

KBNS A priori Seminar 18/5/18

Attending: Giovanni, Giacomo, Xintong, Peter, Sam, Crispin, Jonathan, Carrie, Alisa

Presenting: Giacomo

Topic: Brainstorming

Different kinds of non-inferential a priori warrants

Giacomo: The warrant for the proposition that 'a cube has 12 edges' involves visualizing the cube, which is easily achievable by small children, whereas the warrant for 'modus ponens is valid' seems to require rather sophisticated conceptual skills and thus would not be available to a number of epistemic agents. **Jonathan:** visual exercise can be involved in the modus ponens case. One can think about modus ponens by visualizing logical space. **Sam:** perhaps the distinction is between two kinds of 'simplicity' or 'basicness'. One is understood as intuitive, obvious; the other as foundational. **Carrie:** Many propositions can be simple/basic in both ways. **Jonathan:** In what sense is 'one is a number' simple? It is foundational but also the first thing one learns when one learns how to count. **Giacomo:** 'one is a number' may be an example of foundational basicness, but it's not clear that it is also an example of simplicity basicness: it requires explicit grasp of the concept of number. On the other hand, '3+2=5' may be an example of simplicity basicness. **Carrie:** For small children, the concept of plurality is actually easier to grasp. In contrast with '2 is a number', '1 is a number' is much less obvious.

Sam: To what extent does the distinction draw on sociological issues, e.g., how we come to learn things? **Carrie:** sociological factors seem to be a relevant consideration, for instance there are cross-culture sociological studies about the way we categorize colours. There is a sense of basicness that has to do with these sociological/psychological facts about how we learn things. But there is also another epistemological, foundational notion of basicness.

Crispin: one can draw a diagram (a small circle which represents p and then a bigger circle which contains the small circle and represent q), and then persuade oneself that whatever is a p, it is also a q. But to draw the diagram, you have to be already convinced by that (if p then q). So one distinction between modus ponens and the cube case may be this: some justification can be obtained by pictorial diagrams, some cannot. **Jonathan:** If so, to what extent individual psychology or sociological facts would feature in? Since they seem to play a role in whether we can obtain the 'pictorial' justification. **Carrie:** It does seem to bear upon individual human psychology, and cognitive resources etc. For instance, some people are more competent in visualizing four-dimensional shapes. I can only understand it theoretically. **Crispin:** You can train yourself to do it. In theory one can get better with such things.

Rational insight and reflection

Crispin: What is reflection on Chudnoff's account? **Giacomo:** Chudnoff doesn't say much. It might involve trying to find counterexamples to the proposition you entertain, considering propositions in the neighborhood etc. The issue here is if we assign too much role to the pre-insight reflection, then it is not clear what work is done by the rational insight. How to differentiate that reflection from rational insight itself? **Crispin:** On some accounts, rational insight might be factive. On some other accounts a rational insight is merely a presentation of p and it is an open question whether you are inclined to judge that p. **Peter:** proponents of

rational insight often draw an analogy to perception. It seems that the more plausible the description of rational insight is, the less it resembles perception. **Carrie:** There might be many different types of rational insights, e.g., in the sense that something is intuitive, simple or basic. There is some ground-clearing work to do here.

Rule-circularity worry for rational insight

Giacomo: What is Cummins's critiques about calibration for intuition? **Jonathan:** The complain is that if one is to rely on one's intuition, we can ask whether intuition is reliable. If one appeals to another intuition, then it is circular. On the other hand, if one appeals to something other than intuition to explain its reliability, then intuition is not doing any work. **Peter:** This reasoning would render eye-test impossible. **Jonathan:** That's one of the standard replies. Perhaps some circular reasoning is fine. Perhaps we cannot separate intuition from astrology, reformed epistemology. **Carrie:** Field's paper 'a priori is an evaluative notion' discusses this kind of view. There is nothing one can do to separate the good cases from the bad ones. **Peter:** it is compatible with Field's claim that rule-circularity can be innocent. **Crispin:** Suppose one relies on some method that has no independent check. But this method is the best you have. **Carrie:** There is a big literature on rule-circularity. Perhaps we could read Dummett's 'Justification of deduction'. **Peter:** The key issue is perhaps less about rule-circularity, but rather in what sense intuition/rational insight can be reliable.

Epistemic grounds

Carrie: Hawthorne rejects the notion of epistemic grounds. We can talk about causal history of how we come to justifiably believe some mathematical propositions, but the notion of epistemic grounds is in no good standing. **Giovanni:** This is echoed in Williamson's argument—there is no easy way to carve up the epistemic from the causal. **Giacomo:** The key move in those sceptical arguments is to shift the focus from grounds for justification to method/process by which we arrive at that justification. **Crispin:** we may define grounds for p as whatever things on which we based our belief p. **Peter:** If so, a ground can include both fact and the causal process. For the instance my belief 'it is raining' can be based on both the fact that the pavement is wet and my visual experience that the pavement is wet. **Sam:** perhaps the ground here is simply the state of pavement. The visual experience/causal process is merely what enables one to base the belief on a ground. **Crispin** suggested that we should read something on basing relations.

Inference, testimony and memory

Crispin: why do we think a priori justification is obviously preserved in inference, but not in memory testimony? **Jonathan:** some people think that knowledge has to be direct—as a direct awareness of some fact. Being presented with a proof is a way to see a fact. **Peter:** in the case of testimony, the evidential basis for p is changed, that's why the a priori justification may not be preserved. **Giovanni:** for non-ideal epistemic agents, there is a problem of preserving a priori justification in inference, but it wouldn't be a problem for ideal epistemic agents. The ideal agent should be able to grasp a long proof at once without involving the exercise of memory. **Crispin:** That is not a proper sense of grasping. To grasp a proof is to be able to figure out the reasons. **Carrie:** This may relate to the distinction between knowing

how and knowing that. There are mathematical proofs that merely show p and there are also mathematical proofs that explain why p .

Giacomo: Regarding the change of evidential basis in testimony, why is there necessarily a change? Suppose Peter proved p . I come to believe p as Peter told that p . Why couldn't my reason for p be the same as Peter's reason for p ? **Crispin:** Do I have the same ground in p , when Peter lied about p ? **Xintong:** The evidential basis for some mathematical truth p should be the same, e.g., a proof that p , no matter whether I get it by proving that p myself or get it by testimony. Alternatively, one might think the ground consists in both the evidential basis and the way we access that evidential basis. In that case, my ground for believing p would be the proof that p and the fact that Peter told me that p . (**Peter:** If ground is the same as justification, then there is lottery case where justification is not preserved by inference. **Jonathan:** That would depend on the assumption of what it takes to be justification.)

Peter: in the case of empirical knowledge, we are willing to say that we know a lot of things just by remembering it. The same seems to be true with advanced a priori knowledge. I know some mathematical truth p because I remember I proved it. **Giovanni:** perhaps we can introduce a notion of a priori* justification for the retention of a priori justification. **Giacomo:** This might degraded a priori justification, the notion of a priori* wouldn't be able to capture the properties we want to assign to proofs. **Sam:** Another worry is that we want to preserve some sort of unity within mathematics. So we would want a principled reason why a priori* is different from a priori. **Crispin:** Proof must be surveyable. There is a kind of proof that you can go through such that whether one hallucinating or misremembering wouldn't undermine the warrant. Not all proofs are like that. There are proofs that if you don't remember how you do it, you lose the justification. **Peter:** Consider the kind of proofs we ask undergraduate students to do in a logic exam. It is not important to flesh out every step in the deduction. Getting the general shape of a proof could make it more surveyable.

Handout

KBNS A PRIORI STREAM
BRAINSTORMING SESSION
18/05/2018

Basic a priori and intuitions

- One may suspect that there are two kinds of basic a priori. The first kind would concern, for example, warrants to believe propositions of elementary mathematics, or to accept a specific inferential step as correct; the second kind would concern warrant to believe propositions that may be considered as axiomatic, or propositions expressing a principle that regulates cognitive investigations in some domain, such as "MP is valid".

Both kinds may invite accounts of non-inferential warrant, but the relevant non-inferential warrants are likely to be different. Justification by visual imagination for propositions of elementary arithmetic seem to be available to more agents than the justification to believe that

MP is valid. How are these two notions of basic a priori—if they really are two different notions—related? (Giacomo)

- How shall we conceive of the epistemic basis of a putative rational insight? Should the reflections that precede the judgment be part of it or not? Boghossian seemed inclined to say “no”, Chudnoff would say “yes”. More generally, how many notions of intuition-based accounts of a priori justification are there? (Giacomo) [Possible reading: Carrie’s “Intuition, ‘Intuition’, Concepts and the A Priori” (2014)]
- Under what circumstances is it epistemically OK to rely on a method without independent corroboration of that method? This implicates traditional skeptical discussions about perception and induction, but also intuition and the a priori—the Cartesian circle, Cummins’s critiques about calibration for intuition, etc. I rather suspect it has implications for testimony and ideologically-informed beliefs too, but that is controversial. (Jonathan)

Epistemic grounds and our access to them

- Is it worth examining in more detail the notion of (epistemic) grounds? I believe this has recurred at least in some of the minutes meetings, and frequently we have complained that some account pays little heed to this notion. It might be worth examining a paper that looks at it directly, or that provides an exemplar of what it takes to heed the notion sufficiently. (Sam)
- A distinction has been clearly drawn between the psychological conditions under which a person comes to believe a proposition and the ultimate rational basis of the proposition. But there is a puzzle about how we have access to the rational basis. This may be or related to the Benacerraf problem. There is a problem of explaining how knowledge of mathematical truths is possible, if these truths are understood realistically. Intuitively, to explain we have knowledge of P, we need to show how our belief about P is not true merely by chance—our belief P should reliably match the truth. But what can account for the link between our cognitive faculties and mathematical truths (and thereby the correlation between our mathematical beliefs and mathematical truths)? (Xintong) [Possible reading: Josh Schechter’s “The Reliability Challenge and the Epistemology of Logic (2010)"]

Memory and warrant-transmission

- I think the issues we have been examining can be broadly put into two categories: (1) question about the generation of a priori justification, e.g., what constitutes a priori justification? (independence of experience in the sense that experience plays a non-evidential but enabling role; conceptual examination; r-rationality; provability from self-evident basic truths) and (2) question about the transmission of a priori justification. Suppose that we solve problem (1), and by that account, S could obtain a priori justification for a proposition p at t. But there is a further problem about the transmission of justification: can the justification be preserved over time (in memory) and across agents (via testimony)? It seems that in the transmission of a priori justification, experience plays a larger role (more akin to evidential role) than it does in the generation of a priori justification. The fact that a proposition (obtained originally at t by agent S) is grounded in a rational basis without evidential import from experience alone seems insufficient to allow the successful transmission of a priori justification. Questions: to what

extent are questions (1) and (2) related? If experience does play a crucial role in (2), does it undermine the possibility of a priori knowledge? (Xintong)

- Lawlor's response to Christensen and Kornblith was that, although memory may involve massive empirical input, we can still identify a role for it where it does preserve (the character of) justification. The price of Lawlor's proposal was that we have to give up the idea that testimony does the same. I wonder if there is a response to C&K without that price. Could we make sense of Burge's point about memory as the idea that the specific features of memory, whatever they are (including whether it plays the anaphoric role suggested by Lawlor), are simply irrelevant to the question whether memory preserves the character of justification? Would it still leave room for an interesting theory of a priori justification? (Indrek)
- There seem to be at least two different roles that memory plays in a wide range of a priori warrants: on the one hand, (i) it provides previously warranted lemmas when they are needed in a step of reasoning; on the other hand, (ii) it seems to play a role in warranting the conclusion of a piece of reasoning by guaranteeing that there was no slip throughout. How are these two roles related? (Giacomo)

Enabling vs Warranting

- What shape should a general theory of the difference between enabling and warranting factors have? (Giacomo, Paul)

Rough suggestion. The *enabling* role is played by those factors which put one in the position to execute the relevant cognitive exercise (including being in the position to acquire the base—grounds or evidence—on which to form a justified belief). The *warranting* role is played by the reasons or grounds that constitute one's propositional warrant, their acquisition, *and* the agent's use of them in the formation of the related doxastically justified belief.

But how wide should the epistemic base be? The wider the base, the wider the set of elements that play a warranting role, and the narrower the set of elements that play only an enabling role. The narrower the base, the narrower the set of elements that play a warranting role, and the wider the set of elements that play an enabling role.

Further rough thought. Whether meeting a given condition plays an enabling or warranting role may be an agent-relative matter. For example, unreflective agents (animals and young children) rely on conditions granting that their cognitive faculties are working well, but, being unable to understand propositions expressing those conditions, arguably they are also in principle unable to have a warrant to believe them. If so, the good functioning of their faculties can, at best, be an enabling condition for them. Things may be different (but needn't be) for ordinary human agents, and at the highest level of idealization we might expect agents to have warrant in support of many of the presuppositions of their inquiries.

Other things (for the future)

- I suppose another thing we could do if we wanted to would be to dig in to some of the literature on how to characterize the contents of judgments about thought experiments. (Jonathan)
- What is the right way of understanding transcendental arguments? Can such arguments generate a priori knowledge - and if so, how does the kind of a priori knowledge they generate

differ from that which is attained through 'understanding', 'rational insight' and the like?
(Giovanni)