Comments on *Inconstancy and Inconsistency* by David Ripley

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Overview

In this very interesting paper, David Ripley brings together formal work on the semantics of vague predicates with experimental work on speakers' reactions to statements involving such predicates. Working within a broadly Kaplanian framework—in which predicate expressions have characters, which together with contexts determine contents, which together with circumstances determine extensions—Ripley distinguishes three positions on the semantics of vague predicates [§1–§2]:

1. A vague predicate P has an inconstant character: there are contexts c_1 and c_2 and circumstance i such that the extension of P relative to c_1 and i is not the same as the extension of P relative to c_2 and i.
2. A vague predicate P has an inconstant content: there is a context c and circumstances i_1 and i_2 such that the extension of P relative to c and i_1 is not the same as the extension of P relative to c and i_2.
3. A vague predicate P has an inconsistent extension: there is a context c, circumstance i and object x such that x is both in and out of the extension of P relative to c and i.

Ripley then describes two experiments—both reported in more detail elsewhere—in which speakers were asked to respond to statements involving vague predicates (the two-place predicate 'is near' and the one-place predicate 'is tall') [§3]. Finally, Ripley assesses the three semantic theories, in light of the experimental results.

The assessment phase proceeds as follows. Ripley first argues that inconstant character views cannot provide a good explanation of the experimental data, while inconstant content and inconsistent extension views can explain the data [§3.1–§3.3]. He then addresses the question whether there could be data which distinguish these two views: data which only one of the views can explain. Here, Ripley first shows that given an assertion of an apparent contradiction involving a vague predicate (e.g. 'The circle both is and isn't near the square'), an inconstant content explanation can always be constructed to match an inconsistent extension explanation of the assertion, and vice versa [§4]. Nevertheless, Ripley argues that inconstant content and inconsistent extension views are potentially empirically distinguishable. The former explain the data via the idea that the circumstance shifts; the latter do not. If we had an empirical theory which placed constraints on when circumstances can shift, we could in theory rule out inconstant content explanations by setting up experimental situations in which the circumstance is held fixed [§5].

In this commentary, I shall first make a general point about the current states of the theoretical and experimental literatures on vagueness, before making two more specific points about Ripley's assessment of inconstant content and inconsistent extension views.

General point

The general point is that, when reading Ripley's paper, one is struck by the discrepancy between the highly-developed theoretical literature and the fledgling empirical literature. In light of existing work in logic, model theory and formal semantics, Ripley is able, in just a few pages, to set up an elaborate and sophisticated set of distinctions amongst different theoretical positions on vagueness. When it comes to the empirical work, however, the body of evidence strikes one as extremely limited. This is not a complaint against Ripley: he is one of those actively working to increase the body of available evidence. The point is that we should keep in mind that the sophistication of the theories being discussed—their level of formal complexity and the subtlety of the distinctions between them—far outweighs the level of detail to be found in the data in light of which these theories are to be assessed. One is reminded of a circus elephant balancing on a tiny stool. The idea that the sum total of experience does not determine a unique choice of physical theory is a familiar one. The problem—in this case, of choosing a theory of vagueness—is that much worse when the data are so meagre.

The simple response to this observation would be to say that we should do more experiments and gather more data. However, there is an essential difficulty here. We are all competent in the use of vague predicates in their clear areas of application and in the areas in which they clearly do not apply. Different theories of vagueness, however, typically say different things about the borderline regions—not about the areas of clear application and clear non-application. In these areas, however, reliable data are very hard to obtain. This is because our standard practice is to *avoid* the borderline areas—and when, for one reason or another, we are forced to consider them, the typical response is to coin a new predicate: either a precise version of the original vague one, or a new vague predicate whose clear area of application coincides with the borderline region of the original vague predicate.

Consider, for example, the classification of humans into 'children', 'adolescents' and 'adults'. These three terms are vague. Suppose someone is forced to consider the borderline region between adolescents and adults—say, for purposes of deciding who can vote, or who can purchase alcohol. A standard response is to introduce a new predicate: 'legal adult'. This is a precisified version of the original vague predicate 'adult'. It has no borderline cases. Or suppose someone is compelled to consider the borderline region between children and adolescents—say, for purposes of finding new target markets. A standard response is to introduce a new predicate: 'tween'. This is a vague predicate, whose area of clear application is the borderline region between the clear areas of application of the vague predicates 'child' and 'adolescent'.

We are, then, uncomfortable in borderline regions: we try to avoid them, and when we cannot, we typically shift to new terms, which either have no borderline regions, or have borderlines somewhere else. Now think about experiments in which speakers are asked to respond to statements, made using vague predicates, about objects in the borderline regions of those predicates. Speakers have very little experience operating

with these predicates *in these regions*—and when we ask people to do things that they generally try to avoid doing, and hence with which they have little experience, it is likely that the results will be noisy. That makes it hard to draw stable conclusions from the results of the experiments.

Consider the following analogy. Someone is doing some research in which they show subjects photographs of various persons and ask the subjects to rate the extent to which they find the persons physically attractive. Now suppose the experimenter puts into the mix photos of the subject's family members. We simply do not think of our family members in these terms—hence it is entirely unclear what conclusions the experimenter could legitimately draw from the results of the experiment, whatever the results were. Similarly in the case of vagueness. When you ask subjects to consider terms used in situations in which they generally go out of their way to avoid using such terms, it is not clear what conclusions you may draw from the results—whatever the results turn out to be.

We may put the point this way. The experiments are supposed to elicit responses from the subjects which flow from the subjects' *competence* in using vague predicates. The problem is that competence with vague predicates requires an ability to use them in their clear areas of application, and an ability to *identify* their borderline regions—but it does not require an ability to *use* vague predicates in their borderline regions. In fact, the latter is something we generally do not do. Thus, it is not clear that subjects' responses to the experiments flow from their pre-existing competence with vague predicates—for they are being asked to do something new: to perform a kind of task with which they have little or no experience.

In sum, not only is there a need for more data, there may well be a need for a different kind of data: data based not on asking subjects what they think of various statements made, using vague terms, about objects in the borderline regions of those terms—but rather arrived at in more sophisticated and subtle ways. What these ways might be is not something I am in a position to settle here: this is a large topic that requires extensive discussion. My aim here is not to preempt that discussion but to put it on the agenda.

Specific comments

I turn now to more specific comments. More particularly, there are a couple of places where Ripley seems to overstate the case in favour of inconsistent extension views as against inconstant content views.

First, Ripley writes:

> inconsistent-extension explanations also have an available explanation for the data. . . The vague predicates. . . determine an inconsistent extension, and the borderline cases are simply both in that extension and out of it. When participants agree to 'both' sentences, they are simply reporting this fact. It might at first seem that participants' agreement to 'neither' sentences tells against this hypothesis, but that's not so. If something is both P and not P, then it is indeed neither P (since it's not P) nor not P (since it's not not P). Thus, an inconsistent-extension approach predicts the observed responses to the 'both' sentences and the 'neither' sentences. [p. 51]

This is fine up until the last sentence: but I disagree that the inconsistent extension approach predicts the observed responses to 'neither' sentences. Consider an analogy. Suppose you have a theory according to which most people think that there are seven oceans. Your theory predicts that when you ask people whether the number of oceans is seven, they will say 'Yes'. It does not predict that when you ask people whether the number of oceans is $147/21$, they will say 'Yes'—even though $147/21 = 7$. For, to give the answer 'Yes' to the latter question, the subject has to work out that $147/21 = 7$. As not everyone can be expected to perform this calculation quickly and accurately, one's theory would predict fewer 'Yes' responses to the second question than to the first. Similarly in the present case. If x is P and not P, then by reasonably basic logical reasoning, it follows (as Ripley says) that x is neither P nor not P. However, not everyone can be expected to carry out such reasoning quickly and accurately, so it seems that the inconsistent extension view should predict less agreement to 'neither' sentences than to 'both' sentences. Moreover, it should predict an increasing discrepancy between the two kinds of sentences as the background cognitive load on subjects is increased.

Second, Ripley writes:

> If total parameters are sticky in this way, it's hard to see how to use a shift in total parameter to explain the data... The inconstancy explanation crucially turned on rapidly varying total parameters; supposing stickiness is in play blocks that rapid variation. [p. 57]

I do not see that stickiness threatens the inconstancy explanation. As Ripley says, the inconstancy explanation turns on rapid variation of total parameter—but stickiness says nothing about the possible rapidity of variation: stickiness means that changes are *asymmetrical*; it does not mean that they are *slow*. Consider Raffman's example, as quoted by Ripley [pp. 56–57]:

> Once [an automatic] car has shifted to a new gear, it will continue to use that gear as long as possible, even if it slows to a speed previously handled by a lower gear. For example, if the car has shifted from second to third gear at 30 mph, it will remain in third even if it slows to 25 mph, a speed previously handled by second. (Shifting gears is hard work.)

The point here is that the shift does not occur in the same place on the way up as on the way down: there is an asymmetry. The point is not that shifts cannot occur quickly. Imagine a control device within some piece of high-speed equipment. It might be asymmetrical—sticky—in precisely the same way as the automatic gear-change mechanism: and yet it might make thousands of shifts every second.

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