper, we sketch two replies to the simple objection which result in two very different kinds of Contextualism: Epistemicist Contextualism and Radical Contextualism. With these two theories in hand, the simple objection loses its force. For Graff-Fara, the designated contextual parameters are the interests and purposes of the speaker and their conversational participants. For Raffman, the designated parameters concern the psychological states and dispositions of the speaker. For Lewis, Soames, pp. Contextualism and weak tolerance. All extant forms of Contextualism are committed to something like the following principle of weak tolerance: WT It is not the case that: Roughly, WT says that, when considered pairwise, adjacent members of the series are never category different. One of the characteristic symptoms of vagueness is that vague predicates draw no known boundary across their associated dimension of comparison. Roughly, no context in which there is a boundary between saliently similar objects in the series entails no context in which there is a known boundary between those objects. WT is compatible with either view. Boundary-shifting Contextualism and Extension-Shifting Contextualism. BSC says that in every context there is a cut-off. Thus, BSC is a form of epistemicism in that vague predicates draw sharp, bivalent, boundaries. Unlike the epistemicism of Sorensen and Williamson, however, it is constitutive of vagueness that the boundary can shift as a function of changes in the context of utterance see fn. Thus, the following principle is invalid: This latter principle amounts to the claim that there is a cut-off such that it obtains in every context. BSC plus WT entails that the cut-off drawn by a vague predicate is not only unknown but unknowable—at least via the method of inspecting adjacent items. What does BSC say about the standard sorites paradox? Given mathematical induction, it follows that all patches in the series are red. But that contradicts the fact that the last member is not 6 See Greenough, pp. Thus, while all forms of BSC are committed to sharp variant cut-offs, not all forms are committed to classical logic. In order to resolve the paradox, BSC—just like standard epistemicism—holds the major premise to be outright false. But if the major premise is false why did we find it so plausible and so believe it in the first place? Importantly enough, BSC and standard forms of epistemicism differ with respect to this key question. Such a confusion confers plausibility onto the stronger claim—explaining why we come to believe the stronger claim. ST It is not the case that: Again, such a confusion confers plausibility onto the stronger claim—explaining why we come to believe the stronger claim. That is, the major premise of the standard sorites follows from ST. Given classical logic, and the fact that the first member of the series is F and the last member of the series is not-F, then the major premise is outright false and so ST is outright false. The thought is that subjects are typically pre-theoretically unaware of the effect that context has in the determination of the extension of a predicate. Given ESC, in no context of utterance is there a cut-off. Rather, the sorites is taken to exhibit a fallacy of equivocation. And there is a false reading: According to ESC, in no context of utterance is there a cut-off. Thus, classical logic fails given ESC. Given 10 The alert reader will have noticed that this is just to assert ST. But ST classically entails the major premise of the standard sorites. As it turns out, ESC can retain ST without fear of paradox because the classical consequence relation is restricted within contexts given ESC—in particular, the classical least number principle is not valid see main text below. For the special and recondit case of the sorites paradox under which one uses the negation of ST to derive a contradiction, the solution given by ESC is follows: But this jump does not mark a boundary within a context but rather a shift in context. Shapiro defends a form of ESC but, oddly, takes the major premise to be false see Shapiro, p. In Greenough, p. We have resisted this way of presenting matters because extant defenders of BSC e. Graff-Fara represent themselves as taking the major premise to be false and so this premise is not, for Graff-Fara at least, equivocal. A further point of note

is that it is not possible for ESC to co-opt the solution to the sorites posited by BSC under which ST and the major premise are taken to be false. So, in what follows we shall only defend BSC against the simple objection. Some prominent exemplars of the simple objection are: Vagueness remains even when the context is fixed Williamson , p. Fix on a context which can be made as definite as you like in particular choose a specific comparison class: This indicates that we are unlikely to understand vagueness or solve the [sorites] paradox by concentrating on context-dependence Keefe and Smith , p. However, ESC must offer a rather different range of responses to the simple objection than the range of responses that are available to BSC. However, no extant or sensible form of Contextualism invokes that kind of context- sensitivity to make sense of vagueness. Two other symptoms are important. The second symptom is also epistemic: In her , p. Raffman , Shapiro , allow that first symptom of vagueness is a genuine symptom, these theories nonetheless permit a subject to know whether or not a predicate applies across the borderline area—”and so the second symptom of vagueness is not a genuine symptom. This feature of these views issues from the fact that, in borderline cases, whether or not a predicate applies is taken to be a response- dependent matter such that what a competent subject judges to be the case determines what is the case where such a judgment also puts the speaker in a position to know what is the case. Strictly speaking, such a response-dependent conception is not an essential feature of ESC. The two parts of this explanation are, of course, connected. This means that when we employ the very natural method of inspecting adjacent members of the series in order to discover the whereabouts of the boundary we cannot locate the boundary since WT ensures that the boundary can never be where we are looking. Furthermore, the contextual factors which in part go to determine the extension cannot be held fixed through a complete inspection of the series using this method since successively considering adjacent items as pairs inevitably entails a change in those very factors. Under those conditions, the simple objection cannot arise. Even so, this only helps defuse a certain version of the simple objection. Even if the relevant contextual factors cannot be held fixed in the required way, we can introduce a new predicate via stipulation which is intuitively just as vague as the original one but is not sensitive to differences in the context. Heck has a version of this objection as follows: Suppose I say, [in context C0]: Some of the patches are red; call them the reddies. I might ask which is the last of the reddies. In Greenough , pp. The general form of the puzzle then becomes: However, if this is the nub of the simple objection, then a further issue emerges: But given that sorites-susceptibility is a necessary condition of the presence of vagueness then the simple objection lapses since vagueness is no longer present once we hold the context fixed. Perhaps all this shows this that the notion of sorites-susceptibility is too elusive to rely on as a reliable indicator of vagueness. In any case, it turns out that one can defuse the simple objection even if all the predicates in S are taken to be sorites-susceptible and so, for the purposes of argument, we shall assume that these predicates exhibit all three symptoms of vagueness. What replies to the simple objection are in the offing? In brief, this reply runs as follows: Let it also be granted that this predicate-context pair exhibits the first symptom of vagueness such that there is no known boundary between the extension of this predicate and its anti-extension. However, let the explanation for this ignorance be a purely epistemological explanation. One can flesh-out the required epistemological explanation by invoking something like a safety-based account of knowledge to explain our ignorance of the cut- off. On such an account, a belief that p is safe just in case there are no nearby worlds where I form the false belief that p on the same basis see Williamson , ch. Here the thought is that the extension of the predicate-context pair could easily have been different since the boundaries drawn by such predicates are unstable—”even relative to a fixed context see below. Such a story can also serve to explain why the second symptom of vagueness arises. Suppose also that this item lies near to the boundary drawn by the predicate-context pair. Again, the thought is that the extension of the predicate-context pair is unstable relative to a fixed context and so it could have easily been the case that the item failed to belong to the extension of the predicate see below. A hybrid theory of vagueness is thus called for. Call this hybrid theory Epistemicist Contextualism. Is this reply ad hoc? Hybrid theories of vagueness are not uncommon. Ironically, Heck , pp. But then Heck can have no principled complaint with the reply in hand to the simple objection. Sorensen and Williamson are likely to be unmoved by this reply on the grounds that considerations of simplicity and uniformity dictate that a non-hybrid theory of vagueness is called for. Suppose this sentence is true and I

believe it to be so, why does my belief fail to constitute knowledge? If true, this sentence expresses a necessary truth Williamson , p. But since there are no worlds in which the proposition expressed by this sentence is false, then a fortiori there are no nearby worlds in which the proposition expressed by this sentence is false.

### 7: Vagueness in Context - Oxford Scholarship

*Linguistic models of vagueness usually record contexts of possible precisifications. A link between such models and fuzzy logic is established by extracting fuzzy sets from context based word meanings and analyzing standard logical connectives in this setting.*

Want to learn more about the Sorites Paradox? Check out my interview with philosopher and logician Graham Priest. Do we have a heap of sand? Well, what if we add one grain? We obviously still do not have a heap. Okay, what if we add one more? One more after that? No matter how many grains of sand we have, adding just one more will never turn a non-heap into a heap. It says that a small enough change can never alter the applicability of a vague property. Say you have a red shirt. Change the light frequency by an imperceptible amount. Obviously, the shirt is still red. Take someone who is sober. One ml of beer will not make that person drunk. It was invented by Eubulides sometime in the 4th century BCE, when he also invented the Liar and a few other paradoxes. It is arguably the most difficult paradox facing contemporary logic. Logic is supposed to deal in precise terms. Logical systems are precise mechanisms designed to avoid vagueness and ambiguity. Consider the following logical rule: That is a perfectly precise rule. Of course, we can create an idealized logic that does not allow vague properties. The sorites paradox progression gets blocked along with the absurd result. It serves a purpose. The solutions to the sorites paradox There are many solutions to the sorites paradox. Nonetheless, I can give a quick overview of the more significant attempts. There is no reasonable sharpening under which it is false. For supervaluationists, truth is supertruth. We normally think of propositions as being either true or not true, not anything in between. But what if there were a third, intermediate value? Why stop at three values? Total falsity is represented by a truth value of 0, total truth is 1, and all real numbers in between represent an infinite spectrum of degrees of truth. So, we might say: The tolerance principle is false. In other words, there is some exact number of grains of sand,  $n$ , such that  $n$  constitutes a heap, but  $n-1$  does not. Maybe that number is  $n$ . Dialetheism is the view that some contradictions are true. Imagine a strip of little patches placed out in front of you. The leftmost is unquestionably red, the rightmost is unquestionably yellow. The contextualist says that we always evaluate vague predicates under some context. A context is like a sharpening that governs our perception in some given circumstance. Contexts unlike sharpenings never distinguish between adjacent members of a sorites progression. Unconscious context shifts explain why we must change our answers even though two adjacent patches always look the same. This is how it plays out: Precise cutoffs All of the above solutions work just fine, to an extent. They all stop or account for the sorites paradox progression. There are many debates about the extent to which they change up logic, what the pros and cons of those changes are, and how justified they are. Whatever their various virtues, however, these solutions all share a major problem: All the solutions move and change the cutoff in different ways, but none manages to get rid of it. Finally, contextualism features precise cutoff points at which contexts shift. For this reason, none of these solutions quite solves the paradox. Yet, if we think about the forced march sorites, it seems impossible to avoid cutoffs. That precise point is a cutoff. Perhaps there are solutions that have yet to be discovered, which can do away with precise cutoffs. For now, I must admit that I have no idea what the best possible solution is.

### 8: CiteSeerX " Citation Query The Sorites Fallacy and the Context-Dependence of Vague Predicates

*The ultimate goal of the technical aspects of the work is to delimit a plausible notion of logical consequence, and to explore what happens with the sorites paradox. Later chapters deal with what passes for higher-order vagueness " vagueness in the notions of 'determinacy' and 'borderline' " and with vague singular terms, or objects.*

The theory is centered on four key theses: The book is full of ideas. It makes for an interesting read. At the same time, many of the ideas remain undeveloped, and Shapiro devotes less attention to relevant background, and to objections that may be raised, than one would like. Given how the book plunges straight into the issues, it can only really be recommended to researchers and graduate students with special interest in the topics discussed; the book would not provide a helpful introduction to the issues for a newcomer. Chapter one lays out the basic elements of the proposed theory of vagueness. Chapter two discusses the role of model theory. Chapters three and four develop the model theory. Chapter five deals with the problem of higher-order vagueness. The book ends with an appendix on Waismann on open texture and analyticity. An equally large part of the book is devoted to developing a formal framework, but I will focus on the underlying philosophical motivation. More on this later. For now I just want to register that one might initially be skeptical concerning the helpfulness of appeal to context, even if vague expressions as a rule, or even always, are context-sensitive. Two potentially controversial distinctions play a role in the discussion. Second, Shapiro, following Raffman, insists that his contextualist thesis concerns the extensions and not the meanings of vague predicates I must confess, though, that it remains unclear to me just how Shapiro conceives of this latter distinction. First, there is the claim that the principle B An item is F if and only if the relevant competent subject  $s$  would judge it to be F. Second, there is the claim that for borderline items being classified, the dependence is right-to-left. The idea of open texture comes originally from Friedrich Waismann the book includes a separate Appendix on Waismann on open texture. Crispin Wright introduced into the sorites literature the idea that speakers can permissibly go either way with respect to borderline cases. Shapiro takes Wright to subscribe to the open texture thesis he describes. Putting the theses together, here is the picture that we seem to get. I will below express some doubts. Vague expressions are context-sensitive. For F, a vague predicate, there are some objects such that F applies to them in some contexts but not in others. Moreover, even given the external context, it is not the case that the truth-values of all sentences of the form  $Fa$  are settled. Here open texture comes in: It is also here that the response-dependence comes in. It is by virtue of the judgments of competent speakers that utterances of borderline sentences have the truth-values they have. Finally, all of this yields a theory that respects the principle of tolerance. Suppose I go down a sorites series. I judge all items in the series before  $a$  to fall under F. Then I judge  $a$  not to fall under F. In every sorites series there will be a first case like this. The predicate F now has a different extension. Now for some critical remarks. Start with the principle of tolerance that Shapiro discusses. This principle is eminently plausible. I do not have any objection to the claim that it is true. My only concern is that I do not see how it is supposed to fit into the overall dialectic. It appears to be a principle that vagueness theorists of quite different kinds can agree on. That everyone agrees on the principle does not mean that everyone in fact can respect it. But Shapiro does not even attempt to mount a case for thinking that his contextualism is the only otherwise plausible view that can respect the principle. Turn next to the claim of open texture. Consider the following claims one can make about borderline sentences: As Shapiro in effect recognizes, Waismann only clearly said something along the lines of i. And although there is disagreement about i, it has good claim to be the orthodox view. Shapiro wants to assert something at least as strong as ii, and i does not entail ii. It is stronger than ii. A proponent of ii can explain instances of seemingly permissible disagreement by saying that the speakers in fact do not assert contradictory propositions. For Shapiro, the relevant cases are not cases of genuine and permissible disagreement at all. Shapiro can hold that two speakers can be in the same external context and yet one can permissibly assertively utter a borderline sentence and the other its negation. This would be denied on less radical views. Often this is no cause for concern. Blurring the use-mention distinction sometimes does not cause any confusion, and simply makes for greater readability. And I will keep on doing so. But in the discussion of the open texture thesis, more care

would have been desirable. This would make clearer that Shapiro is not in fact a proponent of iii. Turn next to the contextualist thesis. I mentioned above that there is immediate cause for suspicion concerning the helpfulness of appeal to context. The contextualist has, I think everyone must agree, a relatively nice story to tell about what is going on in sorites paradoxes; perhaps especially of the forced march kind. The reason why we never find a sharp boundary between the Fs and the non-Fs is that it is never among the objects that are salient to us; whenever our focus shifts to a particular segment of a sorites series, the boundary, even should there be one, will not be there. But however nice this may be as a story, several puzzles about vagueness remain even given contextualism, and together they seem about as serious as what we started with. First, even if, with respect to long sorites series, it can seem plausible that we cannot judge the F-ness of each item within a single context, it is on the face of it ad hoc to deny that we can do this with short, intuitively surveyable sorites series consider one for the predicate "natural number much smaller than 10". The contextualist might answer that there is no such sharp boundary: But this just gives rise to familiar problems of higher-order vagueness. Where, in the sorites series, is the boundary between the objects such that F determinately applies to them and the indeterminate cases? And is this problem not exactly as serious as the original sharp boundaries problem, so we have made no progress? Shapiro devotes a chapter to higher-order vagueness. But he seems not to sense the urgency of the problem: The solution to the problem of higher-order vagueness that Shapiro offers is to say that it is vague who counts as a competent user of a predicate F, and to say that this vagueness renders "borderline F" vague. Waive any worries about whether this is even relevant to higher-order vagueness. Focus instead on the question: Taking the vagueness in who counts as a competent user of F into account, we get a richer division of cases than the tri-partite one we start out with. But, to repeat a standard point from discussions of higher-order vagueness, no n-partite division of cases appears to be intuitively better than the original two-partite one. Shapiro, although explicitly noting all of this, is surprisingly cavalier about the matter. He simply notes that as we ascend the hierarchy of ever more complicated questions about who is a competent user of F, the questions will quickly become harder to evaluate: A fortiori, we need not worry about transfinite levels" Two worries about this. The best suggested answer I can extract is that although the relevant counterfactuals will be indeterminate, this indeterminacy will be distinct from vagueness: Turn lastly to response-dependence. The discussion of vagueness in Raffman , which Shapiro mentions as an important inspiration, focuses on how speakers actually react to borderline cases and to sorites series. Raffman and Shapiro fasten onto how a borderline case may be judged differently in different contexts by the same speaker. This provides a basic motivation for contextualism. But at least when only this much has been said about the motivation for the contextualist view, the view lies open to the following rejoinder: This problem is pressed against Raffman in Sorensen , and Shapiro recognizes that the problem arises equally for his theory It is in response to this sort of objection that Raffman and Shapiro invoke response-dependence. Given response-dependence, one can relatively immediately argue from how speakers judge borderline cases to how borderline cases are correctly judged. Neither Raffman nor Shapiro actually argues for response-dependence; it is simply postulated. Moreover, I think there are good reasons for doubt. There is an important distinction to be made. A claim of form 1 should appear initially plausible, no matter what predicate we consider. By contrast, some claims of form 2 should appear quite implausible. With these remarks in mind, let us return to borderline cases of vague predicates. Shapiro wants to hold that a subject can still truly judge "Harry is bald", and he wants to appeal to response-dependence here. But let C be a context of an assertive utterance of "Harry is bald". For response-dependence to come into the picture at all, 4 must be true. But of these two claims, surely 3 is the only plausible one. Generally, 4 seems about as plausible--or, rather, implausible--regardless of whether Harry has borderline status or not.

*The sorites paradox results from two equally plausible constraints on categorization in sorites series: a constraint of category switch between the first and the last items, and a constraint of similarity or consistent judgment for adjacent items.*

Richard Dietz, Sebastiano Moruzzi eds. December 14, Richard Dietz and Sebastiano Moruzzi eds. Reviewed by Pablo Cobreros, University of Navarra

Cuts and Clouds is a collection of 31 original essays on vagueness authored by influential philosophers currently working in the area. The book is meant to contribute to the contemporary debate on several questions concerning the nature and the logic of vague expressions. It is divided into two parts Nature and Logic, each divided further into four more parts: Most of the articles in Cuts and Clouds presuppose an important amount of background knowledge; I would recommend the book to philosophers with an active research interest in the field of vagueness. The editors provide a helpful survey introducing the problematic of vagueness and unifying the themes discussed in subsequent chapters. Since the topic of vagueness has been in the limelight for at least the last thirty years, there are lots of different vagueness-related questions, and it has become difficult to make simple categorizations classifying the partisans of this or that other cause in the debate. This fact, along with the length of the book and the complexity of most of the essays, precludes a detailed treatment of each contribution in this review. I will discuss in some detail just those papers whose subject is closer to my personal interests this should not be taken as an assessment of the quality of the papers that are not discussed. Rayo develops a metasemantic account of vagueness. According to this view, the root of vagueness is not located in the kind of semantic status associated with the expressions of the language but in the linguistic practices that render those expressions meaningful. Soames addresses an objection to the possibility of partial definition raised by Glanzberg. Soames also discusses several issues connected to his account of vagueness: First-level indeterminacy concerns the attribution to vague sentences of a third differentiated semantic status between truth and falsity. Second-level indeterminacy is the idea that there is no determinately best way of assigning a semantic value to a given vague sentence. Eklund makes a case for vagueness as second-level indeterminacy and discusses several objections to this view. According to Edgington, the prospects of an adequate theory of vagueness involves rejecting the temptation of a reductive analysis of definiteness. Schiffer and Salmon argue for the existence of vagueness in the world. According to Schiffer, a theory of vague propositions should be compatible with the Q-constraint: Schiffer argues that truth-status theories of vagueness whether bivalent or non-bivalent are inconsistent with this constraint at this point, however, it looks as if Schiffer leaves out glut theories. Schiffer sketches a theory of vague properties according to which these are individuated by the use made of the words expressing them and argues that the theory respects the Q-constraint. Tolerance and Paradox One of the tough problems of vagueness is to provide a good solution to the sorites paradox. Ideally, the solution should explain not just what is wrong with the argument generally, whether unsound or invalid but where and why our intuitions are fooled. For example, if one holds that the argument is unsound because the tolerance premise is not true, one should explain why it is so plausible in the first place. Sven Rosenkranz argues for an agnostic solution to the paradox, a solution according to which we are not in a position to know whether or not there are cut-offs in suitable sorites series for vague expressions. Leon Horsten discusses the nature of phenomenal concepts and its relation to the thesis that perceptual indiscriminability is not transitive. In particular, Horsten is concerned with arguments from Raffman and Fara to the effect that, contrary to the common opinion, perceptual indiscriminability is transitive. Field makes use of strong Kleene logic to provide a solution to the sorites; issues concerning higher-order vagueness and a unified solution with semantic paradoxes are discussed. Dual because according to it, occasions of use of a sorites-susceptible predicate might be divided into regular occasions in which case the predicate has an extension and irregular occasions in which case the predicate lacks an extension. The view makes use of a Kripkean view on the meaning fixation mechanism at work for sorites-susceptible predicates. According to it, the reference of this kind of expression is fixed with the aid of linguistic preconceptions, sentences that are firmly accepted by competent speakers.

His dual picture of vagueness is intended to possess the benefits of different theories: Vague expressions vague predicates to simplify seem to be fully tolerant in the sense that if  $x$  and  $y$  are similar enough in  $P$ -relevant respects, then if  $x$  is  $P$  so is  $y$ . On the other hand, vague predicates allow us to make distinctions and so they are useful when talking about the world. The problem is that these two properties are in tension since full tolerance seems to entail no cut-offs while utility seems to entail cut-offs. According to Beall, the vague intension of a predicate  $F$  is a relation  $r$  relating  $F$  to a multiplicity of extensions. In particular,  $r$  determines a core extension, but also relates  $F$  to more inclusive extensions attending to the or a  $F$ -relevant similarity relation. Under reasonable assumptions, this entails that the intension of a vague predicate is all inclusive. Consequently, Beall endorses the nihilist conclusion that all vague predications fail to be true. Now, if vague predicates have intensions of this sort, how can we save their utility? Beall concedes that vague predicates are not useful, at least in the sense explained above, but he claims that we can still save an appearance of utility. Vague predicates lead to homonym relatives that in fact have cut offs those that take some extension among the several ones related to the vague predicate. The marriage proposed in the title concerns nihilists and non-nihilists. According to Beall, theories of vagueness that reject full tolerance such as supervaluationism and epistemicism are different theories on how sharp homonym relatives to vague predicates are generated. The nihilist is right about vague predicates. The non-nihilist is right or at least some theory in the market might be right about their precise relatives. Beall ends the paper with a discussion of objections and replies to this peculiar view on vagueness. Though I find appealing the idea that vague expressions are tolerant, it is not obvious that full tolerance is inconsistent with utility this debate is quite sensitive to the way things are understood so to fix ideas the best thing is to adopt a principled way to talk. Accepting tolerance amounts to accepting that, for any vague predicate  $P$ , the following principle is valid: However, LP and SbV share an important shortcoming: Can we endorse tolerance plus utility while making use of a decent conditional? A central gap is a domain restriction in a sorites sequence bigger than the tolerance level the threshold of similarity between objects that makes the tolerance principle compelling that renders only positive and negative cases of the vague predicate. Pagin notes that the informal formulation of tolerance can be understood in two different ways and provides a model-theoretic characterization of central gaps, showing that the weaker formalization of tolerance is true in any model with a central gap. In other contexts, such as those in which we consider the tolerance of vague predicates, we might be unable to dismiss objects in the gap and so vague predicates are incoherent. Vagueness in Context Contextualist theories of vagueness have become popular in the last decade. The reason is that they promise to provide an ideal solution to the sorites paradox explaining in particular why it looks like vague predicates are tolerant without involving a drastic revision of classical logic. According to contextualists at least to an important group of them there is a cut off point in any suitable sorites series. However, the extension of the predicate varies with the context in a way that makes it look as if there is no such cut off. There is a cut off point somewhere in the series, but it shifts with context so it is never in the part of the series we are looking at. One simple objection to contextualist theories is that, although vague expressions are typically context-sensitive, vagueness remains when we keep the context fixed. The authors argue that contextualism in particular, their preferred generic form of contextualism: The radical contextualist strategy makes use of higher-order vagueness as vagueness in the meta-language to explain the vagueness of context-fixed terms. The interesting point of this response to the simple objection is that epistemicists lack a principled reason to dismiss hybrid explanations such as the epistemicist contextualist since, as they observe, well known epistemicist accounts of vagueness are not purely epistemicist and non-epistemicists such as supervaluationists lack a principled reason to dismiss the radical contextualist explanation since they make essential use of higher-order vagueness as vagueness in the meta-language Keefe , ch. Though the paper provides, I think, a satisfactory answer to any of the objectors, there is something puzzling when we take it as a general response to the simple objection. There are two different and seemingly incompatible replies, one for the epistemicist and another for the non-epistemicist. Assuming that the authors succeed in their purpose, the first response is persuasive for the epistemicist but not for the non-epistemicist, the second is persuasive for the non-epistemicist but not for the epistemicist. So although for everyone there is a persuasive reply, there is no single persuasive reply for everyone. The

response to Williamson is based on a distinction between two notions of saying: What is said in the truth-conditional sense is an interpretation, that is, a way of understanding a sentence in a sufficiently specific way for the purpose of ascribing truth or falsity to that sentence. Iacona argues that truth and falsity apply to sentences relative to interpretations  $p$ . When a sentence, as uttered on a given occasion, is a borderline case and so there is more than one valuation compatible with the actual understanding there is nothing said by the sentence in the truth-conditional sense  $p$ . In this way, classical logic plus disquotational truth does not entail epistemicism: Iacona alleviates the tension of this position with the intuitiveness that utterances in borderline cases do really say something by means of his distinction between the two notions of saying: I have, however, a query concerning the proposal. The orthodox supervaluationist avoids an epistemicist view by acknowledging that there might be truth-value gaps; Iacona points out that the gappy treatment leads to failures in classical logic. In this account, it looks as if this sort of problem is moved to the level of saying. According to that alternative, a sentence containing a vague predicate in a given context of use might express a proposition whose truth-value varies according to different sharpenings. Faultless disagreement is the idea that disagreement on a particular subject need not involve some of the parties being mistaken. One might wonder whether judgments involving borderline cases are cases of faultless disagreement. The reason is that in borderline cases, we do not typically and should not respond by taking a view. Thus, in the case of vagueness, there are no contrasting judgments that are like building blocks for the appearance of faultless disagreement. In the case of a semantic view, such as supervaluationism, the weakest sensible norm of assertion states that one should not assert an untrue proposition predicting this way that one should not take a view in borderline cases. In the case of epistemicism, it is natural to adopt a stronger norm of assertion: In particular, Ripley argues that some experimental data seem to receive a better explanation in the frameworks of non-indexical contextualism and dialetheism. Supervaluationism Schiffer and poses the following objection to supervaluationism. Consider Harry, a borderline case of baldness and his friend Renata who says that Harry is bald. More generally, although for every precisification, there is an  $n$  such that Renata said that Harry is bald $n$ , there is no  $n$  such that for every precisification, Renata said that Harry is bald $n$ . The supervaluationist can coherently maintain that the report is true without a commitment to the idea that Renata said something precise. In the final part of her paper, Keefe considers whether reports involving demonstratives pose a particular difficulty for supervaluationism. Keefe argues that problems surrounding demonstratives are not particular problems of vagueness and that they equally affect theories other than supervaluationism. In her paper, Fara discusses two problems for the supervaluationist theory: The first issue has been discussed quite a lot, but almost all the arguments rest about intuitions on truth-functionality and penumbral connections. Interestingly, Fara adopts a different strategy here. Leaving aside intuitions about penumbral connections intuitions on which a bivalentist, as Fara, agrees the only justification of how a disjunction might be true without either disjunct being true relies on the idea that, in a certain sense, each disjunct could be true. But Fara presents a case that, seemingly, cannot be justified in these terms. The case is one in which a disjunction is true even when each disjunct is not only untrue, but unsatisfiable by supervaluationist standards. I agree with Fara that supervaluationism is unlikely to address the psychological question, but I think this worry extends to many theories of vagueness. The first is concerned with the truth-value a sentence might get if we make its vague expressions precise.

Japan, the coming social crisis International policy for the world economy Migrants and Identity in Japan and Brazil Engineering Fluid Mechanics, 8th Edition, 2006 JustAsk! Set (Justask! Set) On grief and reason An introduction to physiological and systematical botany . Iot solutions in microsofts azure iot suite Guilt at Versailles Movies of the 60s Arduino uno basic programming Teaching children about physical science Protection and bad times Help yourself in ing holy quran arabic english. Topographies of Japanese Modernism Sexually Transmitted Diseases (Single Title: Science) Optical Nanotechnologies Hurricanes and Tornadoes (Wonders of Our World) Handpainted tiles for your home Geometric dimensioning and tolerancing workbook and answer book A practical malay grammar Cultural diversity in the British Middle Ages Economics and politics of oil price regulation Adobe flash cs4 book Computer Security in Financial Organisations Operations research applications and algorithms winston solutions Its Not In Your Head, Its In Your Hormones Send Walter White The culture of cyberspace and everyday life Cyberhome ch-dvd 300 manual The dramatic works of John Crowne Traditions of Maimonideanism Integrative endocrinology Number one Millbank Urquhart, F. The bike. California road trips guide Fromkin, V. A. The non-anomalous nature of anomalous utterances. Universal Abandon? the Politics of Postmodernism (Cultural Politics) Traditional Country Crafts Philip the Good and the Church Plant diversity of Malesia