

Questioning Epistemic Requirements

Daniel Drucker

August 28, 2019

1 Introduction: Aims

1. I'll present a longstanding puzzle in epistemology and show how we can solve it.
2. To do that, I'll argue we can be epistemically required to have certain kinds of *desires*.
3. The bridge will be a particular theory of what having a question amounts to.

2 A Puzzle about MODUS PONENS and Other Epistemic Requirements

1. The following requirements seem plausible, at least at the outset of inquiry:

MODUS PONENS. X is epistemically required to be such that: if at t X believes that ϕ and believes that $\phi \supset \psi$, then at $t' > t$ (i.e., soon after t), X believes that ψ .

UNIVERSAL ELIMINATION. X is epistemically required to be such that: if at t X believes that $\forall x(\phi_x)$, then at $t' > t$ (i.e., soon after t), X believes that $\phi[o/x]$, where $\ulcorner x \urcorner$ is free in $\ulcorner \phi \urcorner$ and $\ulcorner \phi[o/x] \urcorner$ is the result of substituting ' o ' for ' x ' in $\ulcorner \phi \urcorner$.

2. But there are apparent counterexamples to it and MODUS PONENS.

Mizoguchi and Kurosawa. Helena has a standing belief that anyone who likes Mizoguchi likes Kurosawa, i.e., believes $\forall X(\text{likes}(X, \text{Mizoguchi}) \supset \text{likes}(X, \text{Kurosawa}))$. Rushing for a train she overhears someone—a stranger in a red hat—declare that they like Mizoguchi. But intuitively Helena is never rationally required to form the belief that this stranger likes Kurosawa—she's just focused on which platform her train is at!

3. By far the most popular thing¹ is to add what I will call a “caring constraint”:

CARING MODUS PONENS. X is epistemically required to be such that: if at t X believes that ϕ and believes that $\phi \supset \psi$, and X cares about whether p is true, then at $t' > t$ (i.e., soon after t), X believes that ψ .

They do this because when Helena does care about whether the person likes Kurosawa, she does seem required to make the inference.

4. Problems: First, notice that the reasoning here completely generalizes.

EVIDENTIALISM. X is epistemically required to be such that: if at t X 's overwhelmingly supports ϕ over $\neg\phi$, then at $t' > t$ (i.e., soon after t), X either changes their overall doxastic state so it doesn't, or X comes to believe that ϕ .

5. Second, the solution seems *ad hoc*.

6. Perhaps it's epistemically irrational to load ourselves up with beliefs we don't care about, i.e., with “junk” beliefs.²

7. If this is the motivation, it's not a very good one. Most of the beliefs I form, I don't store in long-term memory.

8. Perhaps requirements like MODUS PONENS and UNIVERSAL ELIMINATION would require us to form an infinite number of quite distinct beliefs.

9. But there are a number of ways we can restrict the propositions we're required to believe, so that we need some reason to think caring constraints are the best way. And we often care about an infinite (or open-ended) number of propositions.

10. The other problem with them is that they make the epistemic obligations to which we are subject depend on our interests. Many philosophers worry about doing this sort of thing in epistemology, as well as in other areas like in morality.

11. The puzzle: there are intuitive epistemic requirements that seem subject to some apparently clear counterexamples; the best extant fixes seem *ad hoc* and to make epistemology overly sensitive to our interests. Can we formulate MODUS PONENS, etc. in a general way that is not subject to counterexamples like **Mizoguchi and Kurosawa**, but which is neither *ad hoc* nor overly pragmatized? I will argue that we can.

²For endorsements of this position, see Harman (1986), Goldman (1986), Williamson (1998), Ryan (1999), Feldman (2000), Field (2009), among others.

¹The *locus classicus* is Harman (1986), but see also, e.g., Broome (2013) and Friedman (2017a).

3 *Comparativism about Epistemic Rationality*

1. Any kind of rational requirement to “do” something should invoke *options*.
2. The rationality of a choice can depend on what our options are; getting a bus to Puebla can be rational when it’s choosing between getting a bus or hitchhiking, but not when it’s choosing between getting a bus or having a friend drive you.
3. We can see this in looking at practical decision theory. This would be a bad rule:

MAXIMIZE UTILITY. X is rationally required to be such that if at t X ’s φ -ing sometime in $(t, t']$ would maximize X ’s utility, then X φ -s sometime in $(t, t']$.

4. Why? It would require me to do things that aren’t my options—things I can’t do, and shouldn’t focus my attention on. There’s a subset of propositions agents can make true that agents ought to focus attention on, evaluate, and compare. Call such sets *option sets*.
5. One important reason MAXIMIZE UTILITY is wrong is that it doesn’t invoke such option sets.
6. This motivates the following:

REQUIREMENTS COMPARATIVISM. If ρ is a rational requirement for someone, then ρ can be correctly represented with a sentence of the following form:

(†) If at t , X ’s option set is $\Phi = \{\varphi_1, \dots, \varphi_n\}$ (or Φ includes such options) and conditions C_1, \dots, C_n obtain, then either X φ_{i_1} -s within some (possibly vaguely characterized) time period $(t, t_1]$ or ... or X φ_{i_m} -s within some (possibly vaguely characterized) time period $(t, t_m]$, with each $\varphi_{i_j} \in \Phi$.

7. A rational requirement should mention initial times, options, conditions, and intervals in which to perform one of the “actions” the requirement requires, beginning after the initial time. (I use scare-quotes around ‘actions’ because of my interest in belief formation, which likely isn’t a kind of action.³)
8. MODUS PONENS, CARING MODUS PONENS, UNIVERSAL ELIMINATION, and EVIDENTIALISM can’t be correctly described with a sentence of (†)’s form. They’re false. But that still leaves open what their correct versions are, and how we can account for the data.
9. By *epistemic* options I mean forming a belief, suspending judgment, etc. But since epistemic options ought to exclude one another, in some cases assume a tacit ‘and change one’s views in no other way’ in option descriptions. Also, agents will normally face different kinds of options, so that the epistemic option set will form a strict subset.

³See, e.g., Hieronymi (2006), among many others, for discussion.

10. What is a person’s epistemic option set at a time? Maybe this: of every proposition I know I can grasp, I can believe it, disbelieve it, suspend judgment about it, or have whatever degree of belief (credence) in it. In other words, maybe these are the options:

$$\mathcal{K} = \{\text{Coming to have credences representable by } Cr: Cr \text{ is a function from the set } P \text{ of propositions that } S \text{ can grasp to } x \in [0, 1]\} \cup \{\varphi\text{-ing } p: \varphi\text{-ing is either believing, disbelieving, or suspending judgment about, and } p \in P\}$$

11. This is too expansive; we ought not to always focus our attention on these “options”.
12. Here’s a proposal. People form beliefs in part to answer the questions they have, and that questions present *alternative propositions*. Q presents p as an alternative proposition only if, possibly, p answers Q well. This is obvious with simple, “polar” (yes-or-no) questions, like ‘did LBJ have JFK assassinated?’. This presents the alternative propositions $\langle \text{LBJ had JFK assassinated} \rangle$ and $\langle \text{LBJ didn’t have JFK assassinated} \rangle$.
13. We also have explicitly restricted ‘wh’-questions:

(1) Of Oscar and Anna, who likely took the cookies?

(1) presents $\langle \text{Oscar likely took the cookies} \rangle$, $\langle \text{Oscar didn’t likely take the cookies} \rangle$, $\langle \text{Anna likely took the cookies} \rangle$, and $\langle \text{Anna didn’t likely take the cookies} \rangle$.

14. Sometimes ‘wh’-questions are at most implicitly restricted. It can be difficult to say *which* alternative propositions are presented:

(2) Who is going to the concert?

People asking questions like (2) won’t generally care to know everyone coming.

15. Questions do present *some* alternatives, though not algorithmically. Here’s a candidate for how when they do:

$$\mathcal{Q} = \{p: S \text{ thinks } p \text{ really might answer } Q \text{ well}\}$$

16. Now suppose that S has questions Q_1, \dots, Q_n . Then we can say that the *core* set of alternative propositions presented to S by the questions she has is:

$$\mathcal{Q}^+ = \mathcal{Q}_1 \cup \mathcal{Q}_2 \cup \dots \cup \mathcal{Q}_n,$$

where each \mathcal{Q}_i is defined as \mathcal{Q} was. We can define the *core epistemic options*:

$$\mathcal{C} = \{\text{Coming to have credences representable by } Cr: Cr \text{ is a function from the set of core alternative propositions } \mathcal{Q}^+ \text{ to } x \in [0, 1]\} \cup \{\varphi\text{-ing } p: \varphi\text{-ing is either believing, disbelieving, or suspending judgment about, and } p \in \mathcal{Q}^+\}$$

Though actual individuals will have more than these, they’re a good start. So, according to REQUIREMENTS COMPARATIVISM, a true (epistemic) rational requirement will have to invoke epistemic options, of which \mathcal{C} forms a core part.

4 *Dynamics of Epistemic Option Sets and Requirements to Have Questions*

1. Savage (1972) presented a “grand-world” decision theory, with a picture of options like \mathcal{K} . How to cut it down? We can’t ask individuals to evaluate the options to see if they’re worth evaluating—that’s evaluating them. Rather, in making a decision, agents should think expanding the set of options wouldn’t change their choice.⁴
2. Believing that p , e.g., commits one to thinking one would still believe p if one expanded one’s epistemic option set enough to make it, say, \mathcal{K} :

EXPANSION STABILITY. X is rationally required to be such that if X has epistemic option set $\Phi = \{\varphi_1, \dots\}$ and “chooses” to $\varphi \in \Phi$ at t , then at t , X believes that were they to have expanded their option set to $\Phi' \supset \Phi$, X would still “choose” to φ at t .

3. But we need heuristic principles to help us follow EXPANSION STABILITY.
4. From my point of view, Lewis (1996)’s Rules—of Attention, of Method, etc.—work as an attempt to develop heuristics for following EXPANSION STABILITY, some of the most important rules of thumb for when a possibility is properly ignored. E.g.;

RESEMBLANCE. S is epistemically required to be such that if φ -ing is one of S options at t , then if φ' -ing is saliently similar to φ -ing, then S considers, evaluates, and compares φ' -ing to her other options soon after t , too.

Some answers to questions are similar to others, making one viable if the other is. ‘What dog breed did Oscar have?’ might be well answered by <he had a lab> and also by <he had a golden retriever>, since labs are similar to golden retrievers.

5. In believing p on the basis of evidence e , I should consider whether e supports other propositions saliently similar to but possibly incompatible with p . Doing that helps satisfy EXPANSION STABILITY; one should want to know whether those possibilities obtain. If you’re inclined to believe p on e , you ought to have the question whether there’s some other similar proposition q that would be better supported by e , i.e., the question whether q is true—they epistemically ought to have the question, assuming:

EPISTEMIC INSTRUMENTAL PRINCIPLE. Suppose X ’s satisfying ρ is indispensable (i.e., necessary) means for X ’s satisfying ρ^* , and ρ^* is an epistemic requirement for X . Then X is epistemically (specifically) required to satisfy ρ .

6. ATTENTION. X is epistemically required to be such that if at t , X has the question of whether Q and is attending to some alternative φ that answers Q well, then X considers, evaluates, and compares believing (etc.) φ to her other epistemic options soon after t in deciding what to “do”, epistemically.

7. If we’re already attending to p , the costs of treating it as an option are much lower than if we had to think of it afresh. Since it is an answer to a question we’re asking ourselves, it won’t be a distraction from our epistemic goals. If it’s a crazy answer, it will be easy to dismiss it with little effort. If it’s not, our inquiry profits from taking it seriously. So either way, ATTENTION seems like a good epistemic requirement.
8. There’s another, more abductive argument for ATTENTION appealing to data from the relevant alternatives tradition that I only mention here.

5 *Having a Question as Wanting to Know*

1. So far we’ve seen why MODUS PONENS and the rest are false. And we’ve come a long way toward constructing an alternative view of these things. But: why should caring matter *at all*, even if indirectly?
2. What is it to have a question?
3. I will say that X has that attitude toward a question Q when $\lceil X$ has the question: $Q \rceil$ is true. This regimentation is inspired by utterances like:

(3) I have a question: where’d you get that cool hat?

I will stipulate that having a question is that type of mental state that, when X has it with Q as its object, X ’s utterance of $\lceil I$ have the question: $Q \rceil$ is thereby made true.

4. You may worry it could be utterances like (1) are roundabout ways of simply *asking* the question Q . This view is hard to square with utterances like this:

(4) I have a question, whether bats evolved from mice, that I would love to ask an expert, if only I knew one.

The speaker in (2) isn’t asking her interlocutor her question, but merely saying that she *has* the question. I think what makes the report true is some mental state of hers; I call it having that question.

5. There are other ways we can indicate the questions we have. Thus:

- (5)
 - a. I’m curious [about] whether bats evolved from mice.
 - b. I wonder whether bats evolved from mice.
 - c. I’m puzzled [about] whether bats evolved from mice.

6. Here’s a further claim to nail down the attitude:

MOST GENERAL INQUIRING ATTITUDE. If X bears Ψ to the question Q , where Ψ is either being curious about, wondering about, or being puzzled about, then X has the question Q .

⁴This is more or less Joyce (1999)’s view.

7. This claim is meant at least in part to be largely stipulative; for others, it's more substantive, i.e., those who also say what the most general inquiring attitude is. E.g., Friedman (2017b) argues that having a question, Q , is *suspending judgment* about Q .
8. But they aren't the same: we can be epistemically required to suspend judgment even when we're not epistemically required to have a question.
9. Here are the questions I'll focus on here: are there epistemic requirements to have questions? and what might they be, if so?
10. To answer them, we need to know what having a question is. Here's my answer:

WANTING TO KNOW. X has the question: $Q = X$ wants to know the answer to Q .

11. (6) I have a question: where'd you get that cool hat? But I don't care to know where you got it.
Such a person is hard to understand. So are these:
 - (7) a. I'm curious about where you got that cool hat, but I don't want to know where you got it.
 - b. I wonder where you got that cool hat. But I don't want to know where you got it.
12. WANTING TO KNOW has been attacked before. Why? First, you may think there are cases where we are deeply curious about what's in some box we know contains dangerous things that would hurt us if we came to know the box's contents.⁵
13. But note 'want' is ambiguous, polysemous, or context-sensitive:

Context: *Country X is beautiful with a fascinating culture and history but it is dangerous on account of recent widespread violence.*

- (8) a. I want to go there now, but it's too dangerous. Hopefully it'll get safer soon.
- b. Because it's so dangerous, I don't want to go there now. Hopefully it'll get safer soon.

The difference is between some-things-considered and all-things-considered desires.

14. Another argument against WANTING TO KNOW claims that metacognition of this kind is too difficult for animals. I think it's standard practice to ascribe desires of this kind to animals (likely because we have an intuitive *de re/de dicto* distinction).
15. My positive argument for WANTING TO KNOW: these sorts of desires can do all the sorts of things we'd want having a question to do. So we don't need any other mental states to account for those things.

16. A desire that $p =$ a degree of positive affect (attraction, liking) toward a representation p that functions to elicit and regulate a degree of positive expectation (affective forecast) and positive motivation (striving) toward maintaining or bringing about the act or state of affairs that p portrays; and this degree of positive affect is subsequently modulated by whether the actual experience of performing, realizing, or moving toward p is better than, worse than, or in conformity with, the expectation of it.⁶
17. What is the functional role of having a question?
 - (a) When we have a question, we shouldn't have it anymore when we take ourselves to have learned something that answers it.
 - (b) If we have certain *sorts* of questions but then find out that knowing the answer isn't that appealing, we won't much have similar questions.
 - (c) Having a question should direct our attention to that question and the considerations that bear on answering it.
18. So the functional roles of questions and desires to know go together. So we should accept WANTING TO KNOW. Because of that, the functional roles of *belief* and desire are not as different as is sometimes supposed.⁷; they are both subject to epistemic requirements.
19. Finally, we see why caring can matter. When we have questions, which set our options, we *want to know the answer*.

6 The Optionality of MODUS PONENS

1. Here's what's to be explained:

- A. MODUS PONENS is an epistemically bad rule. We need a diagnosis. (*Universal Elimination* is also bad, so the diagnosis should extend to it.)
- B. The diagnosis should be informed by the Kurosawa-type cases.
- C. The diagnosis ought not to concern memory limits. Caring should somehow be relevant, but it'd be better to not simply write them into the conditions.

With A, in section 3, I argued that REQUIREMENTS COMPARATIVISM is true. Since MODUS PONENS and UNIVERSAL ELIMINATION don't invoke options in the way a rule correctly describable with a sentence of (\dagger)'s form, they are bad rules. All rational rules invoke options. In this section, I will resolve B and C, too.

2. Given the problem I raised for MODUS PONENS earlier, here's a minimal fix:

⁶See Railton (2012, page 36).

⁷See, e.g., Beddor (2019) for a recent example.

⁵For this argument, see Friedman (forthcoming).

OPTIONAL MODUS PONENS. X is epistemically required to be such that if at t , X believes ϕ and $\phi \supset \psi$, and one of X 's epistemic options is believing ψ , then X either soon abandons her belief that ϕ or her belief that $\phi \supset \psi$, or soon forms the belief that ψ .

REQUIREMENTS COMPARATIVISM is compatible with this. So we need to see how it handles **Mizoguchi and Kurosawa** and related cases.

3. A person who has a question cares about the answer. Suppose Helena has the question whether Red likes Kurosawa. Then she cares about the answer to the question. Also, believing (etc.) \langle Red likes Kurosawa \rangle becomes part of her core epistemic option set \mathcal{C} , and thereby becomes an epistemic option. Then OPTIONAL MODUS PONENS requires that she believe Red likes Kurosawa. This explains why she is required to infer that Red likes Kurosawa when she does care about whether they do.
4. Caring plays a role in what it requires because of the role that options in general play.
5. But maybe she doesn't care about anything that knowing whether the stranger likes Kurosawa would help her answer. In a normal case, OPTIONAL MODUS PONENS does not require that she form the belief that they do. Believing \langle that stranger likes Kurosawa \rangle is not one of her epistemic options in any normal way of filling the case out. Believing \langle that stranger likes Kurosawa \rangle is not in her \mathcal{C} because she is not asking herself the question whether the stranger likes Kurosawa. Nor will it become an option by anything like RESEMBLANCE or ATTENTION.
6. It's routine to modify other epistemic requirements get their optional versions.
7. ¡Gracias por todo, mis amigos y amigas!

References

- Beddor, Bob. 2019. "Noncognitivism and Epistemic Evaluation." *Philosophers' Imprint* 19:1–27.
- Broome, John. 2013. *Rationality Through Reasoning*. Malden, MA: Wiley-Blackwell.
- Feldman, Richard. 2000. "The Ethics of Belief." *Philosophy and Phenomenological Research* 60:667–695.
- Field, Hartry. 2009. "What Is the Normative Role of Logic?" *Aristotelian Society Supplementary Volume* 83:251–268.
- Friedman, Jane. 2017a. "Junk Beliefs and Interest-Driven Epistemology." *Philosophy and Phenomenological Research* 1–16.
- . 2017b. "Why Suspend Judging?" *Noûs* 51:302–326.
- . forthcoming. "Inquiry and Belief." *Noûs*.
- Goldman, Alvin I. 1986. *Epistemology and Cognition*. Cambridge, MA: Harvard.
- Harman, Gilbert. 1986. *Change In View: Principles of Reasoning*. Cambridge, MA: MIT.
- Hieronymi, Pamela. 2006. "Controlling Attitudes." *Pacific Philosophical Quarterly* 87:45–74.
- Joyce, James M. 1999. *The Foundations of Causal Decision Theory*. Cambridge, UK: Cambridge.
- Lewis, David. 1996. "Elusive Knowledge." *Australasian Journal of Philosophy* 74:549–67.
- Railton, Peter. 2012. "That Obscure Object, Desire." *Proceedings and Addresses of the American Philosophical Association* 86:22–46.
- Ryan, Sharon. 1999. "The Logic of Rationality." *Philosophia* 27:287–299.
- Savage, Leonard. 1972. *The Foundations of Statistics*. New York: Dover. Second edition.
- Williamson, Timothy. 1998. "Conditionalizing on Knowledge." *British Journal for the Philosophy of Science* 49:89–121.