In Praise of a Modest Probabilism

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I

Has a Bayesian anything to teach a philosopher? To judge from much of the literature in epistemology [the theory of knowledge], many practitioners of the discipline think not. As typically portrayed by epistemologists, a Bayesian is someone who is committed to the following two doctrines: first that, for each person and each hypothesis that person is capable of comprehending, there is a precise, real-valued degree of confidence that person has in the truth of that hypothesis, and second that no person can be counted as rational unless the degree of confidence assignment she thus harbors satisfies (at least) the Kolmogorov axioms of probability. The Bayesian thus portrayed cuts a figure that most epistemologists have found quite unattractive. The following three objections have figured prominently in their explanations of why they are so repelled.

1. The Psychology Objection. The Bayesian's claim that each of us harbors a precise degree of confidence assignment is simply not credible. Reflection on their own cases has convinced many epistemologists that there are a great many hypotheses (particularly hypotheses about which they have little evidence) in whose truth they do not have a precise degree of confidence. The standard Bayesian reply is that a degree of confidence is to be understood as a disposition to bet or to choose—not as a consciously felt degree of conviction—and is thus not the sort of thing whose presence can reliably be detected by reflection. But this a reply that many epistemologists have found singularly uncompelling. The extent to which it is possible to elicit from a person dispositions to bet or choose that are at odds with her felt conviction has only served to convince these epistemologists that the dispositional analysis of degrees of confidence Bayesians have championed is in error.

2. The Idealization Objection. The condition on a person's being rational that the Bayesian endorses is far too demanding. It follows from the Kolmogorov axioms of probability that every tautology receives the maximum probability, probability 1, every contradiction the minimum, 0. Thus, it follows from the Bayesian's condition on rationality that you cannot be considered rational so long as there is even one tautology in which you fail to invest the maximum degree of confidence or one contradiction in which you fail to invest the minimum. While this may be a reasonable constraint to impose on a

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2. Where P and Q are any hypotheses, the Kolmogorov axioms hold that
   (i) prob(P) ≥ 0;
   (ii) prob(P) = 1, when P is a tautology; and
   (iii) prob(P v Q) = prob(P) + prob(Q), when P and Q are mutually exclusive.

2. See, for example, Ellery Eells, Rational Decision and Causality (Cambridge UP, 1982) pp. 41 ff.

being of limitless logical acumen, it is (many epistemologists have complained) hardly appropriate to impose on real-life human beings. Indeed, they have argued, there are circumstances in which it is rational for a real-life human being knowingly to violate this constraint.

Suppose that P is some complicated hypothesis. You have determined that P is either a tautology or a contradiction, but you haven't determined which. A friend with pretty good logical acumen tells you that she is fairly confident that P is a tautology. In such circumstances, it would seem you have no business being certain that P--no business assigning P the maximum degree of confidence. After all, your friend is neither sure that P is a tautology nor (let us suppose) perfectly reliable in her verdicts. Nor would you seem to have any business being certain that not-P--that would be to ride roughshod over the testimony of your friend. What would seem reasonable is for you to invest more confidence in P than in its negation but assign neither hypothesis an extreme degree of confidence.5

3. The Ignorance Objection. Even regarded as a condition on the rationality of an ideal inquirer (an inquirer who has a degree of confidence assignment, together with sufficient cognitive resources to ensure that this assignment satisfies the Kolmogorov axioms of probability), the Bayesian's condition is at odds with our epistemic intuitions about what such an inquirer should do in cases of ignorance.

Imagine that you are an ideal inquirer who satisfies the Bayesian condition. Consider the following hypotheses:

(P) Mark Kaplan was wearing brown shoes on his tenth birthday.
(Q) There was ice skating in Milwaukee's Cathedral Square in 1996.

If I've chosen correctly, then you haven't the slightest idea whether or not either of the two hypotheses is true. The only way you have to express your ignorance as to the truth value of P and the truth value of Q is to invest in each a degree of confidence no greater and no less than the degree of confidence you invest in its negation. You must invest in each a degree of confidence equal to 1/2.6

Now consider

(P v Q) Either Mark Kaplan was wearing brown shoes on his tenth birthday or there was ice skating in Milwaukee's Cathedral Square in 1996.

It is a consequence of your harboring a degree of confidence assignment that satisfies the Kolmogorov axioms of the probability calculus that (letting "con(X)" represent your degree of confidence in hypothesis X)


If there is no reason to believe one hypothesis rather than another, the probabilities are equal . . . to say that the probabilities are equal is a precise way of saying that we have no good grounds for choosing between the alternatives . . . The rule that we should take them equal is not a statement of any belief about the actual composition of the world, nor is it an inference from previous experience; it is merely the formal way of expressing ignorance.
\[
\text{con}(P \lor Q) = \text{con}(P) + \text{con}(Q) - \text{con}(P \land Q),
\]
where (by the definition of conditional probability)
\[
\text{con}(P \land Q) = \text{con}(P|Q)\text{con}(Q).
\]
And what value will \(\text{con}(P|Q)\) have? \(\text{con}(P|Q)\) represents your degree of confidence in \(P\) given \(Q\). This being so, \(\text{con}(P|Q)\) should be greater than \(\text{con}(P)\) just if you regard \(Q\) as a hypothesis that, if true, counts as evidence that \(P\); it should be less than \(\text{con}(P)\) just if you regard \(Q\) as a hypothesis that, if true, counts as evidence that not-\(P\). But, if I have chosen \(P\) and \(Q\) as I hope I have, you regard \(Q\) as neither of these things: you regard \(Q\) as a hypothesis that, if true, has no evidential bearing whatsoever on \(P\)'s truth. Thus, you are bound to assign \(\text{con}(P|Q)\) the same value as you assign \(\text{con}(P)\): \(1/2\). This being so, conformity to the Bayesian condition on rationality will require you to arrange your degrees of confidence so that
\[
\text{con}(P \lor Q) = \text{con}(P) + \text{con}(Q) - \text{con}(P)\text{con}(Q) = 3/4.
\]
But, some epistemologists have argued, this is a bizarre result. You are every bit as ignorant as to the truth-value of \(P \lor Q\) as to the truth values of its disjuncts. That the Bayesian condition would nonetheless require you to invest so great a degree of confidence in \(P \lor Q\) shows that the Bayesian condition on rationality is defective.\(^8\)

How powerful are these objections? While I think that some are more powerful than others, I think it is fair to say that, if a Bayesian is the sort of creature described at the outset, then these objections jointly provide a powerful reason not to be Bayesian. But, for all that, I am convinced that it is a mistake to conclude that Bayesianism has nothing to teach epistemologists. That is because I am convinced there is available a much more modest and sensible variant on the orthodox Bayesian view epistemologists have so rightly seen fit to reject. What I want to do today is provide a sketch of this view--a view I have called "Modest Probabilism". I want to explain how it handles--indeed, how it is inspired by--the objections I've just rehearsed. And I want to explain why it is a doctrine of epistemological import. Addressing the latter task will provide an occasion to talk about what I think is the most disorienting, and philosophically interesting, feature of the Bayesian approach to epistemology: the way it finds in decision theory a foundation for epistemological doctrines.

II

Let me begin the sketch with Modest Probabilism's psychology. It is, true to the name, modest. In contrast to its orthodox ancestor, which strains our credulity by assuming that actual persons have real-valued degree of confidence assignments, Modest Probabilism assumes only that any person harbors at least some confidence-rankings: that she can, for at least some pairs of hypotheses, say in which (if either) she invests the greater confidence, in which (if either) she invests equal confidence. It is, of course, compatible with this assumption that there are some hypotheses (for example, the tautology, "Either Bloomington is south of Chicago or it is not") in which she has a precise degree of confidence. But it is also entirely compatible with this assumption (and doubtless true of any actual person) that there are a great many pairs of hypotheses that she has not so ranked – a great many pairs of hypotheses as to whose relative credibility she is

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6. For a defense of this claim, see my *Decision Theory as Philosophy* (Cambridge UP, 1996), pp. 45-62.

undecided - either because she hasn't gotten round to ranking them, or because she finds no grounds for ranking them one way rather than another. The Psychology Objection is no objection to Modest Probabilism.

Nor is the Idealization Objection. The Idealization Objection shows that it is not a credible condition on the rationality of an actual person that she assign every tautology a degree of confidence equal to 1. The question is: if so, is there anything on which this requirement can credibly be thought to be a condition? The typical Bayesian response is to say that the requirement is a condition on the rationality of an idealized inquirer. But (as many epistemologists have observed) this response is not at all satisfying. We are not idealized inquirers. This being so, it is not in the least obvious how, so construed, the requirement that tautologies be assigned the maximum degree of confidence can be of any import to us.

Modest Probabilism offers another response: the requirement is to be understood as a regulative ideal. By that I mean it is to be understood as putting forth a constraint the violation of which opens a state of opinion to rational criticism. It is to be understood as saying that your state of opinion is open to rational criticism insofar as there is a tautology to which you have failed to assign a degree of confidence equal to 1.

It is, of course, one thing to say that your state of opinion is open to criticism if it violates a certain constraint, another thing to say that you are open to criticism if your state of opinion violates that constraint. You can hardly be held open to criticism for violations (such as your failure to assign the maximum degree of confidence to every tautology, no matter how complicated) that are due only to your limited cognitive capacities, limited logical acumen, limited time. Nor can you reasonably be held open to criticism for a violation that you do not know how to avoid (as in the case in which you don't know whether the hypothesis is a tautology or a contradiction and, thus, don't know what degree of confidence in P--1 or 0--would avoid the violation).

Thus there is nothing in the requirement, understood as a regulative ideal, that provides grounds for calling you irrational if you fail to assign the maximum degree of confidence to a tautology you don't recognize as a tautology; or, if you fail to assign a hypothesis an extreme degree of confidence when you know it is either a tautology or a contradiction but you don't know which. The requirement that tautologies receive the maximum degree of confidence is a requirement on the cogency of opinion, not the rationality of persons.

The two are not, however, unrelated. The reason we are disinclined in the cases described above to count you as not rational is that we deem your failure to satisfy the requirement as eminently excusable: your failure is due entirely to your limited logical acumen. We would feel differently if your violation could have been avoided had you but paid the slightest attention to the form of the hypothesis before you, or if had you been the least bit careful, or if had you made even the most cursory check. This suggests

8. See, for example, Paul Horwich, Probability and Evidence (Cambridge UP, 1982), p. 12, where he writes:

    More specifically, the Bayesian approach rests upon the fundamental principle:
    (B) That the degrees of belief of an ideally rational person conform to the mathematical principles of probability theory...

that, while a wildly implausible requirement on the rationality of actual persons, the
requirement that tautologies receive the maximum degree of confidence nonetheless
plays an important role in our assessments of the rationality of actual persons: we will not
count a person's failure to invest the maximum degree of confidence in a tautology as
rational unless we deem her failure to be excusable.11

And, cast as a requirement on the cogency of opinion—as a requirement the
violation of which opens the offending state of confidence to rational criticism—the
requirement that tautologies receive the maximum degree of confidence occupies even
more central a role in inquiry. The question of what constitutes a rational criticism of a
state of opinion is central to the enterprise of rational inquiry—an enterprise whose aim,
after all, is to determine what opinions may be sufficiently immune to rational criticism
to warrant adoption. The requirement that tautologies be assigned the maximum degree
of confidence offers an extremely modest, but nonetheless genuine, contribution to that
enterprise.12

Of course, the requirement that a person harbor a degree of confidence
assignment that satisfies all the Kolmogorov axioms of probability—of which the
requirement that tautologies be assigned the maximum degree of confidence is but
one—would offer a far more substantive contribution. But is it a regulative ideal we
should endorse? Modest Bayesianism sees in the Ignorance Objection decisive reason
why we should not. From the perspective of Modest Bayesianism, what is responsible
for the unintuitive result revealed in the Ignorance Objection is that the orthodox
Bayesian regulative ideal demands that, on pain of opening your state of opinion to
criticism, you assign each of P and Q a precise degree of confidence. It is a regulative
ideal that would have you behave towards P and Q—as hypotheses as to whose
truth-value you have virtually no evidence—exactly as you would if they were hypotheses
as to whose truth-value you had excellent evidence. Insofar as it would have you assign
the value 0.5 to each of P and Q, the regulative ideal would have you behave toward
these hypotheses just as you would were each predicting the outcome of a different toss
of a coin of whose fairness you were certain.

Now, it is indeed true that, as in the coin-toss case, the evidence in the case
described in the objection neither favors P nor Q over its negation. But that is because, in
the case described in the objection, you have virtually no evidence at all as to the truth
values of P and Q. If the evidence you have gives you no reason to assign either
hypothesis a greater (or a lesser) degree of confidence than you assign its negation, the
evidence also gives you no reason not to assign one or both of the hypotheses a greater
(or lesser) degree of confidence than you assign its negation. The evidence gives you no
reason to assign either hypothesis any particular degree of confidence rather than some

10. Why not the stronger claim: we will count a person's degree of confidence in a tautology as rational just
if either it is maximal or it is excusably not maximal? To see why not, suppose she assigns P the maximal
degree of confidence on a whim: she has no reason to assign it the maximal degree of confidence but does
so all the same. As it happens, P is tautology. I doubt that we want to count her confidence as rational.

11. For a similar line of response, see Brad Armendt, "Dutch Books, Additivity and Utility Theory,"
Philosophical Topics 21: 1-20, p. 4.
other. If so, the appropriate way to respond to the case described in the Ignorance Objection—the appropriate way to respect the difference between the evidence in this case and the evidence in the coin-toss case—is to acknowledge as much and to refrain from assigning a degree of confidence to either hypothesis. But that is just to say that the Ignorance Objection describes a circumstance in which it would be wrong—even wrong for an ideal inquirer—to harbor a degree of confidence assignment. We must conclude that the orthodox Bayesian regulative ideal is not one we should want to satisfy.

What would Modest Bayesianism put in its stead? Let me approach the answer a bit indirectly. I said that Modest Bayesianism lays the blame for the unintuitive result revealed in the Ignorance Objection on the fact that the orthodox Bayesian regulative ideal demands that you harbor a degree of confidence assignment. Satisfying this demand would require you either to rule out (i.e., regard as inferior to at least one other) all but one degree of confidence assignment or, failing that, to pick one degree of confidence assignment from the ones you haven’t ruled out. The complaint, then, is that orthodox Bayesianism would thus have you either rule out, for no good reason, any degree of confidence assignment that fails to assign the value 0.5 both to P and to Q, or adopt, for no good reason, one state of opinion rather than another. And the moral issued by Modest Bayesianism—that you should not assign either hypothesis any particular degree of confidence—is that (i) provided it satisfies the Kolmogorov axioms, you are simply in no position to rule out a degree of confidence assignment on the basis of what it assigns to these two hypotheses, and (ii) to adopt one state of opinion rather than another for no good reason is to open that state of opinion to criticism.

How does any of this bear on the propriety of your confidence rankings? Consider the case at hand. Suppose you have taken the Modest Bayesian moral to heart. That is, suppose that we can pick any two values (identical or otherwise) from 0 through 1, and there will be a degree of confidence assignment you haven’t ruled out on which P has the first value and Q has the second. Under such a circumstance you hardly seem in a position to invest more confidence in one hypothesis than the other—say, more confidence in P than in Q. After all, there are assignments you haven’t ruled out on which P gets a lower value than Q. To be in a position to invest more confidence in P than in Q, you would have to have ruled out every assignment on which P gets a lower value than Q and (at the very least) not ruled out at least one on which P gets a greater value than Q.

Nor are you in any better position to be equally confident in the two hypotheses. There are, after all, myriad degree of confidence assignments you have not ruled out that, if adopted, would have you investing a greater degree of confidence in one hypothesis than you do in the other. To be in a position to be equally confident that P as you are that Q you presumably would have to have ruled out all those assignments.

But if you are neither in a position to be more confident in one hypothesis than the other, nor in a position to be equally confident in each hypothesis, you have but one alternative: indecision. In the case at hand, you should leave P unranked with respect to Q.

If this is right, then questions about the propriety of your adopting a particular confidence ranking are intimately tied to questions about the propriety of your ruling out certain degree of confidence assignments—and they are tied in such a way as to require that the following, Modest Bayesian, regulative ideal hold:
Your state of opinion is open to rational criticism unless it is characterizable as a non-empty set $W$ of degree of confidence assignments each of which satisfies the Kolmogorov axioms of probability and where for every hypothesis, $P$ and $Q$:

(i) you are just as confident that $P$ as you are that $Q$ only if every member of $W$ assigns $P$ and $Q$ the same value;

(ii) you are more confident that $P$ than you are that $Q$ only if every member of $W$ assigns $P$ at least as great a value as it assigns $Q$, and at least one member of $W$ assigns $P$ a greater value than it assigns $Q$; and

(iii) otherwise you are undecided as to the relative credibility of $P$ and $Q$. 13

For all its modesty, the Modest Probabilist regulative ideal has some bite. It would deem your state of opinion open to criticism if you harbor a confidence ranking of hypotheses that cannot be so ranked in probability. It would also deem your state of opinion open to criticism if there is any pair of hypotheses you have left unranked whose ranking is fixed by every probability assignment compatible with your confidence ranking. Yet it is a regulative ideal that allows you to do pretty much what epistemic intuition says you should do in the case described by the Ignorance Objection. It allows you to respond to the fact that you have no evidence as to the truth values of $P$, $Q$ and $(P \lor Q)$ by allowing there to be, for each of the three hypotheses, and for each real number from 0 through 1, a degree of confidence assignment you have not ruled out that assigns that hypothesis that number.

I say "pretty much" because there is one respect in which the Modest Probabilist regulative ideal would have you discriminate between $P \lor Q$ and its disjuncts. There is no degree of confidence assignment compatible with the Kolmogorov axioms on which $P \lor Q$ is assigned a lower value than either of its disjuncts. Thus the Modest Probabilist regulative ideal requires you to rule out all such assignments. But if you take the Modest Probabilist moral to heart—if, for every pair of real values from 0 to 1, there is an assignment you haven’t ruled out on which $P$ gets the first value and $Q$ the second--there will be plenty of degree of confidence assignments you have not ruled out that satisfy the axioms, preserve your being exactly as confident in $P$ given $Q$ as you are in $P$, and assign $P \lor Q$ a greater value than either of its disjuncts: for example, the one we imagined you harbored in the Ignorance Objection--it assigns each of $P$, $Q$, and $P$ given $Q$ probability $1/2$, and $P \lor Q$ probability $3/4$. Thus, according to the Modest Probabilist regulative ideal, you must, on pain of opening your state of opinion to rational criticism, invest more confidence in $P \lor Q$ than you do in either of its disjuncts.

Now, I recognize that some epistemologists may be tempted to conclude that, in thus running afoul of the epistemic intuition that all three hypotheses ought to be treated in the same way, Modest probabilism's regulative ideal shows itself to be defective as well. What I what to argue now is that this would be a mistake. But to understand why it would be a mistake requires understanding the distinctive way in which Bayesianism approaches epistemology. At the heart of that approach is an insight into the relation between confidence and preference.

12. This is a slight rewrite of a regulative ideal I defend in Decision Theory as Philosophy. For discussion of how it compares to some other non-orthodox Bayesian competitors, see Decision Theory as Philosophy, pp. 23-31.
III

Suppose you are offered a free choice between two identical gambles, one a gamble on the hypothesis H and the other a gamble on the hypothesis G. That is, the prizes in the two gambles are so designed that you are indifferent between winning the one gamble and winning the other, indifferent between losing the one gamble and losing the other. You prefer, of course, winning to losing. Suppose, further, that the truth-values of H and G are not in any other way auspicious for you, and that neither their truth-values nor the desirability of the prizes that ride on their truth-values are going to be affected by which, if either, of the two gambles you prefer. Now, think about what will decide the choice for you. It is pretty clear that your preference will depend entirely on what confidence ranking (if any) you have for H and G: you will find the gamble on H preferable to the gamble on G if and only if you are more confident in the truth of H than you are in the truth of G. Thus what I will call The Bayesian Insight:

Your state of confidence and preference is open to rational criticism unless the following condition is satisfied: where P and Q are any hypotheses, you prefer a gamble on P to an identical gamble on Q if and only if you are more confident that P than you are that Q.

This insight into the relation between confidence and preference is surely a modest one. But, modest though it may be, it opens up a distinct approach to epistemology. It has been a traditional concern of epistemology to say, in some general way, by what principles the opinions of a rational person ought to be constrained. Epistemologists have sought such principles, and evidence for their legitimacy, in various places. Some have sought insight from the traditional sources--from reflections on metaphysical structure of the world, from analyses of the nature of justification. Others have argued that insight is available only from the scientific study of the empirical world--from the analysis of the way actual human inquirers behave, from the findings of cognitive psychology, from the application of evolutionary biology to human cognition.

The foregoing insight suggests a different place to look. The insight tells us that, on pain of opening our states of confidence and preference to criticism, we will invest more confidence in P than in Q just if we prefer a gamble on P to an identical gamble on Q. This means that, if we can find a theory that says something general and informative about when (on pain of inviting such criticism) we ought to prefer one gamble to another, we have reason to think it will be a theory that tells us something general and informative about when (on pain of inviting such criticism) we ought to invest more confidence in one hypothesis than in another--a theory that will constitute a genuine contribution to epistemology. Bayesianism's claim is to have found just such a theory.

This is not the occasion to present a full-blown account of how to derive the regulative ideal I have touted here, and its probabilistic constraints on confidence-rankings, from such a theory. But, even absent such a presentation, it is not hard to see, given the Bayesian Insight, why you should invest more confidence in P v Q than you do in either of its disjuncts. Given the Bayesian Insight, you should invest more confidence in P v Q than you do in either of its disjuncts if and only if you should prefer a gamble on P v Q to an identical gamble on either of its disjuncts. And it is obvious that should prefer such a gamble.

After all, you cannot possibly fare any better by gambling on a disjunct of P v Q rather than on the disjunction itself; any circumstance in which you would win a gamble
on a disjunct is a circumstance in which you would win a gamble on the disjunction. But, for all you know, you could fare worse. You haven't the slightest idea which if either of P and Q is true. For all you know, P is true and Q is false. For all you know Q is true and P is false. If P is true and Q is false and you were to gamble on Q rather than on \( P \lor Q \), you would be worse off for it. If Q is true and P is false and if you were to gamble on \( P \lor Q \) rather than on \( P \lor Q \), you would, again, be worse off for it. But if you cannot possibly do better by gambling on one of the disjuncts of \( P \lor Q \) rather than on \( P \lor Q \) itself, and, for all you know, you could do worse, the direction your preference should take is surely clear: you should prefer a gamble on \( P \lor Q \) to an identical gamble on either of its disjuncts. That is, given the Bayesian Insight, you should be more confident in the truth of \( P \lor Q \) than you are in the truth of either of its disjuncts.

Not everyone will be convinced. There is a worry some epistemologists have had about the Bayesian Insight and its kin—a worry about the necessary condition it would impose on your investing more confidence in P than in Q. Talk of gambling, they have complained, only makes sense when the preconditions for gambling are met—when it is possible to determine whether the gamble one is talking about has been won or lost and, thus, possible to pay off the gambler in the event she wins. That means that, even if such talk makes sense in the case at hand—even if it is possible to determine what color shoes I wore on my tenth birthday and what activities occupied Cathedral Square in 1996—it will not make sense in a great many others. Suppose that P and Q are scientific theories, for example. In that case, it makes no sense to talk of gambling on P and Q because the preconditions for gambling are not met. No one is in a position to pay off the gamble if the theory is true—because no one can ever be in a position to determine that the theory is true. Thus it is simply nonsense to require, as the Bayesian Insight does, that you invest more confidence in P than in Q only if you prefer a gamble on P to an identical gamble on Q.14

But notice that, while it is certainly true that the preconditions for your actually gambling on a theory are simply not met, neither are the preconditions for my having spent yesterday in Paris. I, in fact, spent yesterday here in Bloomington. There is nothing anyone can do to change that. Yet it still makes sense for me to prefer having spent yesterday in the city of light to having spent it in Bloomington. But if it ever makes sense to prefer that things were otherwise than they in fact were, we must reject the view that the preconditions for the realization of a state of affairs must be met for there to be sense in speaking of your preferring that state of affairs to some other. And once we reject that view, it is hard to see anything at all problematic in supposing—even as we concede that the preconditions for gambling on theories are not met—that you, say, prefer having $100 ride on one theory to having $100 riding on another.

There is another worry, however. It is easy enough to see why, insofar as you want your confidence-rankings to be consistent with your preferences, my argument for investing more confidence in \( P \lor Q \) than in its disjuncts should weigh with you. But suppose that your interests are purely epistemic. Suppose that you are concerned solely

with the epistemic propriety of investing more confidence in P v Q than in its
disjuncts--and not at all with the ramifications this confidence-ranking has for your
preferences. How, some epistemologists would ask, can the argument have any force?
The fact that, say, your being equally confident in P and in P v Q commits you to an
unacceptable indifference between a gamble on P and an identical gamble on P v Q may
well be important from the point of view of your desire to have reasonable preferences.
But it seems to provide no epistemic reason not to be equally confident in the two
hypotheses. It seems to provide no reason why, say, a being that had no preferences at all
would be mistaken in being equally confident in P and in P v Q.15

But does it really? Suppose that you go to the doctor because you are suffering
from fatigue and loss of appetite. You are going to the doctor to initiate an inquiry that
will result in your harboring a reasoned state of confidence that does not just satisfy your
curiosity about what is wrong with you, but also can provide doxastic input into whatever
decisions you and your doctor will have to make as to how to proceed with treatment.
You do not always conduct inquiry with the purpose of arriving at a state of confidence
that will do this double duty. Sometimes your inquiry is motivated solely by curiosity.
But even then you expect the resulting state of confidence to be capable of doing double
duty. We expect even the state of confidence produced by pure research--so often of no
immediate use to any decision-making of interest--to be capable of such use.

If this is so, then the adequacy of an epistemology needs to be judged by
something more than how well it answers to our intuitions about the extent to which you
should consider your curiosity about the truth-value of a hypothesis to have been
satisfied. An epistemology's adequacy also needs to be judged by how well it answers to
our intuitions about good decision-making and, in particular, the role reasoned opinion
should play in good decision-making. That is, an epistemology should be judged
adequate only to the extent that it places constraints on a confidence-ranking appropriate
to its double role: as curiosity-satisfier and decision-making guider.

But then the sort of argument I gave for investing more confidence in P v Q than
in either of its disjuncts cannot justly be accused of turning on considerations external to
the epistemic realm. On the contrary, this argument is focused squarely on a matter
critical to the adequacy of an epistemology: it means to show that any epistemology that
does not demand, in the circumstances described, that you invest more confidence in P v
Q than in either of its disjuncts cannot but sanction an unreasonable preference--cannot
but sanction an opinion unsuited to guide decision-making. It means to show that any
such epistemology will fall short in a critical aspect of its own vocation.

To be sure, if we were preferenceless beings--if our opinions had no call to inform
our decision-making--the argument I offered might well lose its bite. But, by the same
token, if we didn't care about science, the demonstration that a given epistemological
doctrine is incompatible with empirical theories' being capable of evidential support
would also leave us cold. Yet no one would suggest that we can develop an adequate
epistemology without concerning ourselves with how it coheres with good scientific
practice. It is no more sensible to suppose that we could develop an adequate

14. See, for example, David Christensen, "Dutch-book Arguments Depragmatized: Epistemic Consistency
epistemology without concerning ourselves with how it coheres with good deliberative practice. The task facing epistemology is not to find a small set of intuitions to which it can answer and call its own. It is rather to find a way to contribute to, and cohere with, the broad story of rational human endeavors. It is, I think, a task to which the Bayesian Insight--and the Bayesian approach to epistemology that it makes possible--provides a signal contribution.

IV

With this I rest my case for the propriety of the way in which Modest Probabilism handles the Ignorance Objection--and indeed, my case for Modest Probabilism, period. I have two hopes. The first is that I have by now convinced you at least that the Bayesian approach to epistemology is a good deal more resilient than it has often been portrayed. That is, I hope have gone some way towards making the case that (despite the precise and extremely demanding mathematical constraint on opinion for which it is widely known) the Bayesian approach can be so crafted as to accommodate, even as it places substantive constraints on, the opinions of people like us—limited in our logical and mathematical acumen, indeterminate in our opinions, and often deprived of evidence good enough to warrant greater precision. My second hope is that I have conveyed some sense of how fertile is the idea—so central to the Bayesian approach to epistemology as I have sought to portray it—that there is important epistemological insight to be found in reflection on our preferences.16

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15. This is paper was designed as a reading paper that would sketch, and provide a new motivation for, the version of Bayesianism I defended in Decision Theory as Philosophy. Some paragraphs have been lifted from pieces of mine already in print.