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2019

A Defense of Semantic Vagueness

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A DEFENSE OF SEMANTIC VAGUENESS

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A Dissertation submitted to the
Department of Philosophy
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

2019

Joshua Ripley Turkewitz defended this dissertation on June 21st, 2019.

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ACKNOWLEDGMENTS

I am indebted to a great many wonderful, supportive, and intellectually stimulating people without whom this dissertation would not have been possible. My supervisor, Stephen Kearns, provided invaluable insights and robust challenges that helped forge this work into what it is. The generosity, freedom, and rigor of Florida State University's Philosophy Department, in particular my interactions with Randy Clarke, David McNaughton, Marcela Herdova and Piers Rawling, helped me grow into a sharper and more considerate thinker and teacher, and I am forever grateful for my time in this outstanding educational environment. I must also thank Karen Foulke and Drew Watson, without whom I would even now be bureaucratically stymied. I would also like to thank Beatriz Sorrentino Marques for her encouragement and helpful feedback. Lastly, I'd like to thank my parents, Jon Ripley and Hillary Turkewitz, whose unwavering love and support I would be lost without.

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ABSTRACT

This dissertation defends the position that vagueness is semantic – a feature of language and thought alone. In order to do so, I argue that vagueness is genuine; that it cannot be reduced to ignorance. I then refute three arguments that semantic vagueness, if genuine, must extend to features of the world that are not representations. Lastly, I argue that, although we might take representations to be examples of a type of metaphysical vagueness, semantic vagueness, even if in some sense metaphysical, does not suffer from the pernicious aspects attributable to other forms of metaphysical vagueness.

I argue that epistemicism is troubled by fine-grained phenomenal sorites series in which adjacent objects are indistinguishable. To avoid contradiction the epistemicist must say either that adjacent objects in the series do not appear the same as their neighbors or that an undetectable difference in appearance makes a psychological difference to how the objects appear. Both options are implausible. The supervenientist is more easily able to resolve the difficulty by appealing to extant fundamental aspects of her theory.

Next, I discuss a dilemma Ken Akiba (2004) presses against supervenientism based on the nature of reference. He argues that reference is either deflationary or inflationary, but if deflationism is true then there cannot be semantic vagueness because there is no substantive reference. I argue that this is false – reference need not be substantive to be imprecise. The second horn claims that if inflationism is true then reference is constituted by indeterminate physical connections so an inflationary supervenientist must already accept physical indeterminateness. I argue that this is also false – an inflationary supervenientist can, for principled reasons, constrain the

indeterminateness at issue in the semantic domain. Neither horn of Akiba's dilemma is sharp.

Many theorists of vagueness hold that vagueness is mind-dependent, that vagueness is due either to imprecise representation of a precise world or ignorance of representational (and worldly) precision. Recently Trenton Merricks (2001 and 2017) has launched two offensives against this cluster of views that he dubs the orthodoxy. He argues that (2001) if there is linguistic vagueness it is either epistemic or a species of metaphysical vagueness and that (2017) there are mind-independent examples of vagueness – vagueness that is due neither to representational imprecision or ignorance. This chapter defends the orthodoxy from Merricks' arguments. I contend that his (2001) argument conflates garden-variety ambiguity with vagueness, and so can be met by the standard supervaluationist approach to vagueness, and that his (2017) argument relies on the claim that for every predicate there is a corresponding property, which is both implausible and will already be rejected by those who believe that vagueness is mind-dependent.

Finally, I argue that two concerns facing metaphysical vagueness, that of its alleged unintelligibility and that it objectionably entails indeterminate identity, can be mollified for representational theories of vagueness that count representations as metaphysical entities.

CHAPTER ONE

INTRODUCTION

It is words that make the trouble and confusion. We are asked now to consider words as useful in only one way: as signs. Our philosophers, some of them, would have us agree that a word (sentence, statement) has value only insofar as it has one single meaning, points to one fact which is comprehensible to the rational intellect, logically sound and – ideally – quantifiable.

Apollo, the god of light, of reason, of proportion, harmony, number – Apollo blinds those who press too close in worship. Don't look straight at the sun. Go into a dark bar for a bit and have a beer with Dionysius every now and then.

- Ursula K. le Guin, *The Left Hand of Darkness*

Vagueness, the apparent imprecision in many of the ways in which we represent and refer to the world, poses a fundamental problem for logical reasoning. The issue is that logic is, ideally, a truth preserving system – by starting with true premises and employing only valid inferences one ought to be guaranteed of a true conclusion. However, one can start with (apparently) true premises expressed using vague terms and employ only (apparently) valid rules of inference and yet end up with a false conclusion. The ancient and paradigmatic examples of this problem are sorites-style arguments. Sorites-style arguments have been formulated in many different ways, such as the following argument employing the vague term 'tall':

- 1) A person 2 meters in height is tall.
- 2) If a person N meters in height is tall then a person N meters – 1 nanometer in height is also tall.
- 3) Therefore, a person 0 meters in height is tall.

The first premise is an obvious truth. Defenses of the second premise vary, but a common line of reasoning argues that since the difference between a person N meters in height and a person N meters – 1 nanometer in height is undetectable to the naked eye, and terms like ‘tall’ are defined by communities of people, the applicability of terms like ‘tall’ are not sensitive to such minute variations in a person’s height. If Alice is tall and Bob is undetectably shorter than Alice then Bob is also tall. Repeated application of this reasoning leads to the unfortunate conclusion that obviously short people are tall and, ran the other way, that obviously tall people are short.

There are three major strategies proffered by philosophers studying vagueness. Vagueness might be *metaphysical*, *epistemic*, or *representational*. If vagueness is metaphysical then the phenomenon of vagueness is due to genuinely vague objects or properties. If vagueness is epistemic then the second premise of the sorites-style argument above is false - there is some N such that a person N meters in height is tall and a person N meters – 1 nanometer in height is not tall. We are, however, unable to discover this boundary; we are unavoidably ignorant as to precisely where the transition between the shortest tall person and the tallest not-tall person is located. If vagueness is representational then it is a feature of our thought and language; there are no genuinely vague properties or objects but there are genuinely vague expressions and predicates. I

prefer the representational view of vagueness, and the following work is dedicated to arguing that it is superior to its competitors.

I defend the position that vagueness is a type of underdetermination, an under-specification of detail. A vague term, be it a word, phrase, sentence, or thought, etc., is vague because the facts that furnish the term's semantic content, such as the intentions and conventions of a linguistic community and their physical and historical circumstances, fail to determine a unique, precise meaning for the term. A word's meaning, particularly the boundary conditions of its application, is established by convention and use and very often these linguistic conventions and patterns of use leave certain matters undecided.

This sort of under-specification runs rampant. I say I will return your call soon, and we understand that I have set some parameters regarding the scheduling of our next conversation. I will not contact you in a year's time, or, if I do, I will not have done what I said I would. We have not, however, specified a precise interval in which you can expect my call – what is a second past soon? Often it is not in our interest to do so. We may speak with precision when there is a need and when the topic and vocabulary permits, but it is frequently cumbersome and unhelpful to pedantically insist upon precision, so we don't.

This position has two notable features. It takes vagueness to be *genuine*, by which I mean that vagueness is not a manifestation of some other phenomenon such as ignorance, and it takes vagueness to be *representational*, in that vagueness is a property of depictions of the world, not the world itself. So it is not the case that there is some first second past soon, we just don't know which second that is, and it is not the case that there is some nebulous unit of time, 'the soon,' which exists independently of our thought and language. Rather, the world is how it is. A given depiction or representation, however, might fail to

depict a unique world. That is, there might be a large class of worlds, any one of which might be depicted by the parameters of a given representation. For the epistemicist, although we know not which, one member of the class of worlds is the world being depicted. Accounts of metaphysical vagueness generally resemble one another less closely than accounts of epistemic or representational vagueness, but we might say that for the metaphysicist the world contains genuinely vague physical objects and properties or that the world itself is somehow indeterminate.

My defense of representational theories of vagueness proceeds as follows: First, in Chapter Two, I will argue, contra epistemicism, that the facts and mechanisms that fix semantic content often fail to determine precise boundary conditions for vague expressions. This is because these mechanisms rely on human cognitive and perceptual capacities, which are coarse-grained. Since these capacities are coarse-grained the epistemicist must hold that a significant semantic difference corresponds to an imperceptible or irrelevant physical difference. Next, I will defend the view that, although vagueness is *genuine* (i.e., non-epistemic), it is purely representational, and not metaphysical. Rather than presenting a positive argument for this position Chapters Three and Four respond to three arguments that representational or semantic vagueness entails non-representational metaphysical vagueness. Chapter Five examines whether representational vagueness is a sort of metaphysical vagueness, and, if it is, how it should be handled. Each chapter is composed as a stand-alone work, although they are linked thematically in the narrative I have just described.

A synopsis of the chapters is as follows:

Chapter Two: The epistemicist holds that every utterance is either true or false (Williamson 1994). The apparent vagueness of some utterances is due to the boundaries of the vague terms they employ being beyond our epistemic reach. Every term is in fact precise, but we are inescapably ignorant of the precise extensions of the many vague terms employed by natural languages. Should we arrange hypothetical objects in a gradient sorted by subtly varying hues of red there will be a pair of objects adjacent in the series such that it is true that one member of the pair is red and false that the other is red.

But the use facts of a language and the typical environments of the speakers determine the meaning of the predicate 'is red'. Suppose the gradient is so finely grained that adjacent objects appear indiscernible in normal circumstances. So the epistemicist's boundary between objects on the gradient that appear red and those that do not is between two objects that appear the same. Plausibly, however, if two objects appear the same and one appears red then so does the other. On a strong reading of this argument the epistemicist is forced to accept a contradiction. On a weaker reading the epistemicist is at a loss to explain how this boundary is determined by the relevant use facts.

Chapter Three: Ken Akiba (2004) presses a dilemma against supervaluationism, a prominent semantic conception of vagueness, based on the nature of reference. He argues that reference is either deflationary or inflationary, but if deflationism is true then there cannot be semantic vagueness because there is no substantive reference. I argue that this is false – reference need not be substantive to be imprecise. A deflationist holds that semantic relations like reference are merely parts of our conceptual toolkit, which is compatible with supervaluationism. Our conceptual paintbrushes are only so fine.

The second horn claims that if inflationism is true then reference is constituted by indeterminate physical connections so an inflationary supervenient must already accept physical indeterminateness. I argue that this is also false – an inflationary supervenient can, for principled reasons, constrain the indeterminateness at issue in the semantic domain. Neither horn of Akiba’s dilemma is sharp.

Chapter Four: Epistemic and semantic theorists of vagueness hold that vagueness is mind-dependent, that vagueness is due either to imprecise representation of a precise world or ignorance of representational (and worldly) precision. Recently Trenton Merricks (2001 and 2017) has launched two offensives against this cluster of views that he dubs the orthodoxy. He argues that (2001) if there is linguistic vagueness it is either epistemic or a species of metaphysical vagueness and that (2017) there are mind-independent examples of vagueness – vagueness that is due neither to representational imprecision or ignorance.

This chapter defends the orthodoxy from Merricks’ arguments. I contend that his (2001) argument conflates garden-variety ambiguity with vagueness, and so can be met by the standard supervenient approach to vagueness, and that his (2017) argument implicitly relies on the claim that for every predicate there is a corresponding property, which is both implausible and must already be rejected by those who believe that vagueness is mind-dependent.

Chapter Five: One issue metaphysical views of vagueness face is that some have claimed they are incoherent or unintelligible. Recently, Barnes and Williams (2014) have proposed an account that aims to make metaphysical vagueness intelligible. I argue that, although their account is intelligible, it cannot be an account of metaphysical vagueness beyond the vagueness of representations.

Briefly, the account argues that vagueness is a matter of it being indeterminate which of a set of candidate possible worlds best represents the actual world. So suppose it is vague whether P. This is because P is true in some members of the set, but false in others, and it is indeterminate which member best represents the actual world.

However, the account also stipulates that P and not P are the only two options, there is no third way the world can be. So what can the indeterminateness of the account amount to? It might be epistemic, we might not know which of the possible worlds best resembles the actual world, or it might be semantic, in that a particular representation of the actual world fails to determine a unique member of the set. But it cannot be metaphysical since, unless the actual world is some third way, some member of the set will best represent the actual world. Instead, we should treat their account as providing a theory of the metaphysics of representational vagueness.

CHAPTER TWO

EPISTEMICISM'S INDISCERNIBLE PROBLEM

Semanticism and epistemicism are competing contemporary theories of vagueness. The semanticist or representationalist view is that vagueness is similar to ambiguity - vague utterances or sentences fail to express a unique, precise proposition. Unlike ambiguity, where the sentence has more than one complete interpretation, a vague sentence is incomplete or undecided. A vague expression is lacking in a particular type of detail - given the dictates of the language in which the expression appears there are multiple, equally legitimate, means of making the expression precise.¹ For any vague sentence there is a cloud of sharpenings or precisifications, each of which is an equally legitimate precise interpretation of the sentence. The most popular theory of this sort, supervaluationism, holds that a vague utterance can be true, false, or neither. On this view a vague utterance (that asserts that something is the case) is true when all its permissible sharpenings are true and false when every permissible sharpening is false. In other instances, typically called borderline cases, some members of a vague utterance's cloud of allowable sharpenings are true and some false. In these cases the utterance is neither true nor false.

The epistemicist holds that every utterance is either true or false (Williamson 1994). The apparent vagueness of these utterances is due to the boundaries of the vague terms they employ being beyond our epistemic reach. Every term is in fact precise, but we are inescapably ignorant of the precise extensions of the many vague terms employed by

¹ See Fine (1975) and Lewis (1986).

² The thesis that meaning supervenes on, or is determined by, conventions of use and environments

natural languages. Should we arrange hypothetical objects in a gradient sorted by subtly varying hues of red there will be a pair of objects adjacent in the series such that it is true that one member of the pair is red and false that the other is red. In section two I will give Williamson's explanation for this ignorance regarding standard sorites series and argue that he must go to counter-intuitive lengths to reconcile epistemicism with the thesis that the conventions of use determine semantic content. Section three argues that this strategy is ineffective at dealing with a particular type of sorites series based on the phenomenology of appearances. Sections four and five consider objections to the possibility of phenomenal sorites as I describe them, specifically to the claim that the appearance of sameness is not transitive. Lastly, section six demonstrates how a representational theory of vagueness such as supervaluationism is better suited to dealing with this class of sorites argument. Section one begins the argument by presenting a fairly standard view about how terms acquire semantic content.

The Determination of Meaning

For the semanticist or representationalist vagueness is not a matter of ignorance regarding the precise boundaries of signifiers. Instead, vagueness is imprecision in the signifiers themselves. A prominent representational theory of vagueness, supervaluationism, treats vagueness as a special case of unresolved imprecision. An expression is vague when it is indeterminate which of many precise propositions legitimately removes the imprecision. A common explanation for this is the conventionality of meaning (Lewis 1986). Sentences and terms are imprecise because

what they express is determined by convention, by the ways in which linguistic communities employ them and the environments in which those communities exist. According to the semanticist, for many linguistic objects the use conventions of the relevant communities fail to specify precise boundaries – hence these expressions lack precise boundaries. As Lewis famously states, “the reason it's vague where the outback begins is not that there's this thing, the outback, with imprecise borders; rather there are many things, with different borders, and nobody has been fool enough to try to enforce a choice of one of them as the official referent of the word 'outback.' Vagueness is semantic indecision” (1986, p 212). For the supervenientist a vague utterance generalizes over a raft of precise propositions, all of which are equally legitimate candidates to sharpen, or make precise, the vague utterance in question. These sharpening are granted their legitimacy by the conventions of use, but those same conventions cannot be bothered to nominate any particular sharpening as more legitimate than any other. As such, semantic supervenience² and representational views of vagueness go hand in hand.

Many epistemicists, such as Timothy Williamson (1994), also believe that meaning supervenes on use (or, more generally, that the semantic supervenes on the non-semantic). Williamson believes that, although meaning supervenes on use, the supervenience relations that hold between the semantic facts and the use facts are complex and impenetrably opaque. One upshot of this opacity is that even if we had complete knowledge of the relevant non-semantic facts we might still be unable to infer the semantic facts, hence our inescapable ignorance of some semantic facts. Additionally, Williamson thinks that we lack access to many of the facts about usage.

² The thesis that meaning supervenes on, or is determined by, conventions of use and environments of speakers.

Our ignorance regarding precise semantic boundaries is unsurprising, by these lights, as there are worlds very similar to our own with ever-so-slightly different non-semantic facts, and thus ever-so-slightly different semantic facts, so we are often not in a position to know the extant precise semantic boundaries. Even true belief about the location of the boundaries, therefore, does not constitute knowledge because it violates knowledge's safety condition – the belief would be false in a nearby counterfactual world that is nearly indistinguishable from the actual world (Kearns and Magidor 2008).

Ignorance Isn't Bliss

In this section I argue that there is a significant tension between the commitment to the supervenience of meaning on use and epistemicism. The epistemicist is committed to the existence of precise boundaries for every purportedly vague predicate or expression. Vague predicates can often be identified by the construction of a sorites series. A sorites series for a predicate can be constructed when the predicate's applicability depends on a property that can be placed on a smooth gradient. For example, a sorites series can be constructed for the predicate 'tall' because whether a person is tall (or not) is determined by their height, and height exists on a continuum (e.g., 150cm, 151cm, 152cm, etc.). For the epistemicist there is some precise height that is the shortest a tall person can be. If that height is, say, 200cm then everyone 200cm or more in height is tall and everyone below 200cm in height is not tall.

The trouble is that the sorites series in question can be indefinitely fine grained, to the point where differences between adjacent pairs in the series are, in practical

circumstances, undetectable. So if the minimum height for being tall is precisely 200cm then someone one Planck length shorter than 200cm is not tall. This, I believe, strains the commitment to semantic supervenience because no speaker would draw a distinction between indiscernible objects. That is, an individual 200cm in height would look no different (to you or me) than an individual $200\text{cm} - (1.6 \times 10^{-35} \text{ m})$ in height were we to observe them under identical conditions. Since the difference between these two individuals is undetectable it is unlikely that a community would apply the predicate 'tall' to one and not the other. Applications of the predicate 'tall' thus will not differ with respect to these individuals in identical circumstances.³ That is, vague predicates appear to exhibit *tolerance* as described by Crispin Wright (1975) – there seems to be some degree of change too small to impact the applicability of the predicates. Epistemicists must disagree. For example, Roy Sorenson (1988) argues that vague (indeed, all) predicates possess *unlimited sensitivity* – no change is too small to impact the applicability of the predicate. I argue that this commitment brings trouble to epistemicism's doorstep, trouble that the supervenience theorist can avoid.⁴

The most general version of a supervenience relationship between relata (X and Y) is that if X supervenes on Y then there can be no difference in X without a difference in Y. So if usage (broadly construed) does not differ with respect to the applicability of a predicate regarding indistinguishable objects then neither should the semantics of that predicate, provided that the semantic facts supervene on the use facts. But the epistemicist

³ It could be, and perhaps is even likely, that actual usage practices – even those of a particular individual – will be inconsistent or otherwise inchoate, but it is at least possible that a community behaves in the manner I have described, which is all that is required for my argument.

⁴ Supervenience theorists also reject the tolerance principle, but on importantly different grounds than does the epistemicist. See section five below.

must insist that there is a semantic difference in the applicability of a vague predicate to some adjacent pair in a highly fine-grained sorites series – we just don't know, and cannot discover, which pair. However, since adjacent pairs in fine-grained sorites series are indistinguishable,⁵ for the intents and purposes of usage by a typical community, the usage facts with respect to each member of the pair (under identical circumstances) will be identical. If the semantic facts supervene on the use facts then the semantic facts will likewise be identical, so there can be no such pair.

To resolve this difficulty the epistemicist must say that there is some non-local set of use facts responsible for the semantic difference. For example, suppose that the mental facts supervene on the physical facts. If one is of a physicalist bent this sort of view makes intuitive sense; my mental states cannot vary unless there is some corresponding change in the physical state of my brain or environment. I think something very similar to this supports the belief in semantic supervenience – it is implausible for a word's meaning to shift independently of the relevant linguistic community's usage and physical environment.⁶

In order to preserve the supervenience of meaning on use the epistemicist must appeal to non-local facts. The epistemicist might say that the sharp boundary is determined by applications of the predicate in various other contexts, or that applications of the predicate to indistinguishable objects would vary in counterfactual contexts in which the objects were distinguishable, or that, although nothing about the use of the term in question varies across contexts, other linguistic conventions and commitments held by the

⁵ Many theorists have tackled the problems raised by the apparent phenomenal indiscriminability of vague predicates. I will explore some of their positions in the following sections – for now this rough-and-ready depiction of indistinguishability will serve to get my argument on the table.

⁶ But see Kearns and Magidor (2012) for a dissenting opinion.

community determine the boundaries. For example, were a community committed to classical logic, bivalence, and the law of excluded middle these commitments might entail sharp boundaries for all of their predicates, even if the employment of the predicates themselves failed to do so.

I find these maneuvers unattractive. For the last, many communities do not have explicit or implicit commitments to classical logic. There are, or at least could be, communities of non-classical logicians who explicitly reject these principles of classical logic. So, although some linguistic communities might have conventions that implicitly determine sharp boundaries for all of their predicates via a commitment to classical logic, epistemicism purports to be a theory that holds of all vague utterances, and there are actual and possible communities that lack the relevant conventions.

Regarding the former, an epistemicist might employ these types of consideration to avoid violating a supervenience claim but the results undermine what is intuitively plausible about the supervenience of meaning on use in the first place. For example, suppose someone held that I would be in mental state M_1 whenever I am in brain state B_1 and the moon is full and that I would be in mental state M_2 whenever in brain state B_1 while the moon is not full.⁷ This would not technically violate the supervenience of the mental on the physical, as the mental would not vary independent of some physical variation. It does, however, strain the intuitive appeal of claiming that the mental supervenes on the physical, as that supervenience claim is founded on the idea that my brain states and my immediate environment are the relevant physical states determining my mental states.

⁷ Assume that I am not observing the moon or near a window, that the moon is not having an effect on my immediate or observable environment, that the moon is currently facing the far side of the earth, that my mental state is not about the moon, that the fullness of the moon has no causal impact on my observable environment, etc.

Likewise, the appeal of the supervenience of meaning on use is the plausible thought that the meaning of a term is determined by the conventions of use of that term, not how non-actual but similar communities would use term in non-actual contexts. Hilary Putnam's (1975) famous 'twin earth' thought experiment is widely held to have established some version of externalism – the meaning of a term is dependent on more than just what is in a speaker's head. On (actual) earth the term 'water' refers to H₂O. Now imagine a world (twin earth) populated by the psychological duplicates of actual humans, except on this world the clear liquid playing the causal and functional role of H₂O on earth is XYZ. On twin earth 'water' refers to XYZ, so the referent, and hence part of the meaning of, 'water' is determined by more than the psychological states of the speakers on twin earth. But this thought experiment also tells against a radical externalism which places no limits on what might determine meaning. The meaning of a term is not determined by possible communities in possible environments. On earth 'water' does not refer to XYZ.

So if we include all the physical facts in the supervenience base of the semantic the epistemicist can preserve semantic supervenience. There is a physical difference between the adjacent objects in the fine-grained sorites series. However, because the difference is undetectable to humans in normal environments, it is hard to see how the minute physical difference could be so semantically weighty.

That said, although I think these considerations make salient counter-intuitive aspects of epistemicism, the epistemicist's responses are theoretically viable. The next section presents an argument that is more difficult for the epistemicist to resolve. I argue that our limited capacity for perceptual discernment makes trouble for a supervenience story that has us drawing distinctions finer than what we can perceive. In section five I

propose that representational theories of vagueness are better suited to resolve this trouble.

Epistemicism and Phenomenal Sorites

Consider a fine-grained sorites series for the predicate 'appears red to me.' Objects of subtly varying shades are arranged in a gradient from those that clearly appear red to me to those that clearly do not. The series is fine-grained such that any two adjacent objects will appear to be the exact same color to me. They are not identical, there are microphysical differences between the objects, but my perceptual faculties are incapable of discerning the difference between them, say because the wavelength of the light they reflect differs by .0001 nanometers. If epistemicism is true then all predicates, including predicates about subjective appearances like 'appears red to me,' are precise. The epistemicist must hold that phenomenal predicates like 'appears red to me' are unlimitedly sensitive where our perceptual faculties are not. So somewhere, although we know not where, there are adjacent objects in the series such that one of the objects appears red to me and the other does not.

Call these objects *A* and *B*, and stipulate that *A* appears red to me and that *B* does not. But any objects adjacent in the series are indistinguishable to my unaided perceptual faculties. So if *A* appears red to me then *B* will also appear red to me.⁸ On a straightforward reading this is a contradiction, *B* cannot both appear red to me and not

⁸ This does not directly follow, but I believe the missing premise is something like the innocuous: 'If I cannot distinguish between two objects it is because they appear the same to me.' Delia Graff Fara, for example takes something equivalent to 'if *X* and *Y* appear the same and *X* appears *P* then *Y* appears *P*' as a truism (2001, p. 907).

appear red to me. So one of the stipulations must be false. Either it is false that there is some pair of adjacent objects such that one of the objects appears red to me and the other doesn't or it is false that adjacent objects are indiscernibly different. Since it is possible for there to be a gradient of indiscernible yet physically distinct objects (my perceptual faculties are only so capable) it seems the most reasonable option is to reject the existence of a sharp boundary between objects that appear red to me and those that do not. My coarse-grained perceptual faculties fail to determine a boundary in the fine-grained series.

An epistemicist could try to employ one of the strategies discussed above, but she will have her work cut out for her, as she will have to explain how non-local linguistic practices and conventions make it so that two objects can appear the same while one appears red and the other does not. That is, while the epistemicist can tell a (implausible, I think) supervenience story where the facts of use globally determine sharp boundaries for the application of predicates like 'red' the same type of story will be even more difficult to tell for the application of 'appears red to me.'

I will expand on this in section six, where I argue that representational theories of vagueness like supervaluationism are better suited for handling phenomenal sorites series, since they can better explain the nature of the boundaries of phenomenal states. The intervening sections consider objections to the possibility of the phenomenal sorites as it is described above.

Transitivity

One might argue that fine-grained phenomenal sorites series are impossible. If, such an argument might run, every object in the series has the same appearance as its neighbors then the series cannot form a gradient – all the objects in the series will have the same appearance. In other words, appearing the same is transitive. So there must be some threshold; at least one pair of adjacent objects in the series must appear different from one another in order for the series to form a gradient at all.

I think this sort of argument conflates the appearance of sameness with sameness of appearance.⁹ The gradient required to form a sorites series is impossible if every object in the series has the exact same appearance. Still, it is possible for objects that do not have the same appearance (in the sense of having different surface qualities) to appear the same (because our perceptual faculties fail to detect these differences). The upshot of this is that, while sameness of appearance is transitive, the appearance of sameness is not; if A has the same appearance as B and B has the same appearance as C then A has the same appearance as C. However, that A appears to be the same as B and B appears to be the same to me as C does not guarantee that A will appear the same to as C.

Many other theorists see the sameness of phenomenal appearance as non-transitive, employing this datum for various ends.¹⁰ Take Crispin Wright's argument for non-transitivity: Assume that phenomenal states can exist along a continuum, that human powers of discernment are only so fine, and that indiscriminability is always transitive.

⁹ See Williamson (2002).

¹⁰ E.g., Russell (1923), Wright (1975), Dummett (1975), Goodman (1951), Armstrong (1968), Everett (1996).

From a phenomenal continuum take two states that are minimally discernably different from one another, and then select a state between the two – if it is indiscernible from the first stage then it cannot match the second, and vice versa. So the region between the two states will not be continuous, contrary to the initial assumption, since every state in the region will match exactly one of the two poles. As Wright puts it:

if D is a non-recurrent temporal process of change such that indiscriminability behaves transitively among every selection of stages from it, and if we can directly discern only a finite variety of stages of D - at least in some of its regions - then D must contain seemingly absolutely abrupt changes. Hence if D is everywhere to give an impression of continuous change, indiscriminability cannot behave transitively among every selection of stages from it; specifically, if D_i and D_{i+1} are adjacent in $\langle D_x, \dots, D_n \rangle$, derived as above, at least one stage occurring between D_i and D_{i+1} in D must match both (1975, pp. 346-347)

So there are at least two considerations weighing in favor of non-transitivity: Wright's proof and the notion that microscopic changes fail to be apparent until aggregated. For the remainder of this section I will examine reasons to favor transitivity, and argue that they are unpersuasive.

Delia Graff Fara (2001), argues that phenomenal indiscernibility, or 'looking the same as,' is transitive. If patch A looks the same (with respect to color) as patch B and patch B looks the same as patch C then A must look the same as C. If, as Fara argues,

phenomenal indistinguishability is transitive then the above argument based on a fine-grained phenomenal sorites fails to get off the ground, since there are no such series.¹¹

Fara argues that the proponent of non-transitivity, if they are relying on either something like Wright's proof or considerations of aggregated microscopic difference, must appeal to one of the following principles:

- (a) For some sufficiently slight amount of change (in colour, sound, position, etc.), when we perceive an object for the entirety of an interval during which it changes by less than that amount, we perceive it as not having changed at all during that interval
- (b) For some sufficiently slight amount of change (in colour, sound, position, etc.), we cannot perceive an object as having changed by less than that amount unless we perceive it as not having changed at all (as having changed by zero amount) (2001, p. 917).

Fara rejects the first principle, (a), because it is overly committal. In particular, it requires that we always perceive "stasis as stasis" (p. 919). That is, should a subject observe an unchanging object for the requisite interval (a) guarantees that she will always

¹¹ Fara favors an interest-relative contextualism (2000) to tackle non-phenomenal sorites series. She writes, "I think it is false that if two men differ in height by one-hundredth of an inch, then if one is tall so is the other, I think it is true that if any two colour patches look the same, then if one looks red so does the other. Why the difference in attitude? If two men differ in height by even one-hundredth of an inch, then they differ in a respect that is relevant for the applicability of 'tall.' But if two colour patches look the same (not just similar, but the same) in respect of colour, then they do not differ...in any respect relevant for the applicability of 'looks red'" (2002, p. 908). Hence her interest in providing a defense of transitivity which can defuse and special problems raised by phenomenal sorites series. She is not against the possibility of fine-grained sorites per se, but she denies that adjacent objects in the series appear the same.

perceive that it remain unchanged. But stationary objects may appear to waver or quiver. And further, since it is possible for stasis to be perceived as motion it must be possible for (indiscernible) motion to be perceived as motion. So Fara rejects (a), claiming that even if it is so that there are changes so miniscule that they cannot be detected (a) is not the proper formulation of this notion.

Principle (b) is more plausible, but, she argues, cannot deliver non-transitivity on its own. All that (b) asserts is that apparent changes cannot be indefinitely fine – but this is compatible with a series of discreet changes in which no object appears the same as the prior object. (b) serves as part of an argument for non-transitivity when combined with the second assertion in Wright’s proof, namely that apparent changes exist on a continuum. If both are true then non-transitivity follows, as demonstrated by Wright’s argument. However, Fara argues that these two assertions (that there are phenomenal continua and that there are limits to human powers of discernment) are in tension with each other such that “it is utterly unreasonable to accept them jointly” (p. 931). That is, one cannot believe both that phenomenal states are continuous and that apparent changes cannot be indefinitely fine.

Fara’s diagnosis of phenomenal sorites series is that the miniscule differences between adjacent objects *are* apparent, so it is not true that adjacent objects in the series appear the same to their observer. Rather, the observer will often fail to *notice* the apparent changes (p. 928). Importantly, this is not the familiar distinction between microphysical changes and phenomenal changes. The phenomenologies produced from observing the adjacent objects in the series are in fact distinct – the objects do not appear to be the same. The observer is just failing to notice the difference in how things appear.

Rosanna Keefe (2011) points out that although (a) is indeed too strong, in that it entails the incorrect claim that stasis is infallibly perceived as stasis, there are better formulations of the general idea that there can be unapparent physical changes in objects that only become apparent in aggregate. Keefe suggests (a*) as a suitable replacement:

(a*) For some sufficiently slight amount of change in colour, or in the physical basis of colour, when we perceive an object for the entirety of an interval during which it changes by less than that amount, we cannot successfully discriminate between the way it is before the change and the way it is afterwards (2011, p. 335).

On this reading two objects are indiscriminable¹² when, should one seamlessly replace the other, we would not perceive the replacement as a change. And, as Keefe notes and Fara would likely admit, (a*) entails that ‘indiscriminable’ is non-transitive. So long as an object can change by a sufficiently slight amount such that we would not be able to successfully discern a difference and those changes can be summed into a change that we would discern then indiscriminability would not be transitive. Further, Keefe notes that if *indiscriminable* objects can *appear the same* then, at least for some possible series, *appears the same* will also be intransitive. So Keefe has shown “that appealing to limitations on our powers of discrimination can show the non-transitivity of certain matching relations and gives us good reasons to expect the non-transitivity of others” (2011, p. 336).

¹² These principles explicitly refer to color, but could easily generalize to other phenomenal properties.

A defender of transitivity might object that (a*) is also too strong for reasons similar to those leading Fara to reject (a). She could, for example, point out that just as we might perceive unchanging objects as changing (and so inaccurately report sameness as difference) we might also successfully (even if purely by luck) detect some minute difference, no matter how small. So there might be occasions on which we do successfully discriminate between objects that vary by arbitrarily small amounts. Such an argument might be blocked by Keefe's built in success condition, but we might also weaken (a*) like so:

(a') For some sufficiently slight amount of change in colour, or in the physical basis of colour, when we perceive an object for the entirety of an interval during which it changes by less than that amount, we *might not be able to* successfully discriminate between the way it is before the change and the way it is afterwards.

All that (a') requires to establish non-transitivity is that there is some nearby possible world in which a subject fails to discriminate between the adjacent pairs of a phenomenal sorites series, and that the subject does discriminate between the poles of the series. I think such series, and their associated failures of discrimination, are both actual and frequent. However, phenomenal sorites series pose a philosophical problem for epistemicism¹³ no matter where they are in modal space. (a')'s weakening is significant in that it leaves open the possibility that every phenomenal sorites series has some pair of

¹³ Fara is a contextualist, not an epistemicist, about vagueness. However, her view shares the features of epistemicism that I find objectionable.

adjacent objects that are successfully distinguished, but, given the limits of our coarse perceptual faculties, I find this unlikely. One might worry that (a') is trivial, as it is possible for a subject to fail to discriminate between obviously distinct objects. But this worry is misplaced – in such cases the subject is *able to* discriminate between the objects, she simply does not. (a') is relevant to situations in which changes are so slight they threaten our detective capacities.

Let's return to Fara's explanation for the distinguishability of adjacent objects in a phenomenal sorites series, which is that at least some adjacent objects in the series do appear differently but we fail to notice the change in appearances. To motivate this account Fara appeals to the example of slow and steady change, such as observing the hour hand on a clock. The two competing theories (transitivity or non-transitivity) produce different explanations of what's going on. According to the proponent of non-transitivity the hour hand appears still when viewed for sufficiently short intervals, and yet appears to have moved when viewed for a sufficiently long interval. Interestingly, Fara does not contest that there might be intervals during which the hour hand moves but seems to appear to remain still. She just asserts that the more compelling explanation is that, for at least one of the short intervals, the hour hand does appear to have moved, but the change in its apparent position went unnoticed.

However, as Keefe (2011) points out, Fara and her fellow proponents of transitivity are committed to more than just a single instance in which we fail to notice changes in how things appear to us. Since many intervals will at least seem to exhibit non-transitivity "transitivity fails over and over again through small sections of the series, so on [Fara's] view there will be many pairs about which we are wrong and we will not even count as

generally reliable when it comes to our judgments of when two things look the same to us” (p. 337). Some philosophers may not be particularly bothered by this fallibility,¹⁴ but it is a notable consequence of Fara’s view. For one thing, this undermines any empirical evidence we might have for the truisms that Fara sets out to defend, such as ‘if A and B appear the same then if A appears red B appears red.’ After all, we’ve never seen two objects that appear exactly the same (although we often fail to notice the difference).

Fara claims that defenders of non-transitivity are not in a position to criticize the distinction between looking the same and appearing to look the same (i.e., that two objects can appear to look the same to me while I fail to notice that they do not in fact look the same to me). This is because the defender of non-transitivity already accepts the distinction between how an object appears and the “way it looks” (2001, p. 928). But these distinctions are not on equal footing. The proponent of non-transitivity is merely appealing to the familiar distinction between the phenomenal state of observing an object (how the object appears to me) and the surface qualities of the object (the “way it looks”). Given the limits of my perceptual and representational faculties an object might look one way while being another. Fara is appealing to a further distinction between how an object looks to me and how it appears to look to me (i.e., what I notice about how it looks to me.)

In both cases, the underlying layer is said to be transitive. It is uncontroversial that if object *A* has the same physical qualities as object *B* and *B* has the same physical qualities as *C* then *A* and *C* have the same physical qualities. The proponent of non-transitivity claims that *A*, *B*, and *C* might have slightly different physical qualities such that, for some

¹⁴ Cf. Timothy Williamson’s argument for the anti-luminosity of phenomenal states. For Williamson being in a particular phenomenal state is insufficient for knowing that one is in that phenomenal state (2002, Chapter 4).

observer, *A* appears the same as *B*, *B* appears the same as *C*, but *A* does not appear the same as *C*. The advocate for transitivity denies this, but her denial had better not entail higher-order intransitivity or we could simply create a phenomenal sorites series for that relation. That is, if I might notice that *A* and *B* appear the same and notice that *B* and *C* appear the same but fail to notice that *C* and *A* appear the same then Fara has rescued the transitivity of 'appears the same' only by introducing the intransitive 'notices the appearance of sameness.'¹⁵ Those who support non-transitivity will hold that appearances may not be veridical in that they may fail to accurately represent reality. Supporters of transitivity, at least those who follow Fara, are committed to the stronger claim that appearances are not veridical in that they may fail to accurately represent how things appear. Fara's account threatens to erode the distinction between appearance and reality altogether. If there is some degree of physical change that is not apparent then the transitivity of appearances collapses. So Fara is committed to the view that all microphysical changes are apparent (but often go unnoticed). But then there would be no difference between how something *appears* and how something *is*. On this view transitivity of the sameness of appearance is easy to secure – as easy as transitivity of physical sameness. However, I view this as a weakness of the account, not a virtue.

Fara is not, as Keefe indicates, only committed to widespread fallibility regarding judgments of when two things appear the same. There will always be some microphysical features of the world that escape my notice, yet are apparent to me. So I will frequently not be a reliable judge of how things appear to me. A solid white screen marred by a single red pixel does not appear solid white to me, even though I do not notice the blemish. A

¹⁵ See Keefe (2011, pp. 340-343) for additional problematic features a transitive matching relation must have.

mountain peak bearing a single, far off snowflake does not appear bare, although it seems as though it does. The pot of water on my counter does not look still to me – its temperature is not absolute zero, so the molecules of water are continuously jostling against one another, despite my failure to notice the bedlam.

Some philosophers take phenomenal sorites as evidence that at least some pair of adjacent objects in the series simply must be distinguishable, no matter how micro-physically similar they are. For example, Voorhoeve and Binmore (2006), when considering a phenomenal sorites series for an individual being subject to ever-so-slightly increasing electric shocks,¹⁶ suppose that the subject, Alice, runs through the series many times (in both ordered and random sequences) and individually labels her level of discomfort at each level. A level will be considered indistinguishable from another when it receives, in total, exactly the same ratings.¹⁷ They write, “it is clear that on this understanding of...’is indistinguishable from’, it cannot be true that all adjacent notches feel the same when she runs through all notches in ascending order. For the assumption that Alice feels no discomfort at notch 0, together with the assumption that all adjacent notches feel the same, yields the conclusion that Alice feels no discomfort at...notch 1000” (2006, p. 104). From this they conclude that “we must reject the popular idea that there is a ‘least-noticeable difference’: a magnitude of physical change so small that human beings always fail to detect a difference between situations in which a change smaller than this magnitude has and hasn’t occurred” (2006, p. 104). How marvelous, to have discovered something so

¹⁶ See Quinn (1990) for the argument Voorhoeve and Binmore are commenting on.

¹⁷ It is unclear to me exactly what work the repeated trials are supposed to be doing – if indistinguishability is transitive (or not) it should be as evident from one run as many. Suppose that on the first run level 299 is deemed ‘slightly painful’ and level 300 is deemed ‘painful.’ Well, then Alice has already distinguished between adjacent levels.

amazing about my perceptual capabilities from the armchair!¹⁸ I think that Voorhoeve's and Binmore's mistake is holding that indistinguishability is transitive.

In summation, upon examination rejecting the non-transitivity of the appearance of sameness leads to unfortunate consequences. Accounts of transitivity either overestimate our perceptual faculties, lead to widespread fallibility regarding judgments of how things appear, or re-introduce some other non-transitive relation – perhaps all three.

Context

A phenomenal sorites argument for a series of color patches ranging from a patch (patch 0) that clearly appears red to a patch that clearly does not (patch 50) might run as follows:

- 1) Patch 0 appears red.
- 2) If patch 0 appears red then patch 1 appears red.
- 3) If patch 1 appears red then patch 2 appears red.
- ...
- C) Therefore, patch 50 appears red.

¹⁸ Voorhoeve and Binmore contest my cheeky inference. They discuss a device that only reports changes in terms of kilovolts, saying that it is sensitive to changes in microvolts even though its "capacities of discrimination" are limited. But this plainly does not answer the challenge – the device's capacities of *reporting* are limited, but its capacities of discrimination are not (otherwise it could not register, and then report, the change from .99999999 kilovolts to 1kilovolt).

Epistemicists claim that one of the conditional premises is false. There is a patch that appears red whose subsequent patch does not, although we do not (and perhaps cannot) know which pair this is. I have argued that this leads to trouble for the epistemicist. She is denying that adjacent patches look the same, but this is tantamount to gifting us with extraordinary powers of perceptual discrimination – powers that we lack. Standard sorites arguments (e.g., replace ‘appears red’ with ‘is red’ above) can be handled by appealing to the factors that determine a predicate’s unknowable extension, as discussed in section two.

One might object that this argument ignores the shifting of the context in which judgments of sameness are being made. That is, for any purported non-transitive triple of which it is alleged that *A* looks the same as *B* and *B* looks the same as *C* but *A* and *C* do not look the same what is really going on is that *B* looks the same as *A* in the context of comparing *A* and *B* and that *B* looks the same as *C* in the context of comparing *B* and *C*. How *B* looks is unstable across the two contexts, but the unwelcome conclusion that *B* simultaneously does and does not look, e.g., red is avoided. *B* appears red in one context and does not in another.¹⁹

Contextualism about vagueness is a live and interesting research area that I am unable to explore here.²⁰ I will, however, suggest that this is not a maneuver available to the epistemicist. This is because the epistemicist is still committed to the existence of a sharp boundary between the objects of the series that appear red and those that do not. The contextualist response is that the boundary is never going to be between any two objects I am actively considering, provided that the objects are similar enough that they are

¹⁹ See Raffman (1994, 1996, 2000 and 2012).

²⁰ See Keefe (2007) for a compelling criticism of contextualism.

indiscernible, but the boundary must exist *somewhere* if a contextualist version of epistemicism is correct. So even supposing the contextualist is right that the boundary shifts as I move through the many pairs of a sorites series such that wherever I look the boundary is elsewhere the epistemicist must believe that, for a given context, there is a boundary. And, wherever that boundary ends up, it will be between indiscernible objects. The flux of context might serve as an explanation for ignorance of the boundary's location but it cannot serve as an explanation for or defense of the boundary's existence.

Supervaluationism Saves the Day

Thus far I've focused on the problems phenomenal sorites series pose for epistemicism. For the remainder of this section I sketch how a representational theory of vagueness such as supervaluationism might do better. Suppose we understand vagueness, as Lewis (1986) and Fine (1975) suggest, as a sort of indecision or incompleteness. On this picture vagueness arises when a representation, such as a sentence, expression, name, or predicate, leaves the minute details unspecified. I take it Kit Fine has something like this in mind when he writes, "vagueness is ambiguity on a grand and systematic scale...Ambiguity is like the super-imposition of several pictures, vagueness like an unfinished picture, with marginal notes for completion" (1975, pp. 282-283) and I interpret Lewis as expressing a similar thought when he calls vagueness "semantic indecision." So vagueness is due to an under-specification of detail; there will be a collection of ways of configuring these missing details, all of which respect the original specifications.

For vague sentences, then, there are a number of precise propositions that all might serve as legitimate interpretations or specifications of the sentence. Call these propositions the sentence's sharpenings. Thus the supervaluationist says we can treat the sentence as true (or that the sentence just is true) when all of its sharpenings are true, false when all of its sharpenings are false, and neither true nor false when the set of sharpenings is mixed. So the supervaluationist will hold that some of the conditional premises of the sorites argument given above are neither true nor false. For any given sharpening of 'red' there will be a false instance of 'if patch_i appears red then patch_{i+1} appears red.' However, which conditional is false will vary with the sharpenings.

Thus far I've argued that sorites series constructed for vague predicates such as 'appears red to me' where each object is indistinguishable, though microscopically distinct, from its adjacent neighbors do not permit bivalent boundaries. Epistemicism requires that, for any sorites susceptible predicate P , there exists some pair of adjacent objects in a sorites series A and B such that $P(A)$ and $\sim P(B)$. Since A and B appear the same this is contradictory for predicates such as 'appears red.' That representational theories of vagueness such as supervaluationism are not committed to bivalent boundaries highlights a feature that I find attractive about this class of theory. Vagueness as a representational phenomenon – the world is not vague (the microphysical structure of each object in the series does distinguish it from its neighbors) but my all-too-human (in)ability to interpret and represent the world is unavoidably imprecise.

Suppose, one tries to turn the same argument against the supervaluationist. Recall that for the supervaluationist a vague utterance is true when every legitimate means of making the utterance precise is true, false when every sharpening is false, and neither true

nor false otherwise. But, the objection runs, won't there be some pair of adjacent objects (C and D) in a fine-grained sorites series such that it is true that C appears red to me and neither true nor false that D appears red to me? If so the supervaluationist is faced with a similar difficulty as the epistemicist, C and D appear the same to me but while it is true that C appears red to me it is neither true nor false that D appears red to me.

It is worth noting that this argument does not resolve the difficulty for epistemicism, it merely attempts to drag supervaluationism down as well. That said, I think the supervaluationist can respond to the challenge in a way that the epistemicist cannot. To see how, consider a simplified model of the supervalational approach to the problem where:

- 1) The series contains three objects (x, y, z).
- 2) There are two legitimate sharpenings of the predicate P in question ($P1, P2$) such that ($P1(x), P1(y), \sim P1(z)$ and $P2(x), \sim P2(y), \sim P2(z)$)

On this simplified model $P(x)$ is true, $P(z)$ is false, and $P(y)$ is neither true nor false. Crucially, the supervaluationist can say what the epistemicist cannot, that it is neither true nor false that x appears the same as y with respect to P , because on one sharpening x does appear the same as y and on the other it does not. The important takeaway is that, because it is vague whether or not the objects in the series appear the same as their neighbors, it is neither true nor false that adjacent objects appear the same as their neighbors. So the supervaluationist can resist the phenomenal sorites using the same strategy with which she resists the traditional sorites.

Furthermore, this analysis is congruent with semantic supervenience. The underlying facts that determine a representation's substance (either the semantics of a sentence or the content of an appearance) don't do so precisely – they leave some matters unsettled. The supervenient analysis respects this by allowing for indeterminate truth-values and provides a strategy for diffusing some of the difficulties vagueness causes.

Conclusion

An epistemicist is faced with only unpleasant options when confronted by a fine-grained sorites series. To avoid contradiction she must say either that adjacent objects in the series do not appear the same as their neighbors or that an undetectable difference in appearance makes a psychological difference to how two objects appear. Both options are implausible. The supervenientist is more easily able to resolve the difficulty by appealing to the extant fundamental aspects of her theory. I take these considerations to weigh in favor of a view according to which vagueness is *genuine* – that is, vagueness is its own phenomenon, and is not reducible to ignorance. The following chapters resist arguments to the effect that vagueness being *genuine* entails that vagueness is *ontic*.

CHAPTER THREE

THE INDEPENDENCE OF SEMANTIC VAGUENESS

Theorists studying vagueness typically belong to one of three camps: representationalism, epistemicism, or onticism. Representationalists believe that vagueness is not, strictly speaking, a part of the world – there are no genuinely vague physical objects or properties. Instead, vagueness arises from imprecise representations. On this view, focusing on linguistic vagueness, the sentence ‘Bob is bald’ is vague because it has a plurality of equally legitimate precise interpretations. Epistemicists agree that there are no genuinely vague objects or properties and that there are no genuinely vague expressions or sentences; vagueness is a matter of ignorance. The sentence ‘Bob is bald’ is, for the epistemicist, always perfectly precise; one candidate from the collection of possible precise interpretations is the only correct interpretation, but we are (often unavoidably) ignorant as to which candidate is correct. Lastly, the onticist believes that there are genuinely vague objects or properties or that vagueness is metaphysical.

Akiba is one such onticist. He argues that onticism and epistemicism are the only theoretically live options – if there is linguistic vagueness then it is, properly speaking, a type of ontic vagueness (2004). I will argue that the representational view of vagueness can resist his argument. Section one presents Akiba’s argument that linguistic vagueness is a type of ontic vagueness. Section two argues that there are good theoretical reasons, independent of Akiba’s challenge, to improve the operational account of linguistic vagueness. Section three argues that, on my updated account of linguistic vagueness, Akiba’s argument is not persuasive. Akiba also attempts to provide independent

motivation for his account of metaphysical vagueness by purporting to make progress on the problem of the many. Section four argues that Akiba's account of metaphysical vagueness faces its own version of the problem of the many, and so considerations of the problem of the many do not give any independent theoretical impetus in support of his view.

Akiba's Dilemma

Akiba's view of ontic vagueness is structurally similar to supervenience, a leading linguistic theory of vagueness. Metaphysically vague objects are trans-dimensional entities that extend through what he calls the precisificational dimension. Precisificational dimensions are microphysically identical; each contains precisely the same arrangements of particulars. The dimensions differ only in how the (precise) boundaries of the macroscopic objects are drawn – any precisificational dimension contains only precise objects. Metaphysically vague objects are extended across precisificational dimensions analogously to how temporal and spatial objects are extended across time and space respectively. Consider the temporal case. For Akiba, Tibbles the cat is extended through time by virtue of being constituted by some particular arrangement of atoms in every time-slice in which Tibbles exists. Importantly, Tibbles the trans-temporal object need not be constituted by the same arrangement of atoms in every time slice in which he exists – he is constituted by one particular arrangement on the day he is born and by a rather different arrangement on the day of his death. Analogously, Tibbles the metaphysically vague object is extended across precisificational space in virtue of being constituted by a unique

arrangement of atoms in each precisificational dimension in which Tibbles exists. Precise objects may be similarly extended, but they are constituted by the same arrangement of atoms in each precisificational dimension. So it can be vague how many hairs Tibbles has because, for example, in dimension D_1 he has 100 loose hairs and in D_2 he has 99 loose hairs and so on. Hair 100 exists in both dimensions, as the dimensions contain exactly the same atoms in exactly the same arrangements, but the precisification of Tibbles that exists in D_2 does not contain hair 100. Tibbles the cat is a vague object that spans precisificational dimensions.

Akiba summarizes the representational account of vagueness as the view that “vagueness is a form of referential indeterminacy: a vague term is term that has more than one candidate referent, none of which the term exclusively refers to” (Akiba p. 407). Here Akiba appears to be targeting prominent supervenientists such as David Lewis, who famously states, “The only intelligible account of vagueness locates it in our thought and language. The reason it's vague where the outback begins is not that there's this thing, the outback, with imprecise borders; rather there are many things, with different borders, and nobody has been fool enough to try to enforce a choice of one of them as the official referent of the word 'outback.' Vagueness is semantic indecision” (Lewis p. 212). In section two I will argue that this account of linguistic vagueness needs a small but crucial update, but for now I will let it stand.

Akiba's argument is that his ontic view is preferable to the semantic view, according to which the world is precise and vagueness only infects thought, language and other ways of representing or referring to the world, because the semanticist is faced with a dilemma. Akiba argues that one can either be a deflationist or an inflationist about semantic

properties such as reference and that, whichever horn one takes, the ontic view of vagueness stands better than the semantic account.

Take the first horn, deflationism. A deflationist about X thinks that X is not substantive. For example, a deflationist about the semantic property of truth might think that 'is true' is merely a logical construct that disquotes a sentence (i.e. "'p' is true' just knocks the quotes off and reduces to p), and so there is, strictly speaking, no robust, substantive property 'truth.' In short, the biconditional "'p' is true if and only if p' is exhaustively definitional of truth. On the other hand, "inflationism holds that semantic properties/ relations, such as reference relations and the truth property, are substantive physical properties/relations" (Akiba p. 412).

A deflationist about reference will think that 'refers to' is strictly a logical or linguistic device that connects a proposition to the objects that sentence is about, but, at bottom, there is no substantive reference. So a deflationist about reference might believe that "a schema linking an expression, referred to by a quote-name, to its referent, as in "'a' refers to a", [gives] an exhaustive account of reference" (Båve 2009). Cashing out complete, unproblematic deflationary or inflationary theories of reference and truth quickly becomes more complicated, but these intricacies are not relevant here.

Akiba thinks that one cannot be a deflationist and hold the semantic view of vagueness. According to Akiba's reading of the semantic view, vagueness is referential indeterminacy and, since a deflationist denies the existence of substantive reference relations, there can be no referential indeterminacy and hence no vagueness. "If you eschew reference, you cannot make sense of referential indeterminacy" (Akiba 412). So if

you are attracted to both a view according to which there is genuine, non-epistemic vagueness and semantic deflationism then you ought to accept ontic vagueness.

On to the second horn. A referential inflationist thinks that reference is constituted by substantive physical or causal relations that connect thought and language to the world. But, Akiba argues, if one is both an inflationist and an indeterminist about reference then one already thinks there is worldly indeterminacy – the indeterminacy in the physical relations constituting reference. So one should be sanguine about other forms of physical indeterminacy. For example, if one subscribes to the causal theory of reference (a type of inflationary theory of reference, see, e.g., Kripke (1980)) then one holds that names refer to objects via certain causal connections to those objects. Akiba believes that it would be “extremely odd” to hold that reference relations are the only metaphysically indeterminate causal connections.

To sum up his dilemma, if deflationism about reference is correct then one cannot be a semanticist about vagueness because there is no substantive reference, and hence no referential indeterminacy. If one is an inflationist about reference then one should not be a semanticist about vagueness because one is objectionably countenancing indeterminacy in only one type of causal connection.

I believe that the semanticist can comfortably take either horn of Akiba’s dilemma, and I will argue for this in Section 3. Before undertaking this, however, it will be useful to explore some internal issues facing the referential account of vagueness sketched above, which I discuss in the following section.

Is Semantic Vagueness Best Characterized as Referential Indeterminacy?

According to the referentially indeterminate account of semantic vagueness Akiba sketches a term is vague when it has a variety of equally acceptable candidate referents. For example, 'the Outback' is vague not because there is some amorphous object in the world with vague boundaries but because there are innumerable precise ways of partitioning the desert in the heart of Australia and we have simply not bothered to specify exactly which partition we are referring to when we employ the name 'the Outback' – hence it is indeterminate which partition the name references. It is worth questioning whether or not this is the most charitable interpretation of Lewis' position. Lewis characterizes vagueness as semantic indecision, which Akiba reads as referential indeterminateness. But it is not obvious that these two notions are equivalent. For instance, if I were to ask you to bring a bottle of wine to the party I am leaving it unsettled exactly which bottle of wine I am asking you to bring. That this is equivalent to my somehow indeterminately referencing each of the possible bottles of wine you might bring seems like a substantial theoretical commitment, and Akiba offers no argument linking the two notions.

That said, I think the even a theorist attracted to something like Akiba's referential account would do well to replace it with an account of semantic vagueness according to which an expression's vagueness is due not to an indeterministic connection to multiple (potentially overlapping) physical entities but instead to a connection to a multitude of precise semantic objects where it is undetermined that any one of the precise semantic objects best captures the vague expression's meaning. So a sentence is vague when it

incompletely or indeterminately expresses multiple precise propositions (the sentence's sharpenings or precisifications).

The key difference between the accounts is that, on the expressively indeterminate model, reference is not indeterminate – it is a relation that maps precise semantic objects to physical entities. Representations are vague when they could legitimately be interpreted as expressing more than one precise representation. A vague unit of language might have multiple referents when it inherits the referents of its sharpenings, but the linguistic entity is vague not because it has multiple referents but because it incompletely expresses multiple precise units of language.²¹ For example, suppose the predicate 'Red' is vague. On the account on offer 'Red' is vague because it ambiguously expresses some number of precise predicates (e.g., Red₁, Red₂, ... etc.). Hence the utterance 'That ball is red' ambiguously expresses a corresponding series of precise utterances ('That ball is red₁, 'That ball is red₂, ... etc.) because each precise utterance is a viable spelling out of the missing precision of 'That ball is red'.

This distinction will prove relevant when I return to the discussion of Akiba's dilemma in section 3. For the remainder of this section I provide independent motivation in support of upgrading Akiba's referential account. The main reason I see to prefer Akiba's referential account of semantic vagueness is that, at least in the case of names (such as 'the Outback'), the expressive account seems to add an unnecessary step. However, I

²¹ I am being intentionally abstract with regard to what counts as a unit of language or linguistic object because I intend for this to be a general theory of representational vagueness. Plausible candidates include, but are not limited to, predicates, names, sentences, utterances, words, terms, statements and phrases. For the sake of clarity I will reserve a technical notion of 'proposition' to denote precise assertions that something is the case. So, for the purposes of this work, there are no vague propositions.

believe there are several theoretical virtues that more than make up for this apparent inelegance.

The first is that it is compatible with a wider range of theories of reference. For example, if one is a Fregean about reference then the referent of a sentence will be the sentence's truth-value. So a true, vague sentence, a sentence with only true sharpenings, will have a single referent. If representational vagueness for sentences is, as a friend of Akiba's interpretation of semantic vagueness would have it, a matter of a sentence having more than one equally good candidate referent then no true sentence is vague. Frege (1982) probably did in fact believe that vague sentences were untrue because they were literally meaningless, but my view avoids this difficulty for a more moderate Fregean; a sentence is vague in virtue of having multiple equally legitimate sharpenings as a viable precise interpretation - each of which refers to its own truth-value.

Substantial work has been done regarding Frege's apparent commitment to semantic nihilism - the view that all vague sentences are meaningless or untrue (e.g., van Heijenoort 1986 and Puryear 2013). I don't intend to supplement or comment on that work here, but one reason a Fregean might struggle with vagueness is that she might face difficulty reconciling her theory with referential indeterminacy as the locus of the vagueness. On the account proffered here this is unnecessary and avoidable.

Additionally, the vagueness of a predicate might not involve indeterminacy of reference. The referential account of linguistic vagueness appears intuitive for vague names that demarcate objects with apparently imprecise boundaries, but it is less clear how it handles the vagueness of predicates. Consider the phrase (R): 'that red ball,' said of the ball on my floor. (R)'s referent (on a non-Fregean view) is a particular object, the ball

on the floor. There are no other likely candidates, yet (R) is vague. The proffered upgrade handles this case naturally and easily – (R) is vague because there are many legitimate sharpenings of (R), each of which employs a precise predicate in place of ‘red,’ and no one of which is a more natural interpretation of (R) than any other. A committed referentialist might argue that the many candidate sharpenings of ‘red’ are indeterminate referents of (R), but this seems unmotivated – if (R) is referring to a shade of red it is likely referring to the particular shade of the ball.

Additionally, I believe the account on offer comes out ahead in cases where the extension of the predicate at issue is empty, such as (Y): ‘that yellow ball,’ said of the red ball on my floor. It is strange to think that various shades of yellow are referents of (Y) when (Y) is about an object that is not yellow. Similarly, the term ‘gorgon’ might be vague without referring to any actual objects, and if possibilities or fictitious objects are candidate referents then nearly every term will have a great many referents.

Regardless, the referentialist will still need to explain how vagueness can remain (and I think it can) when the referents of an expression are explicitly determined. I might make explicit exactly which ball (the one on the floor) and exactly which color (the one on the ball) I am referring to, removing the indeterminateness of reference, without removing the vagueness of (R). I think it is natural to see the remaining vagueness of (R) as due to (R) ambiguously expressing many candidate meanings of ‘red.’ This modification to the traditional account of linguistic vagueness is small but, in certain domains, it will prove significant. In the following section I demonstrate its significance for Akiba’s argument – specifically, it will allow the representational theorist to blunt the second horn.

Grasping the Horns

I will now argue that neither horn of Akiba's dilemma is sharp; supervenience, or some other representational theory of vagueness, is compatible with both semantic deflationism and inflationism. Supervenience is compatible with deflationism, the view that semantic notions such as reference and expression are non-substantive, merely logical devices in our conceptual toolkit, because our conceptual tools can be imperfect. Representational theories of vagueness are compatible with inflationism, the view that these semantic operations are substantive, physical, and perhaps causal, relations because, contra to Akiba's claims, the supervenience theorist can provide principled reasons to restrict this sort of indeterminacy to the semantic domain.

Supervenience theorists think that semantic indeterminacy is the result of semantic underdetermination; vague utterances fail to hook up to the world in precise ways or fail to express unique propositions. My version of the supervenience account of vagueness is that a vague utterance is vague because there are many precise propositions (the expression's precisifications or sharpenings) that are all equally good candidate precisifications. Akiba thinks that a deflationist who "eschews" reference can't make sense of referential indeterminacy, but this does not follow. A deflationist about truth does not eschew all of the properties of truth (it is, for example, what is preserved by valid inferences). She merely deflates the property of truth to a merely disquotational device. Analogously, a deflationist about reference does not need to think that reference or its features play no role in our cognition.

If semantic relations like reference (which maps semantic entities to objects, semantic or not) or expression (which maps semantic entities to other semantic objects) are merely devices in our conceptual toolkit then it is reasonable to think that those tools might be defective. An explanation for these defects might be that we lack either the desire or capability to refine the tools in our conceptual toolkits. This fits nicely with a view according to which the world is determinate but our perceptual or conceptual schemas do not inherit the world's precision. If we ever clear up the problems in our conceptual toolkit, such a theorist might think, there will be no more vagueness. It seems to me that deflationism and a linguistic theory of vagueness go hand in hand – the supervaluationist thinks that the world is precise but many representations of the world are imprecise. These representations are imprecise because there are many worlds that might satisfy the representation, which fails to narrowly define a unique world as the world it depicts. A representation is vague when it is unsettled which of a number of precise representations best expresses the semantic content of the original. This commitment is naturally friendly to deflationary views of the mechanisms underlying and creating these representations and providing their semantic content or the mechanisms that connect the representations to objects. So the semantic theorist of vagueness can comfortably grasp the first horn of Akiba's dilemma.

For the second prong of the dilemma, Akiba argues that if inflationism is true and so reference is constituted by physical connections the referential indeterminist already allows for ontic indeterminacy, and if this is so “there must be many other indeterminate causal connections in the world” (413). Akiba doesn't argue for this expansion, and it hardly seems necessary that countenancing indeterminacy in one type of causality must

allow for other types of indeterminate causation. For example, an agent causalist (e.g., (O'Connor 1995)) might hold that only agent causation, and not event causation, is indeterminate. Indeed as a general inference [If phenomenon X is Y and Z then some other things that are Y are also Z] this maneuver is clearly invalid. That said, I believe the burden of proof here is on the theorist making a distinction, not the one denying the distinction. In order to hold that the physical connections grounding reference are the only indeterminate physical connections one ought offer some principled reason for the demarcation.

Before going into these demarcating reasons some metaphysical issues ought to be cleared up. First, it is worth noting that semantic theories of vagueness might countenance other forms of metaphysical indeterminacy. For example, it might be semantically indeterminate (and hence vague) whether or not some person is bald and metaphysically indeterminate where some electron is located. One phenomenon is semantic, the other physical – a solution to the sorities paradox will not shed light on quantum phenomena, and borderline bald men do not exist in a wave function whose collapse will determine their baldness. When the semanticist about vagueness claims that vagueness is semantic indecision and not worldly imprecision she need not be claiming that there are no other forms of ontic indeterminacy. Second, not all inflationary views are physicalist. Truthmaker semantics, for example, is an inflationary view of truth according to which a proposition is made true by some feature of the world such as states of affairs or facts. Some truthmaker theories might be resolutely physicalist, but they do not all need to be (facts, for example, are not always taken to be physical entities). Relatedly, it is not obvious that any physical connections exist between myself and abstracta (such as numbers) or possibilia (the inhabitants of possible worlds) when I refer to these non-physical objects.

So it seems likely that a sophisticated referential inflationist will not require that substantive reference relations need be grounded in the physical.

However, Akiba's argument can be shored up in light of these metaphysical concerns. Suppose that inflationism is simply the view that semantic properties are grounded by some non-semantic properties. The supervenientist must now explain why these, and only these, non-semantic properties are indeterminate in the way characteristic of vagueness. A supervenientist might run into trouble here if she employs the referential indeterminateness theory of vagueness that Akiba attributes to Lewis, as then the indeterminate relation at issue takes non-semantic objects as relata. However, if a supervenientist employs the theory of semantic vagueness I sketched in Section 2 then she can appropriately bracket semantic indeterminateness.

On that account semantic vagueness is characterized as a vague sentence's indeterminately expressing a number of precise propositions. On this view the imprecise or indeterminate relation at issue obtains only between semantic objects. Vague expressions are incompletely detailed and their sharpenings are viable ways of filling in the missing detail, but both are linguistic objects. Reference, on this view, is a relation between names and non-semantic-objects, and might be wholly determinate (so a vague name expresses many precise names ambiguously, and each precise name refers to a precise object). The upshot is that it is easy to contain the imprecision wholly in the semantic domain – semantic indeterminateness, ambiguity, or underdetermination is a matter of one semantic object imprecisely expressing some range of precise semantic objects. Hence, even on an inflationary view of reference that takes reference to be grounded by some assembly of the non-semantic, it is unobjectionable to hold that vagueness, understood as

semantic underdetermination, does not countenance non-semantic indeterminacy generally.

Many Problems of the Many

In addition to pressing the inflationism/deflationism dilemma against semantic theories of vagueness Akiba argues that his preferred account of metaphysical vagueness offers a solution to the problem of the many. Credited to Peter Unger (1980), the problem of the many concerns an unwelcome proliferation of objects. Here is Lewis' presentation of the problem:

Think of a cloud—just one cloud, and around it a clear blue sky. Seen from the ground, the cloud may seem to have a sharp boundary. Not so. The cloud is a swarm of water droplets. At the outskirts of the cloud, the density of the droplets falls off. Eventually they are so few and far between that we may hesitate to say that the outlying droplets are still part of the cloud at all; perhaps we might better say only that they are near the cloud. But the transition is gradual. Many surfaces are equally good candidates to be the boundary of the cloud. Therefore many aggregates of droplets, some more inclusive and some less inclusive (and some inclusive in different ways than others), are equally good candidates to be the cloud. Since they have equal claim, how can we say that the cloud is one of these aggregates rather than another? But if all of them count as clouds, then we have many clouds rather

than one. And if none of them count, each one being ruled out because of the competition from the others, then we have no cloud. How is it, then, that we have just one cloud? And yet we do. (Lewis 1993: 164)

The issue is that wherever we have purportedly one composite object, such as a cloud or a cat, we have a large number of candidate collections, every one of which would be sufficient for being a cloud or a cat. So suppose there is a cat named Tibbles sitting on a mat, and that there 100 loose hairs that are neither clearly part of nor clearly not part of Tibbles. The object that contains all of those hairs, plus the rest of Tibbles, is a cat. But the object that contains just the rest of Tibbles and none of those hairs is also a cat. So it seems as though where there was just one cat on one mat there are now a great overabundance of (overlapping) cats on a great many (overlapping) mats. Call each of these objects a p-cat for 'precise cat.'

For a supervenientist such as Lewis, 'Tibbles is the only cat on the mat' is true, because when we precisify (and so are talking about only one of the p-cats) it is the case that there is only one of them on the mat. However, the factors that determine the referent of the name 'Tibbles,' such as the conventions of the linguistic community, are not precise enough to determinately pick out a particular p-cat as 'Tibbles.' Akiba finds this response unsatisfactory, because there is still an overabundance of cats on the mat; we are just unclear about which one we are referring to. Akiba's solution is to say that none of the p-cats is Tibbles. Tibbles is the vague object that is constituted by p-cat₁ in dimension D₁, by p-cat₂ in dimension D₂, and so on. So, he claims, on his view there is only one cat on the

mat, the vague object 'Tibbles,' even though there is an overabundance of p-cats (one for each precisificational dimension).

But Akiba is faced with his own problem of the many. Say we accept that Tibbles is a vague object extended across precisificational dimensions,²² and that Tibbles is constituted by a unique p-cat in each precisificational dimension (p-cat₁ in D₁, p-cat₂ in D₂, and so on). In addition to Tibbles, there is Tibbles*, the vague cat constituted by p-cat₂ in D₁, by p-cat₁ in D₂, and so on. Indeed, there is also an overabundance of vague cats; Akiba's view disposes of the traditional problem of the many only by introducing an even greater superfluity of cats.

Akiba might insist that, because Tibbles and Tibbles* are qualitatively identical (any property that Tibbles possess Tibbles* also has, even if they have those properties in different precisificational dimensions) they are in fact the same cat. But this move threatens to collapse his metaphysical picture altogether. Recall that each precisificational dimension has the same atoms in the same arrangements as any other. The only difference between the precisificational dimensions is that some trans-dimensional objects are constituted by arrangement A in D₁ and by arrangement B in D₂, and so on. So in that sense the precisificational dimensions are also qualitatively identical; if the dimensions are not discernible based solely on how trans-dimensional objects are constituted in them then the dimensions are not discernible at all. Tibbles is not identical to any of the p-cats he is constituted by in the various precisificational dimensions because of their cross-dimensional differences; they are constituted by different arrangements in some other dimension. On this picture Tibbles* is a discernible cat from Tibbles, and both are on the

²² See section 1 for a sketch of Akiba's metaphysical view.

mat. So, while I don't pretend to offer a fresh solution to the problem of the many, it seems quite clear that Akiba's proposal stands no better than the existing attempts of tackling the problem.

Conclusion

Akiba argues that the supervaluationist faces a dilemma depending on the nature of reference. If deflationism is true then there cannot be semantic vagueness because there is no substantive reference. I have argued that this is false – reference need not be substantive to be imprecise. If inflationism is true then reference is constituted by indeterminate physical connections, so the supervaluationist should accept indeterminateness in other realms as well. I argued that this is also false – an inflationary supervaluationist can, for principled reasons, bracket the indeterminateness at issue in the semantic domain. Furthermore, his view makes no progress on the problem of the many.

CHAPTER FOUR

RELOCATING VAGUENESS

Vagueness is the apparently unresolvable imprecision infesting thought and language. There appears to be no precise boundary for the application of predicates like 'bald,' no maximum number of hairs in some exact arrangement on a human scalp that suffices to exclude a man from the predicate's domain. There are three main approaches theorists studying vagueness might take. According to the metaphysical account there are genuinely vague objects or properties – it is metaphysically indeterminate whether or not some property applies to some object. On the epistemic view, defended by Timothy Williamson (1994) and Roy Sorensen (2001), the imprecision is merely apparent and vagueness is a type of ignorance; all predicates have precise boundaries, all utterances that assert that something is the case are either true or false. However, the epistemicist asserts, we lack knowledge of the boundaries' locations or the truth of many vague sentences. The third view is that vagueness is genuine, but constrained to language and thought – that vagueness is semantic or linguistic imprecision.

Advocates of the linguistic or semantic approach, such as David Lewis (1986) and Bertrand Russell (1923), often hold that there is something unintelligible about metaphysical vagueness. As Russell remarks, "vagueness and precision alike are characteristics which can only belong to a representation, of which language is an example. They have to do with the relation between a representation and that which it represents. Apart from representation...there can be no such thing as vagueness or precision" (p. 82). In a similar vein, Lewis states that, "the only intelligible account of vagueness locates it in

our thought and language” (p. 212). Epistemicists too hold that reality is precise, that vagueness is mind dependent (Williamson 2003). Vagueness, on the epistemic view, is a type of ignorance, and ignorance is mind dependent – without thinkers there would be no ignorance and thus no vagueness.

Despite noteworthy attempts to make sense of metaphysical vagueness (e.g., Barnes (2010a), Williams (2008), Akiba (2004)) approaches that view vagueness as mind dependent are in vogue, so much so that Trenton Merricks (2017) calls mind dependent theories of vagueness the “orthodoxy.” Merricks (2001 and 2017) offers two interesting arguments aimed at overthrowing the orthodoxy. The first (2001) argues that linguistic vagueness, if it exists, is a species of metaphysical vagueness. I contend that this argument relies on a conflation between varieties of ambiguity, and that the friend of linguistic vagueness should reject Merricks’ diagnosis of vagueness in terms of garden-variety ambiguity. The second (2017) argues that there are vague objects in worlds without thinkers, so vagueness must be mind-independent. I will argue that this argument relies on the implicit assumption that the existence of a predicate entails the existence of a corresponding property. However, this assumption is both philosophically problematic and something the defender of ‘orthodoxy’ is already committed to denying. As such, theorists who hold that vagueness is mind-dependent should not be persuaded by either of Merricks’ arguments.²³

Section one responds on behalf of the friend of orthodoxy to Merricks’ (2001) argument that linguistic vagueness, if it exists, must be a species of metaphysical

²³ I am a fan of approaches to vagueness that accept that some predicates are genuinely imprecise (and so am no epistemicist). So I will set aside considerations of how an epistemicist should resist Merricks’ second argument (his first argues that vagueness is either epistemic or metaphysical, so would not trouble an epistemicist.)

vagueness. Section two presents Merricks' (2017) argument for the existence of mind-independent vagueness and argues that the argument is unpersuasive.

Vagueness and Ambiguity

In his "Varieties of Vagueness" Merricks (2001) argues that vagueness must either be metaphysical or epistemic –linguistic vagueness, if it exists, is a species of metaphysical vagueness. His argument proceeds as follows: Suppose that Harry is a borderline case for being bald. So it is vague whether or not Harry is bald. Merricks then considers sentence (1): 'Bald' describes Harry.

If, Merricks argues, (1)'s being linguistically vague means that (1) expresses a single proposition which does not have a determinate truth value then the linguistic account of vagueness is already in trouble. He writes, "one might also add that this means there is no determinate fact of the matter about whether 'bald' is related by describing to Harry, no determinate fact of the matter about whether 'bald' has the property of describing Harry, and no determinate fact of the matter about whether Harry exemplifies the property of being described by 'bald'. Obviously enough, if this interpretation of the vagueness of 'bald' is correct, then linguistic vagueness is a species of metaphysical vagueness..." (p. 147).

I do not think this is as obvious as Merricks claims. His thought seems to be that the above claims indeterminately ascribe some property to 'bald,' and if it can be indeterminate whether or not a property attaches to an entity then the indeterminacy at issue must be metaphysical. However, the properties he is discussing (whether 'bald' is related by describing to Harry, whether 'bald' has the property of describing Harry,

whether Harry exemplifies the property of being described by 'bald') are properties of linguistic entities. If linguistic entities are vague then they may have vague properties. The linguistic view of vagueness is only troubled if the semantic vagueness of representations somehow 'trickles down' into the metaphysical reality the representations are about. I will return to this idea in Chapter Five, but for now I will set it aside as, like Merricks, I believe that propositions (which I stipulate must be precise) never have indeterminate truth-values, so we should not say that (1) expresses a proposition that is neither true nor false.

The most promising account of linguistic vagueness, I believe, is some version of supervaluationism. According to this view a sentence is vague when there are multiple precise propositions (the sentences valuations, precisifications, or sharpenings), each of which has a determinate truth-value but none of which is a stronger candidate for capturing the best interpretation of the sentence than any other. The original sentence, however, will lack a determinate truth-value when some of its sharpenings are true and others false. A supervaluationist will likely say that (1) is vague and has an indeterminate truth-value because the sentence indeterminately or 'hyper-ambiguously' might express one of multiple propositions, none of which is a better candidate than any other for the 'correct' sharpening of (1). So (1) does not express a single proposition.

Merricks does not think this strategy successfully rescues linguistic vagueness. He argues that if (1) is vague it must be due to the vagueness of the expressions or terms (1) contains. 'Harry' is not vague (or, if it is, its vagueness does not account for the vagueness of 'bald.')

Merricks then claims that (1)'s vagueness cannot be due to the vagueness of 'bald' because (1) mentions, but does not use, 'bald.' And since "it is clear which word is mentioned, even if it is not particularly clear who, exactly, it describes - and so - no

precisification is needed” (p. 148). I think this is not as clear as Merricks contends. ‘Bald’ is not being used as a predicate in (1), but the term is being employed as a name to signify a predicate – namely, ‘bald’. As names, like predicates, can be vague a supervenational treatment of the vagueness of ‘bald’ would interpret it as indeterminate over a range of precise predicates, and this might very well be a source of (1)’s vagueness.

As Lewis famously states, “the reason it's vague where the outback begins is not that there's this thing, the outback, with imprecise borders; rather there are many things, with different borders, and nobody has been fool enough to try to enforce a choice of one of them as the official referent of the word ‘outback.’ Vagueness is semantic indecision” (1986, p. 212). Analogously, a supervenationalist will hold that the reason it is vague whether or not some person is bald is not because there is some fuzzy property, baldness, with imprecise borders, but that there are many properties (having so many hairs in just such an arrangement), and we simply do not insist that one such property is the official definition of ‘bald.’ If we were to christen each of these various properties (e.g., bald₁, bald₂, etc.) the members of the series would all be equally good candidate sharpenings of the vague name ‘bald’. But if ‘bald’ is a vague name for many candidate predicates (e.g., ‘bald₁, ‘bald₂, etc.), much as ‘the outback’ is a vague name for multiple candidate deserts in the heart of Australia, then the vagueness of ‘bald’ (as a name) may well be relevant to the vagueness of (1). If we are asking whether or not ‘bald’ describes some entity the vagueness of ‘bald’ (the name) is relevant to our inquiry in a way it is not if, say we were asking whether or not ‘bald’ has four letters (since every candidate sharpening of ‘bald’ has four letters).

But for now I’ll grant that the vagueness of (1) is not due to the vagueness of ‘Harry’

or 'bald.'²⁴ What remains is 'describes.' For Merricks, the supervenational treatment of (1) might then hold that (1) can be disambiguated into many propositions, each of which employs a slightly different (determinate) semantic relation to link Harry and 'bald.' So (1) expresses not one but many propositions. However, Merricks contends that this account fails to preserve vagueness as linguistic:

What we would have instead [of semantic indecision or indeterminacy] is a cluster of relations gathered under the title 'describes', and the fact that it has been decided – somehow – that 'bald' stands in certain of those relations to Harry and fails to stand in the remainder of those relations to Harry. (Perhaps it has been "decided" by causal factors associated with our linguistic practices, as opposed to, say, a vote of English speakers.) But if there is a determinate fact of the matter as to whether or not 'bald' stands in each and every semantic relation expressed by 'describes' to Harry, then it seems that there is no linguistic vagueness (p. 150).

If, the argument runs, as the supervenationalist might have it, 'describes' expresses some collection of relations, each of which determinately does or does not relate 'bald' and 'Harry,' then 'describes' cannot be linguistically vague. There is something a bit strange going on here. Consider a case of lack of specificity:²⁵

²⁴ It is ultimately immaterial – if Merricks' objection to a supervenational treatment of 'describes' succeeds it will also succeed against a supervenational treatment of 'bald.'

²⁵ Vagueness is often taken to be particularly about unspecified or unknown boundary conditions.

(B): 'The guest at the party wore black.'

Suppose that there were several guests, many of whom wore at least one black article of clothing and some of whom did not. Independent of a particular analysis of (B) or a discussion of its truth or falsity we should not insist that (B) cannot be linguistically unspecific because there is a determinate fact of the matter as to what each guest was wearing. I believe Merricks' argument commits a similar mistake – it conflates garden-variety ambiguity with vagueness. The phrase 'garden-variety ambiguity' is a bit misleading, as ambiguity is itself a philosophically contentious topic.²⁶ The basic idea is that ambiguity arises when a linguistic object has multiple possible (determinate) meanings. For example 'Flying planes can be dangerous' is (at least) ambiguous between 'the activity of flying a plane can be dangerous' and 'planes, the machines, can be dangerous when airborne' (Chomsky 1965).

Vagueness, on linguistic theories, is quite similar to ambiguity (Sider and Braun 2007, Fine 1975) but one difference relevant to this discussion is that ambiguity is, in principle, resolvable, whereas vagueness is not. We might investigate, perhaps by discovering context or the intentions of a speaker, whether or not they are trying to warn off piloting or advising we stay away from airfields (or both). A similar strategy will not be able to uncover which of many precise semantic relations a speaker is employing when they invoke the vague term 'describes,' and a natural explanation of this difficulty is that there simply is no fact of the matter as to which candidate sharpening is more legitimate than any other. Ask a speaker to disambiguate what she means when she speaks of the

²⁶ See, e.g., Chomsky (1965), Austin (1962), Atlas (1989), Brendan (1990) and Sennet (2016)

risks of aviation and she might be happy to do so, ask her which version(s) of ‘describes’ she intends to employ and she will be rather confused. As Kit Fine elegantly articulates, “vagueness is ambiguity on a grand and systematic scale...Ambiguity is like the superimposition of several pictures, vagueness like an unfinished picture, with marginal notes for completion ” (1975, pp. 282-283). A vague sentence’s sharpenings are ways of completing the sentence, filling in the missing imprecision. The sentence can be considered true when every legitimate completion is also true. An ambiguous sentence expresses, all at once, multiple complete sentences.²⁷

The key difference, for present purposes, is that (1), because it is vague but not ambiguous, is not asserting or expressing any or all of its precisifications – this is the semantic indecision at issue with vague sentences. There are many ways of drawing in the details, of specifying exactly what relation ‘describes’ is picking out and employing, and (1) indeterminately generalizes over all of them. Merricks holds that if we had a complete list of all the many ways of filling in the imprecision of (1) then (1) would no longer be imprecise, but that is not so – we would just be aware of the many ways one might go about making (1) precise. Cognizers more attuned to precision than we humans might replace our language with one that is maximally precise, and such a language would not contain sentences such as (1). In such a language any remaining vagueness would of necessity need to be epistemic or metaphysical – but Merricks has not demonstrated that there would be any remaining vagueness. The mere possibility of such a language does not entail that less precise languages contain no semantic indecision or indeterminacy.²⁸

²⁷ Fine (1975) believes that the logic of ambiguous sentences matches that of vague sentences, but for the purposes of this paper we can remain neutral on the issue.

²⁸ See Lopez de Sa (2013) for a similar objection to Merricks’ argument.

Merricks thinks that this sort of explanation is “inconsistent with the intuitive picture that motivated linguistic vagueness in the first place, a picture of our language as rough-and-ready, rather than absolutely precise” (pp. 150-151). This is because, if vague semantic relations like ‘describes’ determinately express some collection of wholly determinate semantic relations, then language is not, in fact, “rough-and-ready.” That is, the supervenientist’s explanation of vagueness might be intuitive for terms that attempt to refer to worldly entities, because it is a picture of imprecise language trying to capture a precise world. But, he thinks, when we cash out our theory of an imprecise language in terms of a fully precise language the picture loses its intuitive appeal. However, as I argued above, the supervenientist can handle vague semantic relations such as ‘describes’ by using her regular strategy of precisification. When she does so she stipulates that there could be a number of (precise) semantic relations linking (precise) predicates to (precise) subjects, but she need not assert that a speaker of a vague language is actually employing any of these precise relations, predicates, or names.

Vagueness in (Modal) Space

The previous section critically examined an argument that linguistic vagueness, if it exists and is not epistemic, must be a species of metaphysical vagueness. Paying careful attention to the distinction between ambiguity and vagueness shows how one might resist that argument. This section addresses Merricks’ (2017) argument that vagueness is mind-independent, by maintaining that vague predicates don’t correspond to vague properties.

In his “Locating Vagueness” Merricks (2017) argues that vagueness, if it exists in the

actual world, must also exist in possible worlds that don't contain thinkers. If vagueness is mind-dependent, a product of language or thought in the form of semantic indecision or ignorance, it should be absent from possible worlds that don't contain minds. Merricks begins by drawing an analogy with the familiar distinction between truth *in* a world and truth *at* a world. A sentence is true *in* a world just in case, were that world actual, the sentence's truth conditions would be met, whereas a sentence is true *at* a world just in case that sentence's actual (this-worldly) truth conditions are met *in* that world. As Merricks puts it, "a sentence is true *at* a possible world just in case that sentence actually has truth conditions and, necessarily, if that possible world were actual, then those truth conditions would be satisfied" (2017, p. 227). Merricks employs the illuminating example of the sentence (S): "there are no sentences." There are no worlds *in* which (S) is true, as any world containing (S) contains at least one sentence. But there are worlds *at* which (S) is true – the worlds in which there are no sentences, since (S)'s (actual) truth conditions are met in those worlds.

Analogously, Merricks distinguishes between a predicate applying to an entity *in* a world and a predicate applying to an entity *at* a world.

Let a *predicate apply to an entity in* a possible world just in case, necessarily, if that possible world were actual, then that predicate would apply to that entity. And let a *predicate apply to an entity at* a possible world just in case, necessarily, if that possible world were actual, then that entity would satisfy the actual (this-worldly) application conditions of that predicate. In other words, a predicate applies to an entity at a possible world just in case that entity satisfies that predicate's actual

(this-worldly) application conditions in that possible world (p. 228).

Consider a world *W* such that, necessarily, if *W* were actual the predicate 'is a heap' would not exist.²⁹ Since 'is a heap' does not exist in *W* it does not apply to anything *in W*. Suppose *W* contains a sorites series of mounded collections of sand ranging from collections that clearly satisfy the actual (this-worldly) application conditions of the predicate 'is a heap' and collections that don't. So the predicate 'is a heap' applies to some entity *at W* because, were *W* actual, some entity meeting the this-worldly application conditions of 'is a heap' would exist. But, 'is a heap' does not apply *in W* because, were *W* actual, 'is a heap' would not exist.

Some member of the sorites series in *W* will be a borderline case with regard to the applicability of the predicate 'is a heap,' so there will be vagueness *at W*. That is, it will be vague whether or not some entity in *W* falls under the (this-worldly) extension of 'is a heap.' For the supervaluationist, this will be due to the entity being included in the extensions of some of the sharpenings of the predicate and excluded from the extensions of other sharpenings (were *W* actual). So far, everything is in line with the mind-dependent orthodoxy – vague predicates might apply to possibilia as well as actual entities. However, Merricks argues that vagueness *at* a world entails vagueness *in* that world. And if there is vagueness *in* worlds without thought or language then vagueness is not mind-dependent.

Merricks' argument leans on the assertion that "necessarily, an entity satisfies the actual (this-worldly) application conditions of the predicate 'is a heap' if and only if that

²⁹ Merricks does not say much more about this world but, for what it's worth, while I can easily conjure up a world without thinkers and language, and so without predicates like 'is a heap', I have a harder time imagining a world in which it is *necessarily* the case that a particular predicate (such as 'is a heap') not exist.

entity is a heap” (p. 230). So, if it is vague whether or not an entity satisfies the application conditions of the predicate ‘is a heap’ (and so there is vagueness *at* the world containing that entity) then it is vague whether or not that entity is a heap (and so there is vagueness *in* the world containing that entity). And, if it is vague whether or not some entity is a heap in a possible world absent thought or language then vagueness is possible absent thought or language, so vagueness is not mind-dependent.

Contra Merricks, I think the supervaluationist need not acquiesce to mind-independent vagueness. This is because the key step in Merricks’ argument relies on the assumption that a predicate applies to an entity when the predicate names a property the entity possesses. But, recalling the distinction between ambiguity and vagueness noted in the preceding section, the supervaluationist would think that, due to its vagueness, the predicate ‘is a heap’ fails to name a unique property (although were it sharpened, i.e., were its missing details filled in, it could name a unique property). A supervaluationist might think that it is true that ‘the predicate ‘is a heap’ applies to an entity if and only if that entity is a heap’ when both instances of ‘heap’ are sharpened concordantly, but this application of a supervaluational analysis does not entail that the vague predicate ‘is a heap’ picks out a property, just that every sharpening does.

It is hardly surprising that a supervaluationist would take this line, as anyone who thinks that language is vague but that the world is precise will also think that vague predicates do not name vague properties, and this commitment flows naturally from the supervaluationist’s standard treatment of vagueness. However, there are other good reasons to hold that there are predicates without corresponding properties.

Russell’s famous ‘is a set containing all sets that are not members of themselves’

provides a compelling example. Any set that might instantiate this property is a member of itself if and only if it is not a member of itself, which is contradictory, so there is no such property. So even though we can form a predicate we should be hesitant to grant that a corresponding property must exist. Likewise, I can create the predicate 'the barber who shaves all and only those who don't shave themselves' but there is no corresponding property. If the barber shaves himself then he wouldn't shave himself, but if he is not a self-shaver then he would shave himself. Of course, since no objects have these properties then these predicates would not apply to anything, but the broader point is that just because one can formulate a predicate does not mean that there is a corresponding property, regardless as to whether or not anything possesses that property.

One might interpret Russell's paradoxes as showing that there can be no such predicates. I think predicates that are contradictory are, nonetheless, predicates, although there are no contradictory properties. For example, I think there is a predicate 'is a round square' but no such property. I find this distinction to be fairly useful. For example, I think that although there is a predicate 'contains all perfections' there is no such property. In general, I am sanguine about these bizarre predicates because I view them as linguistic entities, and linguistic entities are things we construct (unlike properties, which are parts of the world). And while I may disparage our capacity to be precise, I am ever impressed with our power to create, even when our creations are nonsensical.

We might also be wary of predicates that attribute causally redundant or inert properties. Perhaps one holds that composite objects do not exist when the composite has no non-redundant causal powers (i.e., causal powers that are not found in the collective action of its parts) (e.g., Merricks 2001b). It is hard to see what causal role having the

alleged vague property of 'being a heap' plays above and beyond the causal role played by having precisely the arrangement of atoms the collection in fact has. And if objects without unique causal roles do not exist, why should the same criteria not apply to properties? If you are tempted to look askance at redundant causal powers you should be tempted to say that the objects in the sorites series in *W* have precise properties (the exact distribution and makeup of their constituents), but they do not have vague properties such as 'being a heap.'

There also does not seem to be some property, e.g., 'heapness,' that all heaps share. Compare the physical properties of a heap of stones in a quarry to the properties of a heap of ashes in an ashtray. There might be some sort of resemblance, but the physical properties of these entities are quite different. The predicate 'is a heap' applies to both collections, but it does not apply in virtue of them having a shared physical property (see Heil 2003 pp. 27-30). We might distinguish between 'heaps of stones' and 'heaps of ashes,' but this is just the first step on the road to precision. If we follow the road to the end we arrive at assigning the objects precise predicates that pick out a precise property.

Substantive engagement with these issues is beyond the scope of this work, I raise them here merely to show that the supervenience theorist is in good, or at the very least crowded, company when she denies that all predicates apply to objects in virtue of the object having the property picked out by the predicate. The friend of mind-dependent orthodoxy should not think that the predicate 'is a heap' applies to an entity if and only if the entity has the property of being a heap. The entity's properties do help determine the applicability of a vague predicate, but those properties are not themselves vague. So the friend of orthodoxy can resist Merricks' argument that vagueness exists in worlds without

thought or language and is thus mind-independent.

Conclusion

Many philosophers hold that the only intelligible account of vagueness locates it in thought and language, or, more generally, representations, as it is a category mistake to hold that anything other than a representation is imprecise. This paper has argued that Merricks' two recent challenges to this tradition are unsuccessful – the first conflates vagueness and ambiguity, the second conflates predicates and properties. Along the way I examined what it implies that some representations may have indeterminate properties, and so may themselves be examples of metaphysical indeterminacy. I think I have offered promising inroads into this thicket for the traditional conception of vagueness as a feature of representations alone, but fully exploring this landscape will have to be the subject of future investigation.

CHAPTER FIVE

GENUINE VAGUENESS AND THE ONTOLOGY OF LANGUAGE

The preceding chapters defend the view that vagueness is *genuine* (i.e., non-epistemic) and that vagueness is semantic (i.e., not ontic or metaphysical). But this raises a potential problem. Semantic entities exist. That is, a world that contains a vague language, such as the actual world, contains vague words, phrases, expressions, and so on. So there are entities in the actual world with vague properties. I stand by the arguments made in the previous chapters; for principled reasons we can say that these vague semantic entities do not entail that there are vague physical entities and that vagueness is mind-dependent. As I argued in Chapter Three, vagueness can be characterized wholly by relationships between imprecise and precise semantic entities; there is no need to involve physical objects. And, as I argued in Section Two of Chapter Four, vagueness is a feature of predicates, semantic objects that attempt to represent properties, but not (physical) properties. So there is no mind-independent vagueness. Specifically, there is no vagueness without thought, language or some other type of representation. Still, I hold that there is vagueness in thought and language. And if we were to take a census of all the many things populating our world it is reasonable to suppose that thoughts and words would get counted along with the tables, quarks, and people. This chapter explores this issue, arguing that some of the difficulties that metaphysical vagueness is thought to cause are unproblematic when (and only when) this vagueness is representational.

The Metaphysics of Vague Languages

In Chapter Four I argued that Merricks' argument in "Varieties of Vagueness" conflates vagueness and ambiguity. That is, when he treats 'describes' as simultaneously expressing a number of determinate relations, some of which connect the person Harry and the predicate 'bald,' he is treating 'describes' as being ambiguous rather than vague. Suppose that Barry Bonds swung a bat. There are (at least) two possible interpretations – either he swung a baseball bat or he swung a small winged mammal. Here the ambiguity is (probably) resolvable, one of the candidate interpretations is more legitimate than the other. But if it were not then Merricks' analysis might be apt – the sentence might simultaneously express both propositions.

But, I think, vague sentences should not be treated likewise. On the account I have defended when a speaker asserts a vague sentence she is not thereby simultaneously asserting each and every one of the sentence's potential sharpenings. Rather, she is asserting something that *could be* sharpened in a number of ways, each of which is an equally good candidate for precisifying her original statement. When I tell you 'I will be there soon' I do not tell you that 'I will be there within ten minutes and/or I will be there within ten minutes and one second and...'. So vague utterances do not express any propositions, though they might be legitimately sharpened into many.³⁰

So although I don't think Merricks' argument successfully establishes what he is after I think he points the way to an interesting problem. Suppose some feature of a language is genuinely vague, in the manner discussed above, such that it is undetermined

³⁰ This sounds striking, but I'm using proposition in a technical sense, propositions are always precise.

whether or not a word in that language is related by ‘describing’ to some entity. On a supervenience reading this is explained by the word being related to that entity by ‘describing’ on some precisifications but not on others. So there is no fact of the matter as to whether or not that word describes that entity. One popular view of facts is that they are states of affairs (Armstrong 1996). A full discussion of the metaphysics of facts is beyond the scope of this paper, but it would be an interesting philosophical result if those who insist that all vagueness is semantic must deny that facts, at least those about indeterminate languages, are metaphysical entities. For instance, suppose Armstrong is correct that “a state of affairs exists if and only if a particular has a property, or a relation holds between two or more particulars.” (1993, p. 429) Then one who holds that linguistic entities are vague might also believe that there is some particular (e.g., the predicate ‘bald’) that indeterminately has some property (e.g., that of describing Harry).

Since the defender of linguistic indeterminacy must countenance some indeterminate facts (those regarding the indeterminate elements of imprecise languages) must she also countenance indeterminate states of affairs? And countenancing the existence of indeterminate states of affairs is a stone’s throw from permitting metaphysical vagueness. Put plainly, if we include the linguistic facts among the worldly facts, and some of those linguistic facts are indeterminate then there are indeterminate worldly facts.³¹

Consider, for example, the sentence

(V): “‘bald’ is vague.”

Suppose we understand ‘vague’ to mean ‘permits of multiple legitimate

³¹ Cf. the inflationary horn of Akiba’s (2004) dilemma. This picture does not depict vagueness as extending beyond thought or language, but it takes seriously the concern that the facts about thought and language count as metaphysical.

sharpenings.' On each sharpening (V) would turn out to be false – once precisified 'bald' does not have many legitimate precise interpretations. Since the worry is clearly generalizable to any candidate vague word or expression, must the supervaluationist say, for every purported instance of vagueness, that it is not vague?

Lewis considers a similar worry in his work on the problem of the many:

[One might object that] Supervaluationism works too well: it stops us from ever stating the problem in the first place. The problem supposedly was that all the many candidates had equal claim to cathood. But under the supervaluationist rule, that may not be said. For under any one way of making the unmade decision, one candidate is picked as a cat. So under any one way of making the decision, the candidates do not have equal claim. What's true under all ways of making the decision is super-true. So what's super-true, and what we should have said, is that the candidates do not have equal claim. Then what's the problem? And yet the problem was stated. So supervaluationism is mistaken. (1993, p. 173)

His response to the worry is pragmatic. Supervaluationism is a tool for evaluating vague statements. Very often the tool is appropriate, and so we should use it. When it is not useful, when it “makes a hash” of what we are trying to say, we should instead select a different tool.

What's mistaken is a fanatical supervaluationism, which automatically

applies the supervenient rule to any statement whatever, never mind that the statement makes no sense that way. The rule should instead be taken as a defeasible presumption. What defeats it, sometimes, is the cardinal principle of pragmatics: The right way to take what is said, if at all possible, is the way that makes sense of the message. Since the supervenient rule would have made hash of our statement of the problem, straightway the rule was suspended. We are good at making these accommodations; we don't even notice when we do it. Under the supervenient rule, it's right to say that there's only one cat, and so the candidates have unequal claim.

Suspending the rule, it's right to say that the candidates have equal claim, and that all of them alike are not definitely not cats. Suspending the rule, it's even right to say that they are all cats! Is this capitulation to the paradox? — No; it's no harm to admit that in some sense there are many cats. What's intolerable is to be without any good and natural sense in which there is only one cat. (1993, 173-174)

I'm sympathetic to Lewis' general approach here. I too see supervenientism as providing a practical measure to evaluate vague expressions, a way to jury-rig our unavoidably vague language and thought so it can be bootstrapped up and inserted into logical inferences without gumming up the works. However, this does not help with the metaphysical problem. If there is an object that admits of precisification then there is, at least in a sense, metaphysical vagueness. And there are actual vague languages.

The standard supervenientist strategy of dealing with this imprecision is to accept

that it is genuine semantic indecision; there are sentences, predicates and other linguistic objects that, like an incomplete puzzle, lack complete definition, and to analyze the vague term by considering the many, equally legitimate, ways of completing (i.e., precisifying) the puzzle. But, by countenancing genuine semantic indeterminateness (i.e., that there is no unique determinate property picked out by the predicate 'heap' or that 'describes' indeterminately ranges over a multitude of precise semantic relations) the supervenientist appears to be backed into including vague objects, albeit purely semantic ones, in the actual world.

It is worth reiterating that this challenge does not threaten the commitment to vagueness as mind-dependent, as the only worlds with vague entities will be worlds with thought or language (or, more generally, imprecise representations). Nor does this threaten the commitment to vagueness as a feature of representations alone. Rather, the concern is that when we include representations among the totality of things in the world we must reckon with the existence of vague (linguistic) entities.

Innocuous Metaphysical Vagueness

The following sections examine two significant challenges facing accounts that countenance metaphysical vagueness, and argues that restricting vagueness to semantic objects avoids the most pernicious aspects of the challenges. The first is the challenge of incoherence, presented by Lewis and Russell. The second is Gareth Evans' reductio against vague objects and indeterminate identity statements.

Russell and Lewis seem to take it as definitional that vagueness can only be a feature

of representations.³² For them, attributing vagueness to anything other than a representation is a kind of category mistake, comparable to attributing anger to an inanimate object like a table. I agree with Russell and Lewis, but the account on offer does not commit this error, if it is an error, as it still treats vagueness and precision as characteristics of representations alone.

Others³³ find metaphysical vagueness intelligible. An interesting account is defended at length by Elizabeth Barnes. Barnes first defines metaphysical indeterminacy negatively. Metaphysical indeterminacy is whatever indeterminacy is left over after all the semantic vagueness has been removed. She writes, “sentence S is ontically vague iff: were all representational content precisified, there is an admissible precisification of S such that according to that precisification the sentence would still be non-epistemically indeterminate in a way that is Sorites-susceptible” (2010a, p. 604). Metalinguistic sentences like (V), should they come out true, fit the bill.

Barnes (2010a) and Barnes and Williams (2011a) attempt to develop a more substantial account of metaphysical indeterminacy, but I will argue that their account only makes sense as an account of representational indeterminacy or epistemic indefiniteness.³⁴ This argument will shore up the central claim of this chapter – metaphysical vagueness is only sensible if it is understood as representational vagueness. Further, the virtues of

³² Russell claims, “vagueness and precision alike are characteristics which can only belong to a representation, of which language is an example. They have to do with the relation between a representation and that which it represents. Apart from representation...there can be no such thing as vagueness or precision” (1923, p. 82). And Lewis states that, “the only intelligible account of vagueness locates it in our thought and language” (1986, p. 212).

³³ E.g., Tye (1990), Akiba (2004), Barnes (2010a, 2013 and 2014), Barnes and Williams (2011a, 2011b).

³⁴ P is epistemically indefinite when knowledge whether or not P would violate metalinguistic safety principles. See Williamson (1994)

Barnes and Williams' account should make (metaphysical) representational vagueness more palatable.

Barnes and Williams propose the following: Consider a set of ersatz possible worlds – abstract entities that are wholly precise. So for every P , either P or not P in each ersatz world. These ersatz worlds are *nearby* the actual world, meaning they closely resemble the actual world. The actual world, being concrete, is not a member of the set of ersatz worlds (since they are all abstract), however one of the worlds is *actualized*, in that it perfectly “represents things exactly as they are in the reality consisting of us and our surroundings” (Barnes and Williams 2011a, p. 114). Metaphysical indeterminacy, with respect to p , means “there are two candidate representations for actualization—the abstract world which represents that p , and the abstract world that represents that $\neg p$. Neither of these are determinately correct, but neither is determinately incorrect, because in reality it's simply unsettled whether p or rather $\neg p$ obtains” (Barnes and Williams 2011a, p. 115).

What I find puzzling about their position, however, is that although they allow for a “fundamental kind of unsettledness in the world” (p. 113) they also insist that only one ersatz world is actualized. It is just that “when matters are metaphysically indeterminate, it is indeterminate which world is actualized” (p. 116). These commitments are also supposed to square with the view that “there are two possible (exhaustive, exclusive) states of affairs—the state of affairs that p and the state of affairs that not- p —and it is simply unsettled which in fact obtains” (p.114-115). So while they hold that there is metaphysical indeterminacy, there is not a state of affairs such that the world is indeterminate. Instead, it is indeterminate which ersatz world is actualized, although only one ersatz world is, in fact, actualized.

I must say I find this picture a bit bewildering. I could understand, and would admire the elegance of, their picture were they are offering a theory of epistemic or representational indeterminacy. As an epistemic account, something might be indefinite because we do not (or cannot) know which ersatz world is actualized. As a representational account, the parameters of a given representation might be satisfied by more than one ersatz world. But, if it is metaphysically unsettled which ersatz world best depicts the actual world then none of the ersatz worlds is actualized (because none of the ersatz worlds depicts it as being indefinite whether or not that world is actualized).³⁵ So it seems to me as though they have hardly given an intelligible account of metaphysical vagueness generally.

Perhaps they have something like the following in mind: Suppose the future is open, such that it is not determined by the past and the laws of nature. Now imagine a set of ersatz worlds depicting unique futures. Each of the ersatz worlds is determinate, but it is unsettled (given the present facts about the past and laws of nature) which of them depicts the actual future. This seems unproblematic, given certain metaphysical assumptions about an open future. But consider an eternalist, indeterministic metaphysics of the future. On such a view all moments exist eternally, but they are not entailed by the past or the laws of nature. In this case we might take an epistemic approach, claiming that future is not knowable or predictable, given the past and the laws of nature, or we might employ a representational approach, such that a unique depiction of the future cannot be determined using only the parameters set by the past and the laws of nature. What we cannot say is that it is metaphysically unsettled what the future will be (given eternalism).

³⁵ Each ersatz world represents itself as being actualized, but this is only supposed to be true in one of the ersatz worlds.

It is this later set of assumptions that is most analogous to cases of purported metaphysical vagueness, given the account Barnes and Williams are presenting. That is, they claim that, for any P, either P or not P – there is no third state of affairs (analogously, the eternalist about the future holds that future events exist, the future is not in some nebulous state of unwritten flux). Further, they claim, whether or not P is unsettled because it is undetermined which ersatz world is actualized (analogously, the past and the laws of nature do not determine a unique future). But herein lies the problem – the future (or which world is actualized) is not *metaphysically* unsettled, it is just unsettled by the facts we are able to access. If the future is set (although undetermined by the past and the laws of nature) or a unique world is actualized (although undetermined by what we can know or represent) then matters have been metaphysically settled, we are just not in a position to know or state how they have settled. So I think that, despite Barnes and Williams' contribution, it is still unintelligible to speak of non-representational vagueness.³⁶ What they have done, however, is give a compelling theory of representational vagueness. According to the parameters of a given representation it is unsettled which of many worlds might be actualized

³⁶ I should note that I don't intend to eschew metaphysical indeterminacy altogether. The repudiator of metaphysical vagueness can (and, I think, should) remain neutral on questions of the open future, of free will, of wave functions and quantum events and objects, and so on. What seems clear to me, however, is that answers to these puzzles will not illuminate the mysteries of vagueness, and vice versa.

Indeterminate Identity

Gareth Evans' (1978) famous *reductio* against the possibility of vague identity poses a significant challenge for any theorist in favor of metaphysical vagueness. Suppose that it is indeterminate whether or not object *A* is identical to object *B*. Since it is determinate that *B* is identical to *B*, by Leibniz's law *A* is determinately not identical to *B*, contrary to the initial supposition. Here's a concrete example: suppose that it is metaphysically vague whether or not Harry is bald. Then it is indeterminate whether or not Harry is identical to the bald man H. But it is determinate that the bald man H is identical to the bald man H. So, contra the original supposition, it is determinate that Harry is not identical to the bald man H.

Typically, Evans' argument is understood as reinforcing the semantic conception of vagueness. If the predicate 'bald' indeterminately fails to choose amongst a range of precise properties then the indeterminate identity statements of the argument equivocate across those various senses rather than asserting that there are genuinely two objects of which it is indeterminate whether or not they are identical (Lewis 1988). The semantic theorist of vagueness can diagnose and diffuse Evans' argument easily, while the metaphysical theorist faces greater difficulty.³⁷ Might we need to rethink this disparity in light of our current concern?

At first glance Evans' proof offers no trouble. Suppose we count representations among the things in the world and as purported examples of metaphysical vagueness. On the treatment prescribed above, a representation's vagueness is due to the representation

³⁷ Many have taken up the challenge, for example Barnes (2009 and 2010b), Akiba (2014), Tye (1990). Commenting on their efforts here will be beyond the scope of this work.

indeterminately ranging over some set of admissible sharpenings, but the sentence is not identical to this set of sharpenings, so Evans' proof finds no immediate purchase. A vague sentence is determinately self-identical; it is not indeterminate whether 'Harry is bald' is identical to 'Harry is bald₁' or 'Harry is bald₂' etc. – 'Harry is bald' is identical to none. The purported *reductio* fails to get off the ground.

However, considerations of higher-order vagueness may open the door to Evans' *reductio*. Suppose it is vague whether or not some sharpening *S* is an admissible precisification of 'Harry is bald.' So it is indeterminate whether or not 'Harry is bald' is identical to the sentence of which *S* a legitimate sharpening. But it is determinate that the sentence of which *S* is a legitimate sharpening is identical to itself. So 'Harry is bald' is determinately not identical to the sentence of which *S* is a legitimate sharpening.

One available option would be to cast aspersions on the very notion of higher-order vagueness. Crispin Wright (2009) argues that higher-order vagueness is illusory, sprung from an inability to draw precise boundaries for competing concepts, which does not, upon careful reflection, necessitate the positing of some in-between concept. Diana Raffman (2009 and 2014) argues that higher-order vagueness is less prevalent or theoretically valuable than it is often taken to be, that vagueness does not so easily iterate around the borders of vague concepts. Rather than there being some indeterminate state, 'borderline bald,' between 'bald' and 'not bald' with its own vague boundaries 'bald' runs up against a proximate category such as 'mostly bald' – and the mostly bald are simply not bald, rather than being indeterminately bald.

To semanticists attracted to penumbras and blurred shadows (e.g., Dummett 1975 and Russell 1923) who wish to preserve robust notions of higher-order vagueness I

recommend rejecting the above interpretation of higher-order vagueness as a metaphysical feature of a sentence or representation. Instead, the supervaluationist should simply iterate her treatment of first-order vagueness. On such an approach when we attend to the higher order vagueness of 'Harry is bald' we are employing a second-order vague name which indeterminately ranges over a set of sentences, each of which range over a set of precisifications. And so on for ever higher orders of vagueness. The vague sentence 'Harry is bald' is determinately self identical, but, just as language about physical objects and properties might be vague, so too is language about vague sentences. Perhaps there is something vicious lurking in this iterative process, but I cannot identify what it may be. At the very least, friends of metaphysical vagueness generally cannot appeal to this solution, as they cannot even appeal to the first-order reply to Evans' reductio.

A final point is worthy of consideration. Imagine a team of alien anthropologists investigating the earth. Suppose these beings spoke an entirely precise language, *P*, but were interested in cataloguing our linguistic practices. How might they talk about English sentences like (1): "'bald' describes Harry"? They might enumerate (1)'s many potential sharpenings, but, as noted in the comparison of ambiguity and vagueness, that is not the same as expressing (1).³⁸ It seems as though (1) is not expressible in *P*, (although it might be referred to by some word in *P*) but this should not be overly troubling. Some methods cannot express some representations. Monet's *The Water Lily Pond* is not expressible in English.

These considerations reveal something important about vague expressions, which is that the worry about whether or not their indeterminacy entails metaphysical vagueness is

³⁸ (1)'s sharpenings are admissible ways of filling in (1)'s unspecified details.

asking the wrong sort of question. The supervaluationist strategy, I think, is a bit of a slapdash patch, a means of papering over the irremovable imprecision of human languages that makes it unsuitable for the application of classical logic. This is a valuable endeavor, as we cannot avoid vagueness and want to be able to employ the most robust truth-preserving system of reasoning available. What we should not insist, as the friends of metaphysical vagueness seem wont to do, is that the features of our language inexorably reveal something about non-linguistic reality. So our alien anthropologists could assert (in *P*) that (1) is vague³⁹ without (as argued above) committing to the existence of some property 'vagueness' that the entity (1) possesses. (1) might ultimately be untranslatable in *P*, but this is no stranger than impressionistic art being untranslatable in English. If there are some features of vague languages that are shared by no other aspect of reality I believe the orthodoxy is in good standing.

Conclusion

This chapter argues that a consequence of taking representational vagueness to be genuine opens the door to worries the representational vagueness is metaphysical. I have argued that, although these worries are apt, representational vagueness is still the only intelligible species of metaphysical vagueness.

³⁹ Stipulating that there is some precise correlate for 'vague.'

CHAPTER SIX

CONCLUSION

This dissertation has defended the position that vagueness is semantic. In order to do so, I argued that vagueness is genuine, and cannot be reduced to ignorance. I then argued that vagueness does not extend to features of the world that are not representations. Lastly, I argued that, although we should take representations to be examples of a type of metaphysical vagueness, semantic vagueness, even if in some sense metaphysical, does not suffer from some of the pernicious aspects attributable to other forms of metaphysical vagueness.

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