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A VAGUE DEMONSTRATION

My favorite episode of King of the Hill features a boy, Bobby Hill, suffering eerie psychological side-effects of the drug Ritalin. Bobby is seated at the kitchen table. He sniffs the air and prophesies "There is some milk in the refrigerator that is about to go bad". He takes another sniff and announces "There it goes."

The absurdity is that the vagueness of `bad milk' prevents anyone from detecting the exact moment at which milk turns bad. But most people think there is a deeper absurdity that explains the indetectibility: there just is no exact threshold to detect. You are probably one of these people.

I am not. As a holder of the epistemic theory of vagueness, I think that vagueness is merely species of ignorance. I think standard logic corners us into concluding that `bad milk' has unlimited sensitivity to arbitrarily small differences in time -- including seconds and milliseconds and nanoseconds. Why? Because that is the only logical exit from a sorites argument such as

1. The milk is not bad one second after 9 AM.
2. If the milk is not bad at n seconds after 9 AM, then it is not bad n + 1 seconds after 9 AM.
3. The milk is not bad 10,000,000 seconds after 9 AM.

Since 10,000,000 second milk is over three months old, the conclusion is false. Since the first premise is true and the argument is valid, standard logic compels rejection of the second premise. And that commits us to saying that milk can turn bad in one second.

Despite the impeccability of the reasoning, the epistemicist's commitment to sharp thresholds is counter-intuitive. How could `bad milk' be more discriminating than the speakers

who use the phrase `bad milk'? Words depend on us for their meaning. Words should not be able to outstrip our cognitive abilities!

As long as we focus on the vagueness of predicates (such as `bad milk', `heap', `bald'), vagueness will look like the effect of incomplete linguistic intentions. However, intention plays a more modest role when we refer without the means of a description -- by pointing. The strategy of this paper is to increase the plausibility of epistemicism by re-directing attention to the vagueness of demonstratives and indexicals.

1. Sorites without vague predicates

As a two year old, my son Maxwell did not believe he was once an infant. Maxwell's skepticism surfaced when he started identifying himself in photographs. He was enthusiastically reliable with pictures taken at age greater than six months. But Maxwell impatiently rejected earlier photographs as pictures of "BABIES".

How could Maxwell be persuaded? I put away my random assortment of photographs and picked up his mother's neatly arranged photograph album. I opened it from the back end and started to turn over the pages in reverse chronological order. Since we were now beginning with the most recent photographs, Maxwell beamed: "THAT'S ME!". Eventually his "ME!"s dwindled to "ME"s which were followed by "Me"'s, then "me"'s. Slowly but surely, we reached a point when Maxwell stopped making identifications. He just smiled awkwardly and shrugged. Where had I seen that grin before?

When I related the anecdote to my colleagues. They agreed that my argument was sound but denied that it was cogent. They pointed out that the slippery slope could have been extended to sonograms of Maxwell. Even I would not accept this argument as establishing that Maxwell was at one time a fertilized egg.

I think Maxwell's advocates are correct in classifying the argument as a sorites. However, the argument is not a typical sorites because it uses demonstrative identifications rather than

vague predications. Number the photographs 1 - 100, and read `That (n)' as a pointing to the individual in photograph n.

1. That (1) = that (2).

2. That (2) = that (3).

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100. That (99) = that (100)

101. That (1) = that (100)

The conclusion, features two repeated demonstrations; after reaching the beginning photograph of the album, number 100 in the series, I flip back to the most recent photograph 1, and say that (1) is that (100).

There are instances of the above argument form which are unproblematically unsound. Suppose Bugsy is tracking a lightning bug at night. The bug flashes frequently enough for him to track its progress by saying, `That [pointing at the bug that just flashed] is that [pointing at the bug who just flashed a second later]'. Bugsy is persistent and constructs a long sentence over the course of an hour:

(L) That is that, which is that, which is that, . . . , which is that.

Bugsy's companion objects that (L) is false on the grounds that no lightning bug can flash every ten seconds for an hour. The slippery slope sentence, (L), is not paradoxical because we readily accept the possibility that one of the identity statements is just false. Another lightning bug must have flashed close to the bug Bugsy was tracking.

There is much less willingness to postulate an unknown break in the chain of identifications when the slippery slope is conceptual. Suppose Horace is watching a heap of sand draining down an hour glass. Like Bugsy, Horace says `That is that' slowly enough to ensure that his second `that' picks out a later stage of the heap than his first `that'. Our mythical Horace infers from this chain of identifications that the heap has been miniaturized into a single grain.

Horace's absurd conclusion cannot be directly blamed on the vagueness of `heap'. For his argument never uses the term `heap'. Indeed, it uses no predicates at all; just demonstratives and identity.

Those who hold that identity is always relative to a sortal might claim that the predicate `heap' is tacitly present in Horace's sorites. Each premise has the form `That is the same [heap] as that'. This solution will not handle "cross sortal" sorites, such as the one that traces my son (a person) to a fertilized egg.

The comedian Steve Martin performed a sketch on Saturday Night Live that consisted solely of a tourist's increasingly bewildered queries: "What is that?", "What, the heck, is that?", "What is THAT?!", etc. Since Martin was pointing into the camera, the audience could not see what he was looking at. The demonstratum is never revealed during the course of the sketch. The depiction illustrates how `that' can successfully refer without any contribution of a sortal by the speaker or audience.

Pointing inherits its cognitively undemanding nature from perception. The stereotypical kind of pointing is egocentric: the speaker points at what he is looking at. (Stereotypical pointing is also visual but the extension to other sense modalities is straightforward.) The pointing finger helps the listener ascertain the speaker's perspective by indicating his line of sight. His audience tries to focus on the object the speaker is focused upon. The connection between pointing and seeing explains why the speaker cannot point through objects or around corners or in perfect darkness. There must be an appropriate causal connection between the pointer and his demonstratum. The "appropriate" makes this connection is vague. However, this causal theory

of pointing is interestingly committed to coordinating the vagueness of pointing with the vagueness of seeing. Borderline cases of `seeing' predict borderline cases of `pointing'. The unclarity of my field of vision is inherited by the range of things that I can point at.

Displaced pointing overcomes many of the limitations of egocentric pointing. Instead of using his own perspective, the speaker achieves displaced speech by specifying a perspective other than his own. Thus I can point at things behind me by using the perspective of a listener facing me. I can point around corners by indicating a perspective on the other side of the corner.

Seeing lacks belief content (Dretske 1969, 88). I can see an object without having any beliefs about it. Consider a man in a desert who suspects that he is viewing a mirage. He sees the oasis even though he does not believe it is there. Seeing an oasis should be contrasted with seeing that there is an oasis; seeing that p entails believing that p. Notice that the agnostic traveler can also point to the oasis and say `I am not sure whether that is an oasis'.

I see an object by seeing a relevant attached part of it. For instance, I see a whole car by seeing its front. Likewise, I point to a whole car by directing attention to its front. When I point to a cloud, only a small portion of the cloud is visible. But just as that limited access is no obstacle to seeing the cloud itself, the limited access is no obstacle to pointing at the cloud. The cloud is my demonstratum even though I cannot demarcate which particles are part of the cloud and which are part of its surroundings. If the cloud is identical to some precise aggregate of particles, then I point to that aggregate rather than any other aggregate. Since I do not see the individual particles constituting the cloud, the reference is secured top-down rather than bottom-up.

In addition to those who relativize identity to sortals, there are those who relativize identity to times (Myro 1986). But some demonstrative sorites do not involve endurance through time. Consider an electrician who is tracing a wire. His utterance of `That is that' is true when his first `that' and his second `that' are directed at segments of the same wire. The demonstratum here is the whole wire even though the electrician has only a small part in view. Just as the electrician sees a whole wire by seeing a segment of the wire, the electrician points at a

whole wire by pointing at a segment of the wire. The electrician is persistent and constructs a token of (L) over the course of an hour. However, his co-worker objects that the wire cannot be long enough to make (L) true. This slippery slope sentence is not paradoxical because we readily accept the possibility that one of the identity statements is just false.

Once again, there is less willingness to postulate an unknown break in the chain of identifications when the slippery slope is conceptual rather than empirical. Suppose there is a long wire that starts off black but shades into grey. The wire then goes on to shade from grey to white. We agree that the black part of the wire is mine and the white part is yours. But I greedily argue that the whole wire is mine employing sentence (L). It is now more difficult to object that one of my identifications is mistaken. Which identification is the falsehood? What would it be like to be false?

Sorites involving identity might also challenged by denying that identity is transitive. Graham Priest (1998) has recommended this solution to handle a Ship of Theseus style sorites in which each stage of the ship has a separate name. Priest backs the denial with some many-valued logic. In addition to being counter-intuitive in its own right, the denial of the transitivity of `=' will require a rejection of the principle that identicals have all the same properties. For if a = b and b = c, without a = c, then b has a property that a lacks: the property of being identical to c.

Many will claim that Graham Priest's sorites covertly involves predicates. For many think that names are disguised descriptions. Demonstratives are the best candidates for directly referential devices, so I shall focus on sorites that contain nothing but identity and demonstratives. My thesis is that these sorites arguments are evidence for the epistemic theory of vagueness. Epistemicists (such as Williamson 1994) say that vagueness is a form of ignorance rather than semantic indeterminacy. Hence, they do not trace vagueness to incomplete specification of the meaning of our predicates. Epistemicists believe in word power!

Word power is most impressive when we are straining to single out objects. Merely intending to refer to Jesse Ventura with `that' does make the demonstrative denote Jesse Ventura. Suppose a discreet fan of Jesse Ventura's knows that he is in the crowd at the opposite side of

arena at a wrestling match. The fan points to someone and say `That is Jesse Ventura'. But the person the fan pointed out is actually Jesse Ventura's double. Jesse Ventura, in disguise, is sitting next to his double. The fan could be looking right at Jesse Ventura. Out of politeness, the fan may have focused his eyes on Jesse Ventura and still have denoted Jesse Ventura's double. The fan might then point at Jesse Ventura and falsely say `That is not Jesse Ventura'.

The denotation of a demonstrative can conflict with many linguistic intentions. This is because the relevant communicative intention involves delegation of referential powers. When I say the wind is blowing in the direction indicated by the weather vane, I indicate the direction the weather vane indicates. This form of linguistic division of labor leads to inconsistent beliefs when I have false beliefs about the "judgments" of my agents i.e. if I think the wind is not blowing from the north and the weather vane indicates that the wind is blowing from the north, then I believe it is blowing from the north and I believe that it is not blowing from the north.

2. Borderline pointing

Poindexter hopes to point at President Clinton. Bill Clinton's motorcade speeds by. Poindexter extends his forefinger and says

(A) That is Clinton.

But visibility is poor. Poindexter might have just as well been inadvertently indicating the other man in the backseat, Vice-President Al Gore. For Gore was waving from the window, blocking much of Clinton from view. Poindexter's gesture is borderline between `pointing at Clinton' and `pointing at Gore'. Poindexter's desire to point at Clinton pulls us in one direction, Gore's domination of the scene pulls us in the other.

In agreeing that Poindexter's demonstration was borderline between Clinton and Gore, we are agreeing that

(1) Either Poindexter pointed at Clinton or Poindexter pointed at Gore.

If Poindexter failed to point at anyone, his gesture is not a borderline case of `pointing at Clinton' or `pointing at Gore'. The assimilation of borderline demonstrations to vacuous demonstrations is just a rejection of vagueness at the level of demonstratives.

Some people may have a lingering feeling that Poindexter's utterance misfired. I invite them to amend the story so that (A) is merely the first disjunct of the more cautious

(B) That is Clinton or Gore.

The whole point of hedging by adding a disjunct is to meet the requirement for assertibility: belief that one knows what one is asserting. If Poindexter had uttered (B), he would have covered the possibility that he was not pointing at Clinton. This means Poindexter's assertion would have imparted knowledge. Hence, the disjunction is clearly true.

The extra disjunct only helps to secure a true description of what Poindexter's demonstrative might have harpooned; the extra disjunct does not help net a demonstratum. After all, the `that' in (B) picks out same individual if the second disjunct is anaphoric:

(C) That is Clinton or it is Gore.

The demonstrative `that' in the first disjunct does all the work. The `it' in the second disjunct merely inherits a referent.

So let us examine the alternative trajectories of Poindexter's ostension. If Poindexter pointed at Clinton, then the content of (A) is the same as

(2) Clinton is Clinton.

`Content' is David Kaplan's term for the proposition conveyed by a kind of utterance in a context. The content is what is said rather than how it is said. When Harry says `I am tall' and Sally tells Harry `You are tall', they express the same content even though the character of their utterances are different. The character of a term is articulated by rules such as `I' refers to the speaker and `you' refers to the hearer. The context supplies particular values for these rules. Kaplan's formula is "Character plus context equals content". The triviality of (2) is due to its mode of presentation, not its content. The content of a proposition must be distinguished from its cognitive significance.

Statement (2) is a truth, indeed a necessary truth. However, if Poindexter pointed at Gore, then (A) has the same content as the necessary falsehood

(3) Gore is Clinton.

Summarizing then,

(4) Either (A) has the same content as (2) or the same content as (3).

Since both identity statements have a truth value, (A) must have a truth value. After all, if (A) has no truth value, then its content cannot match that of (2) or (3). What matches in content matches in truth value.

Nevertheless, the vagueness of Poindexter's demonstration ensures that there is no way to discern the truth value of (A). Therefore, (A) has an unknowable truth value. The hidden truth value of (A) is due to vagueness but not its own vagueness. Statement (A) has the same content as one of the precise statements (2) or (3).

Resist the temptation to say that (A) means

(D) The man that I am pointing at is Clinton.

As Saul Kripke (1972, 79n) and David Kaplan (1989, 518) emphasize, there is a difference between fixing the reference of a term and supplying a synonym for the term. Sentence (D) entails that Poindexter pointed at Clinton but (A) does not. Therefore, (A) and (D) have different contents. Poindexter's pointing only fixes the reference of the demonstrative `that'. Thus the vagueness of his pointing does not infect the content of statement (A). It is "off the record". The genetic fallacy is a hazard here. Determiners of content can be vague without the content they determine being vague.

Since (A) has a hidden truth value by virtue of vagueness, it increases the plausibility of epistemicism. Epistemicism says that applying a predicate to one of its borderline cases yields a statement with a hidden truth value. If a precise statement can have a hidden truth value conferred indirectly by vagueness, then a vague statement can have a hidden truth value directly by its own vagueness.

3. Commitment from convergence

The complaint against classical logic is that it mishandles vagueness, not that it mishandles precision. Deviant logicians concede that classical logic works well for precise propositions. Indeed, deviant logics are designed to agree with classical logic for the limiting case of precise propositions. For example, the rules for many-valued logic yield the same results as classical logic when the truth values are at the extremes of 1 and 0. Supervaluationism converges with classical logic when there are no truth-value gaps.

Suppose the deviant logician agrees `That is Clinton' expresses some precise proposition or other. Since their logics are engineered to agree with classical logic about precise propositions, they would agree with classical logic about `That is Clinton'. In particular, they would need to say (A) is either (fully) true or false. Acceptance of this hidden truth-value would constitute capitulation to epistemicism.

Therefore, the deviant logician must deny that Poindexter's utterance of (A) is vague between the two precise alternatives. This denial will let them in turn deny some of my premises. In particular, the many-valued logician will deny that (1) is fully true on the grounds that each of the disjuncts is less than fully true. This denial is a forced move by the many-valued theorist, not an independently attractive position. Many-valued logic has special difficulty modeling hedging. The standard rule is to assign disjunctions the truth value held by the disjunct with a highest truth-value. Therefore, adding disjuncts that do not exceed this truth value has no influence -- even if one exhausts all the alternatives and creates a tautology! Ironically, many-valued logicians promote themselves as innovative nurturers of hedging (Lakoff 1973, Lycan 1984, 62-71).

Supervaluationists think that disjunctions can be true even though their disjuncts have no truth value. Thus they can and must affirm (1) even though they think neither of its alternatives has a truth value. The same consideration may seem to also commit them to:

(5) Either Poindexter's utterance of `That is Clinton' has the same content as `Clinton is Clinton' or the same content as `Gore is Clinton'.

After all, they say there is no fact of the matter as to the content of Poindexter's utterance. So it would seem that the supervaluationist would just go on to note that (5) is true because it comes out true on all the precisifications of `the content of Poindexter's utterance of "That is Clinton"'. The special hitch is that if the supervaluationist knows that Poindexter's utterance lacks a definite content, he also knows that it has no truth value. Supervaluationists know that a statement without a truth value cannot have the same content as a statement that has a truth value. This principle would make each of the disjuncts in (5) knowably false and hence the whole disjunction would be known to be false. Since the supervaluationist must indeed deny that Poindexter's utterance has a definite content, he must count the whole disjunction, (5), as false.

A related principle will lead the many-valued logician to also reject (5): two statements with the same content must have identical truth-values. Since `That is Clinton' is being treated as vague (and thus has a truth value above 0 and below 1) while `Clinton is Clinton' and `Clinton is Gore' are precise (and so have the extreme truth values of either 0 or 1), many-valued logicians also count (5) as completely false.

4. The case for (5)

Those who deny the content specifications contained in (5) must either deny that Poindexter's utterance of `That is Clinton' has any content or assign to it a content other than `Clinton is Clinton' or `Clinton is Gore'.

4.1. Vague versus vacuous demonstratives

I have already argued `That is Clinton' must have content to respect the distinction between demonstratives that lack demonstrata and those that are borderline between demonstrata. If Poindexter had said `That is Clinton' when there was nobody to point at, his demonstration would have misfired. But Poindexter's utterance suffers from a tie between candidates rather than an absence of candidates. Poindexter went somewhat awry in that he did not manage to clearly refer to Clinton. But he did not go so far awry as to clearly not refer to Clinton.

If Poindexter's utterance of `That is Clinton' is a misfire, then his utterance of

(B) That is Clinton or Gore.

would be a double-misfire. But in fact (B) would have been clearly true. If Poindexter's companion, Pocahontas, had said, under the same conditions,

(E) That is Gore,

then a bystander could have correctly noted that `Either Pocahontas or Poindexter is right'.

If borderline demonstrative utterances were false, then `If that is not Gore, then that is Clinton' would have a true antecedent and a false consequent. But this conditional is true rather than false.

The assimilation of vague demonstratives to vacuous demonstratives jeopardizes a second kind of borderline case. For in addition to there being vagueness as to which candidate is the demonstratum, there can be vagueness as to whether there is a demonstratum. In other words, `vacuous demonstrative' has borderline cases. I can point at a water drop but not at a specific molecule composing it. What is the smallest part of the drop I can point to? This slippery slope question is unanswerable because there is vagueness as to what counts as an object big enough to single out.

One might try to preserve a remnant of the contrast by an appeal to illusion. Perhaps a "vague pointing" is just a near-miss of a pointing. If Clinton had not been blocked by Gore, then Poindexter would have clearly succeeded in pointing at Clinton. The suggestion is that we confuse near-misses as borderline cases.

I can attest that this confusion is alive in contexts of distributional justice. Students who have earned only a point less than the quota I announced for an A say that their grade is a borderline A. Their hope is that I will then exercise the discretion that is needed to adjudicate borderline cases. In particular, they hope I will raise them to the A category even though the grading rule clearly states that a score below the quota gets a grade less than A. However, the best they can expect is that they will be first in line if I lower the quota.

Although there are failures of performance, we have general competence at distinguishing between being nearly an F and being a borderline F. In particular, a near-miss demonstration does not ordinarily create the appearance of being a borderline demonstration. A boy playing spin the bottle may have nearly pointed to the girl he hoped to kiss but have actually pointed to her neighbor. Onlookers readily distinguish this near miss from a borderline case in which the bottle stops between the two girls.

Demonstrative utterances can also misfire if they lack a demonstration. If a boy says `That girl is a fine kisser' but does not indicate which girl, then the demonstrative is incomplete. However, Poindexter's utterance of `That is Clinton' was accompanied by finger pointing. The vagueness was over what the demonstration referred to, not whether there was a demonstration at all. Of course, there can be vagueness as to whether there was any demonstration. If the bottle breaks in the course of its spin, does its severed neck piece still select someone to kiss? Borderline incomplete demonstratives create uncertainty about whether the utterance has any content rather than which content it has. This distinction would be abrogated by a reduction of vague demonstratives to vacuous demonstratives. The reduction would thereby distort the reducer along with what it is being used to reduce.

Finally, vague demonstratives ground anaphora but vacuous demonstratives do not. Suppose a false alarm leads a homeowner to say `That is someone. He is stealing.' when there is no one there. The anaphor `he' is as empty as the vacuous `that'. However, `He' successfully inherits reference from the demonstrative `that' if Poindexter points indeterminately between Gore and Clinton and says

(G) That is someone. He is staring.

Although we cannot tell whether `He' refers to Clinton or refers to Gore, we know it refers to one of them. For `He is staring' is true if both are staring, false if neither are staring, and of uncertain truth value if only one is staring. If no one had been in the car, then the `He' would be a dangling pronoun.

Vagueness can strike anywhere along the anaphoric chain. Suppose Poindexter had said

(H) That is Clinton. He is the President. He is from the South.

Although the second sentence is vague, we know the third sentence is true because we know Clinton and Gore are both from the South. This shows that reference can be inherited through an indeterminate intermediary. Indeed, the number of intermediates can be increased indefinitely.

4.2 Ambiguity and Non-specificity

Vague demonstratives cannot be assimilated to ambiguous demonstratives. If (A) were ambiguous between (2) and (3), Poindexter would have discretion over which (A) means (Sorensen 1998). Indeed, since he intended to refer to Clinton, (A) would definitely mean (2).

When a lecturer ambiguously points out the next questioner, the ignorance is confined to the audience. They ask the speaker `Are you referring to the man in front or the woman behind him?' because the speaker knows the answer. Since the speaker knows, there is a determinate fact of the matter. In contrast, vague demonstratives are inquiry resistant.

Ambiguity is the possession of multiple readings. Vagueness is the possession of borderline cases. Borderline cases arise when there is an unbreakable tie between alternative hypotheses as to what the statement means. `Someone rents a house' is ambiguous between a landlord reading and a tenant reading. But since the readings are logically equivalent (and can be known to be so), the statement is not vague between the landlord and tenant readings.

An ambiguous word such as `bank' is ambiguous simply in virtue of having multiple meanings. Words are only vague indirectly, by virtue of having a sense that is vague. The direct bearers of vagueness are a word's full disambiguations such as `inedible for boy from Texas'.

Part of the confusion between ambiguity and vagueness arises from the fact that most words are both vague and ambiguous. `Child' is ambiguous between `offspring' and `immature offspring'. The latter reading of `child' is vague because there are borderline cases of immature offspring. The contrast is further complicated by the fact that most words are also general. For instance, `child' covers both boys and girls. The distinction between ambiguity, generality, and vagueness is easier to make when we are clear about which alternative readings are involved.

Another technique of clarification is to consider special languages that are free of ambiguity. For instance, cognitive scientists have theorized about a special "language of thought", mentalese (Fodor 1975). Mentalese is a language of description and inference rather than communication. Hence, it has no social dimension. There is no metaphor, conversational implicature, or indirect speech. Nor is there any ambiguity. Natural language sentences are translated into mental sentence tokens which bear the content of those utterances. Since there can be unclarity about which ordinary sentence maps into which mental sentence, natural language sentences can be ambiguous. But there is no ambiguity at the level of mental sentences themselves. They play the role of propositions (except, as Jerry Fodor (1981) stresses, mental sentences can be indexical). Therefore, all sentences in mentalese are univocal. Yet they can still be vague (Sorensen 1991).

In particular, there are vague demonstratives in mentalese (Levine 1988). An introspector can single out mental images that are stable. But as the images become more fleeting, they become harder to fix upon. When one "sees stars before one's eyes", the "stars" are as hard to single out as bubbles in a freshly opened bottle of beer. Just as the confusion creates borderline cases for `that bubble', there are borderline cases of `that star'. There can also be vagueness as to the extent of the demonstratum. As I sit on a crowded subway over a heater, the patch of heat sensation gradually acquires painful band. I think `That part of the sensation is painful' even though the nature of the sensation gradually varies from heat to pain. How much of the sensation does my `that' select?

Some philosophers and linguists believe that there are semantically non-specific utterances. Jay David Atlas (1989) has characterized the difference between ambiguity and non-specificity at book length. But the main idea can be conveyed by adapting an illustration by Kent Bach (1982, 593). If Jack points to the moon says `That attracts the earth too', he could mean any of the following: (a) the moon attracts the earth just as the earth attracts the moon, (b) the moon attracts the earth and attracts other bodies as well, (c) the moon, in addition to other bodies, attracts the earth (d) the moon attracts the earth in addition to doing other things.

According to the non-specificity hypothesis, the utterer of `That attracts the earth too' might have one of these alternatives in mind but that would not make the sentence have the same content as that alternative. The utterance is not disambiguated by this intention. Semantically non-specific utterances have no ambiguity to disambiguate because they express no propositions (not even the disjunction of the alternative readings). They hover in an irresolvably undecided state between several readings without meaning any of them. Consequently, semantically non-specific utterances lack truth conditions and lack a logical form.

Non-specificity is a-propositional rather than pre-propositional. Since logic only deals with propositions, non-specific utterances cannot be counterexamples to any logical principle. In contrast, vague propositions are candidate counterexamples to the principle that every proposition has a truth value, the principle that every proposition of the form `Either p or not p' is true, and many others. Since non-specific utterances do not express propositions, they cannot be the premises or conclusion of an argument. Consequently, one cannot construct a sorites argument from the non-specific utterances. But as we have seen, one can construct sorites arguments from vague identity statements involving demonstratives.

4.3 Partial content?

Once it is agreed that (A) has content, the denier of (5) must maintain that (A) has a content other than (2) or (3). However, there are no plausible alternatives to (2) and (3).

A supervaluationist might agree that (2) and (3) are the only plausible full contents for (A). However, he suggests that (A) could instead have a partial content. Like a partly filled molding, (A) has enough content to forbid all but (2) and (3) as further fillings. So on this account, Poindexter partially also refers to Clinton and partially refers to Gore.

The metaphor of `partial reference' was popularized by Hartry Field's (1973) attempt to avoid the relativism of Thomas Kuhn's The Structure of Scientific Revolutions. Isaac Newton's usage of `mass' is vague between the readings `rest mass' and `inertial mass'. Some infer that Newton was talking about a third kind of thing -- Newtonian mass. This reaction to

indeterminacy leads to the conclusion that Newton and Leibniz were talking past one another. Newton was talking about Newtonian mass and Leibnizian was talking about Leibnizian mass. Field tries to fashion a common referent for the debate by considering `rest mass' and `inertial mass' as alternative precisifications of `mass'. Newton partially refers to both inertial mass and rest mass. Leibniz does so as well. Hence, both are talking about the same thing, namely, the pair of alternative extensions of `mass'.

Is partial reference reference? Field defines `partial reference' to include reference, so anything that refers partially refers. However, he has difficulty relating mere partial reference to reference. One horn of the dilemma is that partial reference must be distinguished from reference failure. Newton's use of `mass' cannot emerge with same status as Newton's use of `phlogiston'. But if reference is successful, what is the referent?

The unattractiveness of the alternatives is plain when applied to Poindexter's case. Poindexter did not refer to both Clinton and Gore. Nor did Poindexter refer to the mereological fusion Clinton + Gore. Equally repugnant is the suggestion that Poindexter referred to a vague object that is partially identical to Clinton and partially identical to Gore. Such an object would be well worth pointing out but chiefly for its interest as a circus exhibit. If Poindexter referred to anything, he referred to a human being. We know that he did not refer to Clinton's limousine or the moon because we know `Poindexter either pointed at Clinton or pointed at Gore'. Since a human being is a material object, we also know that Poindexter did not refer to an abstract thing such as the set {Clinton, Gore}.

So the problem for the partial reference theorist is that he must find a referent (to distinguish partial reference from failed reference) but there is no plausible referent other than Clinton or Gore. But if Clinton or Gore is the referent, then the reference succeeds in the usual way. Partial reference collapses into successful reference.

The partial reference theorist has no direct answer to question `Did Poindexter refer to Clinton?'. However, he could claim that there is no answer because `refer' has to be relativized. Under one precisification of `refer', Poindexter picked out Clinton. Under the other, Poindexter

picked out Gore. This proposal cannot be understood as a standard precisification of the vague sentence itself. Normally, supervaluationism operates at the level of types. The idea is that precisification of `heap' trickles down to particular statements such as `That is a heap'. But `That is Clinton' lacks any predicates. When supervaluating a predicate, one considers alternative extensions for the terms. But `that' can clearly refer to anything. (It is self-defeating to single out an object and say "No one can refer to that with `that'".) Therefore, `that' does not have any (semantic) borderline cases.

Precisifying `that' is a category mistake -- like precisifying a free variable. The variable in `x is bald' does not acquire a referent by virtue of describing something. If it does not acquire a referent, `x is bald' remains an open sentence and so fails to express a proposition. If the variable in `x is bald' does acquire a referent, then it acquires that referent by an independent stipulation ("Let x be the president"). Unlike `the president', in `The president is bald' the variable in `x is bald' does not search for a referent by issuing a certain description. The referent of `x' is assigned to `x' prior to any evaluation of the sentence containing the variable. Since the referent is in place before any evaluation of the statement takes place. As Kaplan (1989, 571-72) emphasizes, demonstratives are analogous to free variables in this respect.

The moral can be cast in medieval terms. Commentators on vagueness have focused on suchness vagueness. However, there is also thisness vagueness. Thisness cannot be reduced suchness. Hence theories that assume that vagueness is always a feature of description (incompleteness, indecision, inconsistency, etc.), will fail to accommodate the vagueness peculiar to direct reference.

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