Week 8: Ramsey's Criticisms

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So what were Ramsey's criticisms of Keynes?

Ramsey 1922

We'll start with this rather blunt review Ramsey does soon after the book comes out. It's a very strange document. The kill your elders tone is reminiscent of what would become standard in 20th century philosophy, though I guess it's a little less common now. But it also does very little to contextualise the book. It's almost like Ramsey published his notepads. The contrast with other reviews at the time, like Broad's or Pigou's, is even more striking. They do *more* than is currently standard to simply describe the book before getting into commentary. Ramsey does very little of this; practically none in fact. But this does mean we have more to work with.

First Objection: Non-Numerical

Ramsey starts by objecting to the idea that probability can be non-numerical. The first objection is that we can sometimes get the benefits of saying that probability is non-numerical by simply saying the probability is not always defined. This seems like a weak objection to me for two reasons. First, if probability is going to be a guide, then it always needs to be defined. Second, sometimes what it means to say that probability is not numerical, is simply to say that certain things are not defined. On some modern views of imprecise probability, what it means to say that the probability of p is vague over an

interval, just is to say that there is nothing ruling values in those intervals out. And the imprecise probability view can do something that the non-defined probability view cannot do.

Let p and q be two completely unrelated propositions, such that Ramsey would say that the probability of p given q is undefined. Let h be that this coin I'm about to toss will land heads. What's the probability of $p \vee h$ given q? Keynes, and modern imprecise theorists, can say that it is non-numerical, but it is at least 0.5. If probabilities are either undefined or numerical, you can't even say that. But this seems wrong. This disjunction $p \vee h$ is surely more probable than some other propositions.

The second objection that Ramsey makes is considerably stronger. He argues that in many places Keynes confuses the unknowability of a probability with its not having a numerical value. And I think this is definitely true. At least some of the arguments do appear to turn on the fact that we can't say what the probability would be. And Ramsey is right to complain that this kind of argument over generates. To use his example, the fact that we can't say what the height of the distant mountain is, does not imply that it does not have a height. To argue that there really is no numerical probability for a certain proposition, we need to do more than say that we can't tell what that probability is, or that no one can agree what it is. After all, the same could be true of the height of a distant mountain. I think there are things to say here, but it's true that Keynes it's not always careful to make these distinctions.

Second Objection: Principle of Indifference

After this, Ramsey discusses the uses of the principle of indifference. And I did not understand at all what the objection was supposed to be. He says that there are cases where the principal leads to paradox, which are not ruled out by the version of the principal which Keynes gives. But his example is one where the things the person is indifferent over can be divided into more cases. Indeed, they can be divided into cases that the person knows about. And one of the constraints on the principle of indifference that Keynes gives is that the case cannot be the divided. This restriction is a very tight restriction. I do not mean to argue that it is a good one. As far as I can tell, it rules out using the principle in any case, we might care to use it. What I do not

understand is how one can say that it is still open to use the principle in cases like the ones that Ramsey describes.

Ramsey makes a positive suggestion about how the principle might be better restricted. His idea is that we can only ever be indifferent between instances of the same determinate. This is a very interesting idea and would be worth developing further. I don't think it can be developed in any successful way within the metaphysical picture of the Ramsey himself endorses. On that picture I don't know how you make sense of the idea of two things being determinables of the one determinate. But on a more plausible, realist, metaphysical picture, you can make sense of that idea, and that might be relevant to proper applications of the principle of indifference.

Third Objection: Missing Assumption

After this, Ramsey makes it looks to me like a really uncharitable objection. He says that one of the arguments that Keynes makes does not go through because it requires an extra assumption, namely, that the values and question are unique. But surely that's always an implicit assumption of the terminology being used. If you write $x = y$, that implies that y is the unique value of x. I'm not sure this really needed to be made as explicit as Ramsey says. It seems obvious to me that Keynes intended the values a/h to be unique. Here it really looks to me like he's just publishing things that he scribbled in his own notepad.

Fourth Objection: Method of Difference

The point about induction also seemed uncharitable as stated, but maybe there is a deeper point there. Ramses point is that we don't just consider what the observed _F_s are like when deciding how likely it is that all _F_s are _G_s. Sometimes the fact that a particular non-F is non-G is relevant too. In particular, if something shares a lot of characteristics with the observed _F_s, but is not F, and is also not G, that raises the likelihood that the reason that the observed _F_s are all G is that there is a deep connection between being F and being G.

That said, this is a bit of a weird case. One of the two biggest worries[I] in the philosophy of induction over the last century is that on

[I] To be clear, it's the second biggest of the two. The biggest is what to do about grue.

some theories of induction, finding a non-*F* which is also not *G* will raise the probability that all _F_s are _G_s. And Ramsey's response is, yes, sometimes we want the observation of a red ball to raise the probability that all ravens are black! I think Ramsey overstates how often this happens, but it does happen sometimes, and he's got a point that Keynes's way of doing induction might imply that it can never happen.

On the bigger picture, part of what's happening is that sometimes enumerative induction looks like a proxy not for argument by analogy, but as a proxy for inference to the best explanation. And when it does, these negative cases seem to matter. So I think there is a point here, even if I think it's overstated somewhat.

Fifth Objection: Limited Independent Variety

Ramsey argues that Keynes's principle of limited independent variety will imply that there are only finitely many objects. The argument goes as follows. Assume an infinity of objects. Assume also that being members of a common set suffices for sharing a property. Then there are infinitely many pair sets. So there are infinitely many properties. So limited independent variety fails. So limited independent variety requires there be finitely many things.

The point to object to here is obvious. You can't have anything like the idea that being members of an arbitrary set is a *property* in the relevant sense on Keynes's metaphysics. Indeed, it's a really hard question whether you can do induction at all on this understanding of what a property is.[2] But it seems really weird to attribute this kind

Here we get to a real philosophical difference. K definitely needs there to be some restriction of the notion of property beyond being members of a common set. If you say any set of objects determines a property, then yeah the account of induction falls apart. If you think that, however, it isn't clear what's left of induction.

[2] That's arguably a lesson of the grue paradox.

Sixth Objection: The Relata

Apparently there is a point in the *Treatise*, and I didn't go back to confirm this, where Keynes writes as if probability is a relation between propositional functions, not between propositions. This is surely a

slip on Keynes's part, but why it should be taken to have philosophical significance was not particularly clear to me. It certainly isn't a reason to think that Keynes has generalised the notion of probability beyond what it will bear.

Russell raised the question of whether we should think that propositional functions should be the primary bearers of probability. This is an interesting idea, and I've really just got two very initial thoughts on it. First, it would be a really really big break from how we do things now. Second, it would make the probability world much more frequentist friendly. Just what Ramsey's relationship is to frequentism is perhaps an interesting question.

Truth and Probability

This paper is really the foundation of modern discussions of the philosophy of probability. We're not going to go over the positive parts, because it's not our topic. But two of the five sections are about Keynes, so they are our topic. And they have, over time, become quite well entrenched.

Section 2 Criticisms

Ramsey starts with a very strange argument. He says that he's arguing against the combination of the following two claims.

1. Probability corresponds to rational degree of belief.
2. Probability is non-numerical.

And his objection assumes that degrees of belief can be numerically measured. And that objection seems, maybe, really not something that anyone sympathetic to Keynes would want to accept. It seems really question-begging. Of course if you have the rest of the views Keynes has, you'll want something like non-numerical degrees of belief. And every modern theory like Keynes's has that. It's just an odd argument.

Then we get one of the two most quoted parts of Ramsey's paper:

> But let us now return to a more fundamental criticism of Mr Keynes' views, which is the obvious one that there really do not seem to be any such things as the probability relations he describes. He supposes that, at any rate in certain cases, they can be perceived; but speaking for myself I feel confident that this is not true. I do not perceive them, and if I am to be persuaded that they exist it must be by argument; moreover I shrewdly suspect that others do not perceive them either, because they are able to come to so very little agreement as to which of them relates any two given propositions.

As stated, this is clearly absurd. We all know that it's more probable that Oswald killed Kennedy given our evidence than that an alien killed Kennedy. Lots of these relations are very easy to see in pretty broad outline. But he goes on to make some other more interesting arguments.

First, when do we go from having (0, 1) probability to having something comparable to numerical probabilities? This is a hard question for anyone, and he's right that there will be some kind of vagueness in the answer. Note we could make the same objection to the idea that some pairs of propositions don't have a defined probability, as he suggested in the earlier paper. But probably whatever one does for vagueness in general will work here.

Second, it should be easiest to identify logical relations in simple cases, but here it's easiest in hard cases. This does seem to be an interesting point. And it brings up a reason you might prefer an *objective* approach over a *logical* approach.

Third, when we do know what the probability facts are (at least roughly) we always do that via thinking about ideally rational behaviour. That's certainly what I was doing in the Kennedy example above. In modern terms, it's kind of like probability facts are true because they are what ideally rational people would do, and not vice versa. Except Ramsey hasn't quite shown that. What he's shown is that facts about ideally rational behaviour are epistemically prior to facts about probability; that doesn't rule out the probability facts being metaphysically prior. It seems common enough in philosophy that we think about what good people would do in a situation; that doesn't make us all virtue theorists.

Fourth, Ramsey notes some points where Keynes doesn't really adhere to his own theory. Most notably he discusses some paragraphs that we discussed too about the half-hearted attempt to bring non-ideal theory into probability. This is surely a mistake on Keynes's part; he just has to pick one side and stick to it. I think these paragraphs are slips, and while they don't reflect that well on Keynes, I don't really think they are much evidence against his theory.

Finally, he discusses a view on which probability is objective, but not itself a logical relation. The arguments against this seem not very strong to me, since it seems from a contemporary vantage point that the Tractarian project just didn't have enough inputs to explain everything we wanted to explain philosophically.

Big background point here: do we think any two people with the same evidence (in any possible worlds) should have the same degrees of belief? If so, we need something like what Keynes offers and Ramsey denies. In particular, we need something that has modal force, and which doesn't have a clear relationship to the empirical facts. But Ramsey says that isn't true; we should be reliabilists. And reliability is world-sensitive, and does not need to get a modal explanation.

Section 4 Criticisms

There are I think four major criticisms here, which I'll end this week by going over.

First, Ramsey says that logic is just a matter of self-consistency, of accepting what is already contained in the premises. And that's not true of induction. So induction is not part of logic.

Here I think the best response is to say that the notion of 'contained' has stronger and weaker interpretations. On the stronger versions, what Ramsey says is only true of a very small range of logics. I don't think it's really true of higher-order logic (i.e., the logic of properties) or epistemic logic (i.e., the logic of knowledge). On a weaker version, where it just means that there is something incoherent about endorsing the premises and rejecting the conclusion, I think Keynes's inductive logic satisfies it. There is something incoherent about saying that all the live grass I've ever seen has been green(ish), and none of it has been blue, and I have no special evidence about the next grass I'll see

(it's not from a special place I'm told makes blue grass), but probably the next grass I see will be blue.

Second, Ramsey says that Keynes's theory can't justify the axioms of probability. This I think is a completely fair criticism, and Keynes doesn't really have an answer here. Indeed, Keynes doesn't even have a story about why his values are even the things that are capable of being added and multiplied, which is a precondition of satisfying the axioms. But I think Jim's work solves the problems here. Thinking of real probabilities as sets of mathematical probabilities explains how they can be added/multiplied and accuracy considerations justify why they should satisfy the axioms. There are a lot of details to fill in here, but the short version is that while Ramsey is right that this is a gap in Keynes's treatment, it is a fillable gap.

Third, Ramsey says that an advantage of his pragmatic approach is that it lets us get by without the Principle of Indifference. And that's true, and has advantages. But it has downsides too. Does it mean that induction is just a good habit, i.e., that as a matter of fact it actually works. In other words, does it just mean that it is reliable? If so, there are three very familiar challenges that we can raise next. First, we need to find the right reference class for saying that something is reliable. Second, we need a separate justification of conditionalisation, and I'm rather unsure the reliabilist can offer one. Third, we need to have something to say about why the evil demon victim is unlucky rather than stupid. These aren't unresolvable problems, but it's not like we eliminate philosophical headaches going this way.

Finally, Ramsey makes an excellent point about Keynes's theory having troubles with uncertain evidence. This is a problem to this day for broadly evidentialist theories (like my own). Maybe Keynes could appeal to things like Jeffrey conditioning to help here, but Ramsey is right that this is a challenge.

For Next Time

We'll move onto the *General Theory*. Next week is a bit of an intro. We're doing chapter 1 (which is literally one page), chapter 2 (which goes over Keynes's criticisms of the 'classical' theories he is opposing), and chapter 24 (the political consequences of his new theory). My plan is to go over some very high level things about the book, and work

in some detail through the objections to the classical theory, which I think raise some interesting questions in decision theory.