The Things We (Sorta Kinda) Believe

For a *Philosophy and Phenomenological Research* book symposium on
Stephen Schiffer, *The Things We Mean* (Oxford: Clarendon Press, 2003)

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On Schiffer's new view, propositions are easy to come by. Any that-clause can be counted on to express one. Thus, trivially, there are vague propositions, conditional propositions, moral and aesthetic propositions. And where propositions go, truth and falsity follow: barring paradoxical cases, Schiffer accepts instances of the schemata "the proposition that *p* is true iff *p*" and "the proposition that *p* is false iff not-*p*." What isn't easy to find, Schiffer thinks, is *determinate* truth. By the end of the book, we have heard that a huge number of the things we say or think are indeterminate in truth value: not just whether Schiffer's book is long, but whether the property of being in pain is identical with any physical property, whether torturing children for fun is morally permissible, whether *modus ponens* is a valid inference rule, and whether someone else would have shot Kennedy if Oswald hadn't. Indeed, on Schiffer's view, there are no determinately true moral propositions (238) and virtually no determinately true conditionals that are "likely to interest us" (295).

Due to space limitations, I won't say anything here about these radical-sounding claims. My primary aim will be to come to terms with Schiffer's interesting and original view about what it *means* to say that a proposition is indeterminate. There are three distinctive components to this view, which I will take up in turn. First, Schiffer insists that indeterminacy must not be understood as a third status on par with truth and falsity. This, he argues, rules out standard degree-theoretic and supervaluational approaches. Second, Schiffer takes what might be called a "phenomenalist" approach to indeterminacy: we understand what it *is* for a proposition to be indeterminate in terms of the attitude of *taking* a proposition to be indeterminate. Finally, Schiffer holds that the attitude of taking a proposition to be indeterminate can be understood as a new kind of partial belief, "vagueness-related partial belief" (VPB), which is distinguished from "standard partial belief" (SPB) by the epistemic norms to which it is subject.

1. Against "third possibility" views

Schiffer rejects any view that takes borderline propositions to have a third "middle" status, distinct from truth and falsity, on the grounds that no such view can account for what Crispin Wright calls "the absolutely basic datum that in general borderline cases come across as hard cases."[1] Thus, for example, "[i]f supervaluationism were correct, we should recognize that the proposition that [borderline Harry is] bald is neither true nor false and therefore have no temptation to say either that he's bald or that he's not bald" (191). But in fact we can find ourselves simultaneously tempted to say he's bald and that he's not bald. Our response to borderline cases is one of "ambivalence."

Granting the datum, it's not at all clear to me that third-possibility views are incapable of explaining it. Consider how Schiffer argues against a standard degree-theoretic approach, on which propositions are assigned real-number "degrees of truth" between 0 and 1:

> The theory is evidently constrained to hold that *p* is true just in case *p* is T to degree 1 (or — allowing for the vagueness of ordinary language 'true' – to a contextually relevant high degree); false just in case *p* is T to degree 0 (or to a contextually relevant low degree); and neither true nor false just in case *p* is T to some (contextually relevant) degree greater than 0 and less than 1. But suppose Harry is borderline bald. Then, since it would be definitely wrong to say that 'Harry is bald' is T to degree 1 (or to some other contextually relevant high degree), the theory entails that it would also be definitely wrong to say it is true that Harry is bald. But if Harry is borderline bald, it would *not* be definitely wrong to say that he's bald, and thus not definitely wrong to say it's true that he's bald. (192)

1 "On Being in a Quandary: Relativism, Vagueness, Logical Revisionism," *Mind* 110 (2001), 69-70.

Schiffer assumes here that "It is true that Harry is bald" must take the value 0 when "Harry is bald" takes a value less than 1 (or some contextually specified cutoff point). But surely it would be much more natural for the degree theorist to take "It is true that Harry is bald" to have exactly the same degree of truth as "Harry is bald." Indeed, only that assignment is consistent with giving the value 1 to the biconditional "Harry is bald iff it is true that Harry is bald" (assuming Łukasiewicz's semantics for the biconditional). If truth (like tallness) comes in degrees, we should expect the monadic predicate "true" (like the monadic predicate "tall") to have a fuzzy extension.

In this way the degree theorist can easily accommodate Wright's point that we have some temptation to class borderline propositions as true and some temptation to class them as false. For when "Harry is bald" is true to degree 0.5, "it it true that Harry is bald" is true to exactly the same degree as "it is false that Harry is bald" (namely, 0.5). Under these circumstances it is just as correct to say that the borderline proposition is true as to say that it is false (and not because it is determinately incorrect to say either). Hence our ambivalence.

Schiffer's other argument against degree-theoretic approaches is that they imply that certain classical modes of inference (for example, *reductio ad absurdum*) can take one from premises true to degree 1 to a conclusion true to a degree close to 0. This, he says, is "apt to seem flat-out unacceptable" (193). But why? One would like to be able to accept as determinately true

(a) A person with 50 million dollars is rich.

and

(b) A person with 1 dollar is not rich.

without also accepting

(c) For some *n*, a person with *n* dollars is rich and a person with *n*-1 dollars is not rich.

But we can derive (c) from (a) and (b) using classically valid inference rules. So we should expect that certain classically valid rules will fail to be applicable to vague discourse. The degree-theoretic framework gives us an illuminating account of why *reductio* fails in vague contexts: a derivation of a contradiction from a sentence *S* shows that *S* does not have the value 1, but it does not show that *S* has the value 0, and hence it does not show that the negation of *S* has the value 1.

This is not to suggest that degree theories are unproblematic. But the objections Schiffer raises against them – objections that motivate and shape his own alternative account – highlight *strengths* of degree theories rather than weaknesses.[2]

2. A phenomenalist approach to indeterminacy

Instead of giving a semantic gloss on indeterminacy, Schiffer gives a "psychological" account. I would prefer to call it "phenomenalist," in the following broad sense: it explains what it is for a proposition to *be* indeterminate in terms of what it is for an agent to *take* a proposition to be indeterminate.[3] To say that a proposition is indeterminate, on Schiffer's account, is just to say that an agent in ideal epistemic conditions could rationally take it to be indeterminate.

The chief explanatory burden facing any form of phenomenalism is that of saying what it is to take something to be *F* without using the concept of *F* (which would lead to an explanatory circle). Schiffer meets this challenge in a very interesting way. To take the proposition that *p* to be indeterminate, he argues, is to have a vagueness-related partial belief (VPB) that *p*. A VPB is a distinct attitude from the "standard partial belief" (SPB) we have in conditions of uncertainty. As Schiffer says, VPBs reflect *ambivalence* rather than uncertainty. One is "pulled both ways," but without thinking that the truth lies

2 As we will see below, some objections to degree theories tell against Schiffer's account as well.

3 For this sense of "phenomenalist," see Robert Brandom, *Making It Explicit: Reasoning, Representing, and Discursive Commitment* (Cambridge: Harvard University Press, 1994), 292.

determinately one way or the other.

The idea has considerable intuitive plausibility. Standard accounts represent partial beliefs using a single real number: 1 represents full belief, 0 represents full disbelief, and intermediate values represent various states of uncertainty. Rational systems of partial belief must conform to the axioms of probability theory. Thus, for example, one's degrees of belief in p and $\sim p$ must sum to 1. How can such accounts represent the ambivalent attitude one (rationally) has to the proposition that Harry is bald? The best they can do is to assign a credence of 0.5 to both that proposition and its negation. But to do that is to conflate the ambivalence characteristic of vagueness with *uncertainty* (the attitude one might have when asked to guess whether a penny landed heads or tails), and these attitudes do not intuitively seem the same.

So far, so good. But how can we characterize the difference between these attitudes? *Calling* one "vagueness-related" obviously does no work. It is tempting to describe the difference by saying that in the penny case, we believe there is a determinate fact of the matter, while in the baldness case, we don't. However, such an explanation is not available to Schiffer, who is committed to explaining indeterminacy (and correlatively determinacy) in terms of VPBs. Instead, Schiffer distinguishes VPBs from SPBs by distinguishing the norms of rationality to which they are respectively subject. Whereas rational SPBs must conform to (a subset of) the laws of the probability calculus, rational VPBs are responsible to a different set of norms.

3. A normative characterization of VPBs

Suppose two coins (*A* and *B*) are to be flipped. We believe that both are fair coins, so we believe to degree 0.5 that coin *A* will land heads, and we believe to degree 0.5 that coin *B* will land tails. To what degree should we believe that coin *A* will land heads *and* coin *B* will land tails? The standard theory says that our degrees of belief should be probabilistically coherent. Since the two conjoined propositions are independent, we should believe their conjunction to degree 0.25 (= 0.5 × 0.5).

Suppose now that coin *A* is borderline shiny and coin *B* borderline old. After inspecting the coins, we believe to degree 0.5 that *A* is shiny, and we believe to degree 0.5 that *B* is old. To what degree should we believe that *A* is shiny *and B* is old? If we demand probabilistic coherence here, we should again say 0.25. But this seems wrong. It does not seem irrational to half-believe the conjunction. It does not seem irrational to believe that *A* is shiny and *B* is old to exactly the same degree one believes that it is not the case that *A* is shiny and *B* is old. In this case, our partial beliefs seem to be governed by different, non-probabilistic norms. This normative difference, Schiffer argues, is precisely what makes our partial beliefs VPBs and distinguishes them from SPBs.

For the proposition that *p* to be indeterminate, then, is for it to be possible for an agent in epistemically ideal conditions to have a partial belief that *p* which is subject not to the demands of probabilistic coherence, but to certain other norms. This is a plausible and interesting view. The epistemicist, who is committed to the view that our attitude towards borderline cases should be one of uncertainty, must hold that our degree of belief in the conjunction of a large number of stochastically independent borderline propositions should rationally be very small. But intuitively it seems that one is not irrational for believing that Harry is bald *and* thin *and* nice to more or less the same degree one believes he's bald (or thin, or nice). If this is right, then we must recognize another kind of partial belief – or better, another *dimension* of partial belief (since one can have both SPB and VPB with respect to the same proposition) – that is subject to non-probabilistic norms.

But what norms, exactly? Here things get tricky, and I suspect that Schiffer has underestimated the difficulties. For propositions that are believed with certainty to be indeterminate (SPB(*p*) + SPB(~*p*) = 0), Schiffer holds that rational VPBs must conform to the Łukasiewicz rules. He thereby inherits many of the counterintuitive consequences of degree theories. To adapt an example from Rosanna Keefe,[4] suppose you believe that Tek is taller than Tim, though both are borderline tall. Suppose, to be precise, that your VPB (*Tek is tall*) = 0.5 and your VPB(*Tim is tall*) = 0.4. Applying Łukasiewicz's rule for negation, VPB(~*Tek is tall*) = 1 – VPB(*Tek is tall*) = 0.5 = VPB(*Tek is tall*). But then, because the Łukasiewicz rules are degree-functional, your VPB(*Tim is tall* & ~*Tek is tall*) should equal your VPB(*Tim is tall* & *Tek is tall*). According to Schiffer's theory, then, you ought to believe that Tim (the shorter man) is tall and Tek (the taller man) is not tall *to exactly the same degree* as you believe that Tim and Tek are both tall. This is highly counterintuitive, even if one is willing to accept (as Schiffer is) that VPB(*Tek is tall* & ~*Tek is tall*) = 0.5.[5]

Things get even uglier when we consider the more general problem of assigning rational VPB and SPB degrees to *p*&*q* and ~(*p*&*q*) given assignments of degrees to *p*, *q*, ~*p*, and ~*q*. Instead of laying out a systematic theory, Schiffer gives us one "basic law,"

(1) for all propositions *p*, VPB(*p*) + VPB(~*p*) + SPB(*p*) + SPB(~*p*) = 1

and three worked-out examples. The trouble is that the principles we are left to infer from the examples seem to conflict with each other and with (1). For example, in his analysis of example (c) on 221, where it is stipulated that *p* and *q* are "independent by every intuitive measure," and that *p*, *q*, and their negations all have positive SPB and positive VPB, Schiffer appeals to the following principles:

4 *Theories of Vagueness* (Cambridge: Cambridge University Press, 2000), 96.

5 Similar counterexamples make trouble for Schiffer's theory of conditionals. On Schiffer's view, when *C* is false and does not "metaphysically or physically entail" *H* or *T*, the conditionals *C*->*H* and *C*->*T* are both indeterminate. Suppose we V-believe each to degree 0.5. Then on Schiffer's view we should also V-believe their conjunction, (*C*->*H* & *C*->*T*), to 0.5 – even if *H* and *T* are incompatible, so that we should fully S-believe ~(*C*->(*H*&*T*))!

(2) $\mathrm{SPB}(p\&q) = \mathrm{SPB}(p) \times \mathrm{SPB}(q)$

(3) $\mathrm{SPB}({\sim}p\&{\sim}q) = \mathrm{SPB}({\sim}p) \times \mathrm{SPB}({\sim}q)$

(4) $\mathrm{SPB}({\sim}(p\&q)) = \mathrm{SPB}({\sim}p \vee {\sim}q)$

(5) $\mathrm{SPB}({\sim}p \vee {\sim}q) = \mathrm{SPB}({\sim}p) + \mathrm{SPB}({\sim}q) - \mathrm{SPB}({\sim}p\&{\sim}q)$

(6) $\mathrm{VPB}(p\&q) = \min(\mathrm{VPB}(p), \mathrm{VPB}(q))$

(7) $\mathrm{VPB}({\sim}(p\&q)) = \mathrm{VPB}({\sim}p \vee {\sim}q)$

(8) $\mathrm{VPB}({\sim}p \vee {\sim}q) = \max(\mathrm{VPB}({\sim}p), \mathrm{VPB}({\sim}q))$

Schiffer applies (2)–(8) to a case where SPB(p) = SPB($\sim p$) = SPB(q) = SPB($\sim q$) = 0.4 and VPB(p) = VPB($\sim p$) = VPB(q) = VPB($\sim q$) = 0.1 and arrives at SPB and VPB degrees for $p\&q$ and its negation that satisfy (1). But that's a lucky accident. There are many legitimate assignments of SPB and VPB to p, q, and their negations, such that applying principles (2)–(8) yields values that do not satisfy (1). Here's one: SPB(p) = VPB(p) = SPB(q) = VPB(q) = 0.3, SPB($\sim p$) = VPB($\sim p$) = SPB($\sim q$) = VPB($\sim q$) = 0.2. Indeed, we can generate assignments that violate (1)–(8) using Schiffer's own method for assigning degrees to atomic propositions and their negations (220):

- Suppose that John believes there's a 0.3 chance Frank has 37 hairs on his head, a 0.3 chance he has 18 hairs, a 0.2 chance he has 0 hairs, and a 0.2 chance he has 5000 hairs. Let *B* be the proposition that Frank is bald. If John knew that Frank had 37 hairs, he'd have VPB(*B*) = 0.5 and VPB($\sim B$) = 0.5. If he knew that Frank had 18 hairs, he'd have VPB(*B*) = 0.8 and VBP($\sim B$) = 0.2. If he knew that Frank had 0 hairs, he'd fully S-believe *B*, and if he knew that Frank had 5000 hairs, he'd fully S-believe $\sim B$. To what degrees should John believe *B* and its negation? Calculating as Schiffer does, we get VPB(*B*) = $0.5 \times 0.3 + 0.8 \times 0.3 = 0.39$, VPB($\sim B$) = $0.5 \times 0.3 + 0.2 \times 0.3 = 0.21$, SPB (*B*) = 0.2, SPB($\sim B$) = 0.2.
- Suppose John believes that there's a 0.2 chance Mary is 5' 8" tall, a 0.2 chance she is 5'

10" tall, a 0.3 chance she is 6' 4" tall, and a 0.3 chance she is 4' 8" tall. Let *T* be the proposition that Mary is tall. If John knew that Mary was 5' 8", he'd have VPB(*T*) = 0.5 and VPB(~*T*) = 0.5. If he knew that Mary was 5' 10", he'd have VPB(*T*) = 0.8 and VPB (~*T*) = 0.2. If he knew that Mary was 6' 4", he'd fully S-believe *T*, and if he knew that she was 4' 8", he'd fully S-believe ~*T*. To what degrees should John believe *T* and its negation? Calculating as Schiffer does, we get VPB(*T*) = $0.5 \times 0.2 + 0.8 \times 0.2 = 0.26$, VPB(~*T*) = $0.5 \times 0.2 + 0.2 \times 0.2 = 0.14$, SPB(*T*) = 0.3, SPB(~*T*) = 0.3.

- *B* and *T* would seem to be "independent by every intuitive measure." But if we use (2)–(8) to calculate VPB(*B*&*T*), VPB(~(*B*&*T*)), SPB(*B*&*T*), and SPB(~(*B*&*T*)), we find that they sum to 0.97, not to 1 as (1) demands.

If we are to understand the difference between SPBs and VPBs in terms of the norms of rationality that govern them, it is crucial that we know what these norms are. Schiffer has only gestured at them. The principles he has given us are only advertised to work in special cases – we are not told, for example, how to calculate degrees of compound propositions when the constituent propositions are *not* independent – and even in their advertised domains, they seem to have exceptions. Nor are we told how "independence" is to be defined in this new framework. (The generalization from the classical case is not obvious.) Nonetheless, Schiffer's idea that there are two distinct dimensions of partial belief, distinguished by the different epistemic norms to which they are subject, is intuitively compelling and potentially very fruitful. I hope that it will receive the theoretical elaboration it needs to become a viable supplement to standard Bayesian models of partial belief.[6]

6 I'm grateful to Fabrizio Cariani and Branden Fitelson for invaluable feedback.