

Questions Should Have Answers

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Epistemic Capacities and the Good

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What kinds of things are there epistemic reasons for/against?

Or—slightly different question—what do norms of epistemic rationality directly govern?

1. Some mental acts (e.g., judgement)
2. Some mental processes (e.g., reasoning)
3. Some mental dispositions (e.g., belief)
4. **Some mental abilities/capacities??**
(abilities to think/grasp a proposition?)

My view: Yes.

Today: abductive argument for one such norm.

Reasonable starting view: skepticism.

My conceptual abilities and non-abilities are perhaps *signs* of epistemic irrationality . . .

and they may constrain how epistemic reasons/requirements apply to me . . .

but it does seem somewhat odd to hold that the *abilities themselves* can be epistemically rational or irrational.

But I don't think the initial skepticism should be very strong.

If dispositions can be caught up in the space of epistemic reasons, why not abilities?

PART I

Two Kinds of Unanswerable Questions

(1) How long will humanity or its descendants continue to exist?

Some answers that be true, for all I know:

- ▶ 100 years
- ▶ 1,000 years
- ▶ 205,344 years
- ▶ 100,000,000,000 years
- ▶ ...

I don't see a way of substantially narrowing this down.

Not answerable, but continuing to wonder seems fine.

- (2)
- a. Why is there anything at all?
 - b. Is the liar sentence true?
 - c. Where is my umbrella, given that I've checked every plausible place I can think of?

No answer I can think of can be right.

Big phenomenological difference: uncomfortable puzzlement feeling which seems to say "NOT OKAY!!"

When I am really wondering these questions I feel like some revision is called for (cf. guilt), not just disappointment that I'll never know the answer.

What explains this?

One reaction I've heard:

Isn't this just the usual discomfort of not being able to get what you're aiming for? Wondering involves aiming to get knowledge, you see you're unable to get it, so you feel frustrated.

Plausible at first, but fails.

This applies just as much to wondering (1) as it does to wondering the questions of (2).

My proposal: there is some epistemic norm violation here and that's what this feeling is an appropriate response to.

But: I don't think it can be explained by standard norms of belief or wondering.

So I posit a new one:

Questions Should Have Answers (QSHA)

Don't both

(i) wonder Q

and

(ii) reject all answers to Q you can conceive.

PART II

Three Ways of Violating QSHA

Al wonders where his keys are.

He starts out being able to think various would-be answers to the question he is wondering that he has yet to reject.

He then rules out some answers (kitchen table) by looking, others by reasoning (office).

Eventually he gets to a point at which he is unable to think of more possibilities that he hasn't already ruled out, at least implicitly.

Appropriately, feels puzzlement—something must be going wrong.

Where did Al go wrong?

Turns out that the keys are at his office.

He had left his home door unlocked, so didn't have to use the key to let himself in.

Al rejected the true answer. This is a **bad rejection** case.

QSHA fits AI's case.

But it doesn't seem necessary.

Other widely accepted norms already tell us something is going epistemically wrong here:

NEGATIVE TRUTH NORM

Don't believe p if p is not true.

(Not a complete account, but a promising start)

Another kind of case: Bea wonders why Santa brought fancier presents to the kids in rich families.

She starts being able to think various would-be answers to this question that she hasn't yet rejected.

But then rules them all out, eventually getting to a point at which she is unable to think of more unrejected answers.

Appropriately feels puzzlement—that something must be going wrong.

Where did Bea go wrong?

No answer that she ruled out was a true answer.

And we can assume her reasoning in ruling them out was impeccable.

Problem: the question she wonders *doesn't have a true answer*.
This is a **bad question** case.

QSHA fits Bea's case.

But still unclear if it's necessary.

Perhaps Bea must have the false beliefs about Santa in order to wonder her question and that's what's going wrong.

Or perhaps there is an additional norm: don't wonder questions with false presuppositions.

Third kind of case: Like Al, Deidre wonders where her keys are.

Unlike Al, she hasn't made any mistakes in reasoning or ruled out the true answer.

It's just that the true answer—the key is in the lock—is just not something she can think of, even after 20 minutes of trying.

Appropriately feels puzzlement—that something must be going wrong.

Where is Deidre going wrong?

Good question, no bad rejections.

Problem: can't think of a good enough answer. This is an **inadequate hypotheses** case.

Sometimes the inability to think of a good hypothesis is rather shallow, as in Deidre's case.

But other cases require conceptual innovation.

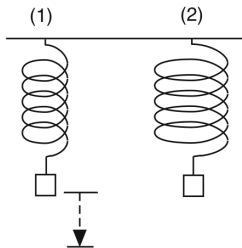
John Clement (2008):

A weight is hung on a spring. The original spring is replaced with a spring:

- Made of the same kind of wire,
- With the same number of coils,
- But with coils that are twice as wide in diameter.

Will the spring stretch from its natural length, more, less or the same amount under the same weight? (Assume the mass of the spring is negligible compared to the mass of the weight.)

Why do you think so?



Subject S2 thinks the wider spring will stretch further, wonders why.

Interview is “peppered with expressions of frustration” and continues past allotted time as S2 struggles to find an answer that could *possibly* be right.

What S2 needs but seems to lack is the concept TORSION STRESS.

Eventually comes up with this and is satisfied with having just a possible answer, while admitting it might not actually be correct.

QSHA fits both Deidre and S2's cases.

Doesn't seem to be an alternative explanation in terms of other epistemic norms like the Negative Truth Norm.

Tentative conclusion: posit QSHA as distinct norm.

PART III

Zetetic Norm?

But perhaps we've been looking in the wrong place.

What about Friedman (2020)'s ZIP?

ZETETIC INSTRUMENTAL PRINCIPLE (ZIP)

If one wants to figure out Q , then one ought to take the necessary means to figuring out Q .

Conceiving of an answer you haven't ruled out is a necessary means to figuring out Q .

So aren't QSHA-violations violating ZIP?

Two problems:

1. Instrumental principles like this only apply to *all-things-considered* wants. But we get the same response in our cases even if they merely *some-things-considered* want to know.
2. Instrumental principles like this don't apply (non-trivially) where you realize it is impossible to get what you want. But I realize I'll never know (e.g.) the answer to why there is something rather than nothing.

So ZIP doesn't give us an explanation for all the cases we need to account for.

Somewhat less tentative conclusion: we should posit QSHA as a distinct norm.

PART IV

Explaining QSHA: a Conceivability Approach

Where does QSHA come from?

My proposal: it's derivative, partly from a truth norm for belief, partly from a conceivability norm.

STRONG CONCEIVABILITY (SC)

Be able to think all contents.

Very demanding! We knowingly violate it often without feeling bad about it.

On the Cohomology of Certain Non-Compact Shimura Varieties

Sophie Morel

ANNALS OF MATHEMATICS STUDIES

Preface

The goal of this text is to calculate the trace of a Hecke correspondence composed with a (big enough) power of the Frobenius automorphism at a good place on the intersection cohomology of the Baily-Borel compactification of certain Shimura varieties, and then to stabilize the result for the Shimura varieties associated to unitary groups over \mathbb{Q} .

The main result is theorem 8.4.3. It expresses the above trace in terms of the twisted trace formula on products of general linear groups, for well-chosen test functions.

Here are two applications of this result. The first (corollary 8.4.5) is about the calculation of the L -function of the intersection complex of the Baily-Borel compactification.

Theorem A *Let E be a quadratic imaginary extension of \mathbb{Q} , $\mathbf{G} = \mathbf{GU}(p, q)$ one of the unitary groups defined by using E (cf. 2.1), \mathbf{K} a neat open compact subgroup of $\mathbf{G}(\mathbb{A}_f)$, $M^{\mathbf{K}}(\mathbf{G}, \mathcal{X})$ the associated Shimura variety (cf. 2.1 and 1.1), and V an irreducible algebraic representation of \mathbf{G} . Denote by $IC^{\mathbf{K}}V$ the intersection complex of the Baily-Borel compactification of $M^{\mathbf{K}}(\mathbf{G}, \mathcal{X})$ with coefficients in V . Let $\mathcal{E}_{\mathbf{G}}$ be the set of elliptic endoscopic groups $\mathbf{G}(\mathbf{U}^*(n_1) \times \mathbf{U}^*(n_2))$ of \mathbf{G} , where $n_1, n_2 \in \mathbb{N}$ are such that $n_1 + n_2 = p + q$ and n_2 is even. For every $\mathbf{H} \in \mathcal{E}_{\mathbf{G}}$, let $\Pi_{\mathbf{H}}$ be the set of equivalence classes of automorphic representations of $\mathbf{H}(\mathbb{A}_E)$.*

Assume that \mathbf{K} is small enough. Then there exist, for every $\mathbf{H} \in \mathcal{E}_{\mathbf{G}}$, an explicit finite set $R_{\mathbf{H}}$ of algebraic representations of ${}^L\mathbf{H}_{\mathbf{E}}$ and a family of complex numbers $(c_{\mathbf{H}}(\pi_{\mathbf{H}}, r_{\mathbf{H}}))_{\pi_{\mathbf{H}} \in \Pi_{\mathbf{H}}, r_{\mathbf{H}} \in R_{\mathbf{H}}}$, almost all zero, such that, for every finite place \wp of E above a prime number where \mathbf{K} is hyperspecial,

$$\log L_{\wp}(s, IC^{\mathbf{K}}V) = \sum_{\mathbf{H} \in \mathcal{E}_{\mathbf{G}}} \sum_{\pi_{\mathbf{H}} \in \Pi_{\mathbf{H}}} \sum_{r_{\mathbf{H}} \in R_{\mathbf{H}}} c_{\mathbf{H}}(\pi_{\mathbf{H}}, r_{\mathbf{H}}) \log L\left(s - \frac{d}{2}, \pi_{\mathbf{H}, \wp}, r_{\mathbf{H}}\right),$$

where $d = pq$ is the dimension of $M^{\mathbf{K}}(\mathbf{G}, \mathcal{X})$.

See the statement of corollary 8.4.5 for more details. The second application is corollary 8.4.9. We give a simplified statement of this corollary and refer to 8.4 for the definitions.

We can get what we need for QSHA with something less demanding, limited to answers to questions one wonders.

Some candidate question-answer conceivability norms:

QAC_V

If you wonder Q , be able to think *all* would-be answers to Q .

QAC_T

If you wonder Q , be able to think *some true* answer to Q .

QAC_{\exists}

If you wonder Q , be able to think *some would-be* answer to Q .

QAC_V still seems too strong. I'm not bothered there are some false answers to the question "where are my keys?" that I can't think of.

QAC_{\exists} is too weak. The characters in all of our cases can think of the answers they've ruled out.

I think

QAC_{\top}

If you wonder Q , be able to think some true answer to Q .
gets the right results.

This is what was going wrong in inadequate hypotheses
QSHA-violations (Deidre and S2).

It can also explain what's going wrong in bad question cases
(Bea).

It can't explain the bad rejection cases (Al), but I think
something like the Negative Truth Norm works for those.

So: I think QSHA can be derived from an ordinary epistemic norm for beliefs together with a new kind of norm that governs agents' abilities to conceive.

What is the source of *these* norms? Tough question.

Plausible that the norm for belief comes from "the aim" of belief.

Perhaps something similar for QAC_{\top} ?

Aim of wondering?

Aim of an ability to think a proposition?

Thanks!

Remaining questions, objections, observations, etc.?

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