EPISTEMIC PLURALISM

THE MISSING LINK AND THE AMBITIONS OF EPISTEMOLOGY

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Abstract: In this paper epistemic pluralism concerning knowledge is taken to be the claim that very different facts may constitute knowledge. The paper argues for pluralism by arguing that very different facts can constitute the knowledge-making links between beliefs and facts. If pluralism is right, we need not anxiously seek a unified account of the links between beliefs and facts that partly constitute knowledge in different cases of knowledge. The paper argues that no good reasons have been put forward in favour of believing in a unified maker of knowledge. It then appeals to the role of knowledge in order to argue that we have positive reason to embrace pluralism.

Keywords: knowledge, pluralism, causation, role.

1. Introduction: In Search of the Missing Link

Most epistemologists agree that knowledge that *p* is constituted in part by the belief that *p* and the fact that *p*. Or, to put it a different way, most epistemologists think that the belief that *p* and the fact that *p* are part of what makes for the knowledge that *p*. These two factors or conditions are constituents of knowledge, or part of what makes for knowledge, in all or at least most cases.[1] It is what comes next that is controversial. Some *link* or *connection* between the fact that *p* and the belief that *p* is also widely thought to be part of what makes for the knowledge that *p*. The link between belief and fact is thought to be something in addition to the existence of the beliefs and facts that are linked. There are those who think that possessing *justification* is always required for knowledge (e.g., Chisholm [1966]). There are also those who do *not* think that justification is always required (e.g., Alston [1987]). But even those who *do* think that justification is always part of what makes for knowledge *also* think that some belief-fact link is part of the knowledge maker; that is one moral of

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[1] See Zangwill 2013, where I explain why I say "fact" rather than "truth."

Gettier cases. Being more specific about this belief-fact link generates complications and controversies, but the belief that there is some belief-fact link where there is knowledge is common ground among epistemologists. So, let us assume, then, that knowledge has a complex maker, consisting at least in the conjunction of belief, fact, perhaps justification and then, in addition, this link—whatever it is—between belief and fact.[2] Epistemologists who are interested in knowledge want to know about this knowledge-making link. Let us call it "the missing link."[3]

Familiar accounts of the missing link for propositional knowledge are causal theories (Goldman 1967), reliability theories (Goldman 1986), tracking theories (Nozick 1981); and there are other accounts. Instead of interrogating such accounts, however, I want to ask: What sort of thing should we be aspiring to say about the missing link? In this paper, I argue, negatively, that we should question some of the epistemic goals assumed by many familiar accounts and, positively, I argue that we can be satisfied by what we can call "epistemic pluralism," which means being satisfied with an unstable and shifting account of what makes for knowledge in different cases. No one kind of thing is the common maker of the many cases of knowledge.

To arrive at the pluralist conclusion, I pursue some familiar material in section 2—the stuff of undergraduate textbooks—in order to get to a point, in section 3, where it makes sense to raise methodological questions. These I resolve in a particular direction, one that deflates the familiar material and that opens up the possibility and plausibility of epistemic pluralism. I then pursue positive arguments for pluralism, briefly airing considerations of conservativism in section 4, before focusing on the role of knowledge. In section 5, I argue that the role of knowledge favours pluralism, and in section 6, I consider various aspects of that argument as well as some of the wider issues about knowledge that it exposes.

In pursuing this question, I focus on propositional knowledge, even though there are questions about whether we should aspire to an account of what makes for propositional knowledge that fits with accounts of other kinds of knowledge and other epistemic properties (Zangwill 2018, sec. 1.1). I believe that a pluralist conclusion is also plausible for other kinds of knowledge (how, whether, why, and so on) as well as for other epistemic notions (justification, wisdom, intelligence, and so on), but I

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[2] See Zangwill 2018 on the idea of a knowledge maker.

[3] The issue raised here is orthogonal to that raised in the "knowledge first" literature (Williamson 2000). I assume that knowledge has a maker and that it has a complex maker. This has nothing to do with whether or not knowledge is a "mental state"; mental states might be simple or complex, and they can be constituents of complex states with other non-mental-state constituents. The question is: What are the constituents of knowledge? It may be that the knowledge-first view denies that knowledge has *any* maker; but then that is as implausible as the idea that something can be good or bad without something making it so—that is, it is not plausible at all (see Zangwill 2008, 2017, 2018).

shall not pursue those cases. I suspect that considerations similar to those that I shall adduce also speak in favour of pluralism about other kinds of knowledge and about other epistemic properties. That, however, needs independent discussion.

2. Seeking Unity

Let us begin by considering a causal relation between belief and fact as a candidate for the missing link. It is not controversial to say that in *many* cases, part of what makes for knowledge, or that partly constitutes it, is the fact that a belief *causally depends* on the fact believed. Many familiar cases of knowledge are like this. For example, we might be at the zoo and believe that there is a giraffe in front of us partly because the giraffe in its location caused us to believe that there is a giraffe in front of us by causing perceptual experiences of that giraffe. This causal relation partly constitutes the knowledge. There is more to knowledge of the giraffe than the obtaining of such a causal link; but the causal link is partly constitutive of knowledge in this and similar cases. Saying this situates us near established intellectual terrain. According to the causal theory of knowledge, the knowledge that *p* is always constituted in part by a causal *dependence* of the belief that *p* on the fact that *p*, or at least that it is always constituted in part by a causal *relation* between them, where that relation allows for knowledge of the future (Goldman 1967; see also Armstrong 1973). Many writers put this claim in terms of a causal relation being a *necessary condition* for knowledge, but it is better to replace that with its partially constituting knowledge (Zangwill 2018); after all, being a member of the set of cases of knowledge is a necessary and sufficient condition for being knowledge, and being what God would think is knowledge is also a necessary and sufficient condition for being knowledge; but neither has anything to do with what makes something knowledge. Putting claims about what knowledge is in terms of necessary and sufficient conditions was a common mistake of epistemology of a certain era. The important point, for our purposes, is that the causal theory of knowledge was supposed to be a *general* account of the belief-fact link covering *all* cases of knowledge. That was quite an ambitious theory—too ambitious—but we can at least give it credit for recognizing that *many* cases are like that.

One problem with the ambitious causal theory was that it risked being too restrictive in its exclusion of non-casual dependencies between beliefs and facts that might generate knowledge in cases of mathematical, moral, modal, logical, or theological knowledge. There is a hallowed distinction within propositional knowledge between empirical and a priori propositional knowledge. We can see this distinction as characterizing knowledge makers—some knowledge makers have features that make the knowledge generated empirical, whereas others have features that make it a priori.

(The same goes for empirical and a priori justification.) Only in cases of empirical knowledge is the knowledge-making link a causal relation (McGinn 1975–76). But a general causal theory of knowledge rules out the possibility of a priori knowledge a priori, just in virtue of what knowledge is! Perhaps a priori knowledge is not possible. But we do not want the account of knowledge by itself to rule out that possibility.

A possible modification at this point, aiming at generality, would be to say that the knowledge-making link is a *dependence* of belief on fact, which is causal dependence in empirical cases, and some other kind of non-causal dependence in cases of a priori knowledge (see Zangwill 2012). A causal dependence would then be a *case* of the more general dependence relation, which is always a knowledge maker. If we say that, however, we run into another complication. Requiring that the knowledge-making link is always one of dependency seems objectionable, as we noted, because the belief-fact link may be *indirect*. In cases of knowledge of the future, our beliefs about the future do not depend on the future facts. Instead there is an indirect causal chain linking beliefs and facts via common causes of them both. We know about the future despite the fact that our beliefs about the future facts do not depend on the future facts. It is similar with innate knowledge, which would depend on indirect causal links between beliefs and facts.

There are also other cases that are difficult to explain in terms of belief-fact dependencies—knowledge of general facts and negative facts. These cases exhibit an indirect structure like that of knowledge of the future. Metaphysical dependencies between general facts and instances seem to be part of part of the route between general beliefs and general facts. Likewise, knowledge of negative facts seems to be mediated in part by metaphysical dependencies between negative and positive facts, which are part of the route between negative beliefs and negative facts. In these two cases, the overall belief-fact route is indirect, consisting of a *conjunction* of metaphysical dependencies and causal relations. Perhaps these cases should be classified as empirical because *part* of the belief-fact link is a causal link. Or we could say that they are a hybrid of empirical and a priori components. Whatever we say, metaphysical dependencies are also part of the overall story in virtue of which we know these facts.

The general moral seems to be that the belief-fact links on which knowledge depends may not be causal dependencies of beliefs on facts— they may be more indirect causal links, and they may include metaphysical dependencies as part of the overall belief-fact link. These are all cases of knowledge without belief-fact causal dependences.

So far so good, or at least so O.K.; but things soon get even more complicated. In Alvin Goldman's fake-barn case, we are in territory with many fake barns, but we happen to be perceiving a rare case of a real barn. This is an instance of the opposite kind of case where there *is* a straightforward causal dependence of belief on fact but *without* knowledge (Goldman

1976). Thus, the connection between knowledge and belief-fact causal dependence is insecure in both directions.

Goldman's interpretation of this case is that it is not knowledge, because there is no reliable discriminatory ability, despite the belief-fact causal dependence. In these unusual circumstances, where most apparent barns are fake barns, people's process of belief acquisition is not reliable; they cannot reliably discriminate real and fake cases reliably, despite the direct causal relation in the particular case. To cast doubt on Goldman's diagnosis, suppose we are in what we might call a Fake Barn World, where *every* case is a fake-barn case. This world is like a sceptical world, with a perverse controlling demonic intelligence, except that either a particular person or people in general are always right. There might be one victim or many. Or the world might be one in which people are usually but not always right, so that they do not get suspicious that things are too good to be true. In this world, supposing there is one victim, a person believes that p when p, and just when confronted with the fact that p, which causes the belief that p—except that the surrounding circumstances are always non-standard. Every time the person looks at something, everything is normal about the person, those things, and the causal and perceptual pathway between those things and the person. For example, suppose the person is looking at a car and experiences it as a car and judges that it is a car, and the car causes the experience of it. But all the other cars are fake cars, merely cardboard cutouts that look like cars. Suppose the person then gives attention to a different car, to one of the fake cars. The demonic perverse controlling intelligence transforms that car into a real car, which the person perceives and causally interacts with in the normal way. Meanwhile the original car reverts to a fake car, along with all the other cars in the world. In this Fake Barn World, a person is very reliable or even completely reliable. The world is like a traditional demonic sceptical world except that the person is always right and never wrong, and always has true beliefs and never false beliefs. Furthermore, the true beliefs are caused by the facts that make them true. But the person never knows anything, despite the person's reliable true beliefs. So, reliability does not always make for knowledge.

3. Methodological Options, Onus, and Folk Theory

So it goes! Or does it?

The standard reaction to these scenarios, and others of the same kind, is to seek a different theory that covers all cases. If there is chaos, impose order! Another reaction, however, is to relax and enjoy wallowing in disorder. This would mean embracing a *pluralist* outlook, which rejects the underlying quest for generality: we could say that although *some* cases of knowledge are knowledge in virtue of belief-fact causal dependence,

others are knowledge in virtue of indirect causal links, and others are cases of knowledge in virtue of discriminatory abilities, and others in virtue of non-causal dependencies. Once the quest for generality is abandoned, all these knowledge makers can be embraced, without having to reject any of them. It could be that in an ordinary non-barn example, where I know there is a barn in front of me due to a causal dependence between my belief that there is a barn in front of me and the presence of the barn in front of me, even though that casual dependence does not make for knowledge in a barn example where it is not a case of knowledge. We *might* persist in seeking a unitary theory that captures all the cases. But why do that? Instead, we can abandon that quest.

To use a term familiar in the philosophy of mind, knowledge might be "multiply realized" in different non-epistemic states. "Multiple realization," as I use the term, does not imply what was called "functionalism" in the philosophy of mind, where that is a unitarian theory that posits a reduction of mental states to second-order causal roles (Shoemaker 1984). Such a theory would indeed yield an explanation of the multiple realization of mental-state types in first-order states by appeal to the second-order reduction. But multiple realization is compatible with the lack of second-order functional reduction. Positions classifiable as "anomalous monism" occupy that space, embracing multiple realization without functional reduction.

Of course, belief and fact always constitute knowledge; so, there is no variability there, unless we think that hunches falling short of belief can sometimes amount to knowledge. Whether or not that is so, there is more variability in the other constituents. And since at least what constitutes the link varies, the entire basis for knowledge also varies.

We now have a new meta-debate between *unitarians* and *pluralists* about what makes for knowledge. Is there one kind of non-disjunctive non-epistemic property that makes for knowledge in all cases, or is there just a great variety of non-disjunctive kinds of non-epistemic states that make for knowledge in different ways in different cases?

The first point to make is that the assumption of unitarianism has not been given any justification, and indeed it lacks plausibility. Compare the situation in moral philosophy. One role for moral theory is to underpin and explain at least many of our common-sense "intuitions," although intuitions may be revised in the light of theory. What we think makes for moral property instantiations comes to an end. But it is very far from clear that they come to an end in a moral *theory*—a theory in which moral kinds are not multiply realized in non-moral kinds and have one common non-moral maker. The moral theorist thinks that all moral property instantiations have one non-moral kind that always makes them. For example, we may think that it is wrong to cut up one healthy person to save six unhealthy people, and that it is wrong to have sex with animals. Need these share a wrong-maker? It is not obvious. Similarly: folk epistemology says that in some cases we know due to a causal relation and in other cases we

know because we have perceptual justification. In the case in which some-one knows because of a causal relation, the fact that in some *other* cases someone knows without a causal relation does not mean that, in the orig-inal case, the causal relation must be a case of some further kind, which is what really makes for knowledge in that case, deep down. Another exam-ple: in some cases, knowledge is partly constituted by justification; in other cases, not. Why generalize?

Jonathan Dancy (2004) has pursued this kind of argument in moral philosophy. And much of Bernard Williams's work aims to cast doubt on the unitarian goal of moral theorizing (Williams 1985). Unitarian epis-temological theorizing is as questionable as the quest for unity in moral theory. This is not a knock-down refutation of unitarianism in moral philosophy or epistemology. Unitarian theories may have other virtues. But common sense does not support unitarianism. Certainly, there is no presumption in favour of the sophisticated ambitions of unifying general theory either in epistemology or in moral philosophy. Explanation might come to an end, sooner than an enthusiastic theorist might wish, in basic making relations that do not derive from something deeper. For exam-ple: "because we are human animals" might be basic in moral philosophy, at least in folk moral theorizing. The idea that there *must* be some other deeper theoretical basis is one that awaits justification (see Williams 2006). Similarly, in folk epistemology we know different things in different ways. The fact that beliefs are caused by what they are about or the fact that a person has a perceptual experience or memory experience of something or that the person possesses testimonial evidence may be basic knowledge makers. The knowledge-making links may be of diverse kinds. The idea that a more general theory *must* be found, which unifies the many intu-itions of folk epistemology, is not part of folk theory and is itself in need of justification.

4. Conservatism

In the previous section, the unargued assumption of unitarianism by some epistemologists was highlighted. That is a negative dialectical point. Let us now turn to considerations that provide positive support for pluralism and give us positive reasons to reject unitarianism.

One first reason, conservatism, I have already noted. It has some force, although it is not decisive. But it does seem to make a difference to which side has the onus of proof. Epistemic unitarianism is revisionary of common sense, in the sense of adding to it; and this suggests that a favourable onus of proof lies on the side of epistemic pluralism, just as the onus of proof in ethics is against consequentialism and Kantianism in moral theory, since their theories are revisionary of moral common sense (as Williams persistently argues). This is not decisive. Consequentialism

and Kantianism provide theoretical unification and explanation in such a way that it might be thought to be an intellectual virtue in a theory. Nevertheless, such a virtue has to outweigh appearing counterintuitive to our folk views of moral makers (Zangwill 2011). The reason that unitarianism seems revisionary is that folk epistemology exhibits considerable diversity across particular judgements, each based on a maker but with no unified (non-disjunctive) type of maker across the different cases, or at least none that is available to ordinary epistemic thinkers. The pressure to deepen knowledge makers, in order to yield makers that harmonize with not just some other cases but all other cases, amounts to a revision of folk epistemology, because folk epistemology is satisfied with a mess of particular epistemic claims. It is not that folk epistemology cannot be wrong or cannot be deepened. It can, just as folk morality can be wrong and can be deepened. However, we need special, and especially strong, reasons to claim that folk epistemology is defective or radically incomplete and that some unifying principle must be found. At least, no one has presented a compelling case for epistemic unitarianism. So, conservativism counts in favour of pluralism. Perhaps not decisively, but it counts all the same.

As academics, we are used to the rather special context of intellectual debate; and so, when an epistemic or moral judgement is challenged by someone who disagrees, we then attempt to say more, to try to deepen the knowledge maker or moral maker, in order to provide makers that encompass many cases. But this is a somewhat artificial and unusual situation. And there is a question: Why take part in such debate? Such a practice presupposes a controversial theory, and it is not compulsory. For a Socrates or a Kant or a Rawls, discussion and giving reasons is somehow privileged. But such hyper-reflective activity, in search of further justification for makers, can be viewed with suspicion by folk morality. Look what happened to Socrates! If we resist the intellectual impulse to keep asking for justification, there is less pressure to seek unity, for we can rest content with a diverse set of makers without feeling the urge to unite them.

5. The Role of Knowledge as an Argument Against Unitarianism and for Pluralism

The case for pluralism from conservatism has some weight but is not that strong. A stronger argument lending more substantial positive support to pluralism and favouring pluralism over unitarianism appeals to the *role* of knowledge. Whatever knowledge is, or is constituted by, knowledge plays a *role* in our lives, over and above whatever it *is*. One role is that knowledge is often useful. For example, knowing the road to Larissa typically makes us a *reliable* guide for getting to Larissa on many occasions, in the sense that we are likely to have true beliefs and unlikely to have false beliefs about the route to take. Knowledge makes us reliable: if one knows facts

of a kind, then our beliefs of that kind will be likely to be true and unlikely to be false in ordinary circumstances. That means that we can put that knowledge to *use*. We arrive at Larissa and get on with whatever Larissa activities we had in mind. Perhaps we are in Larissa on business or on vacation or for a social visit.

The role of knowledge is a *relation* in which it stands with respect to other things. And reliability is one role of knowledge. Reliability is not some unitary thing that knowledge *is*; instead, people are often reliable in virtue of knowing. One often explains the other. Knowledge explains reliability, in many cases, that is. We may contrast Larissa-type cases, where knowledge explains reliability, with examples of knowledge without reliability and reliability without knowledge. Cases of knowledge of hinge propositions are plausible examples of knowledge without its usual reliability role. I know that there is an external world or that the world has existed for five minutes even though I am not reliable, where that is cashed out, roughly, in terms of what I would believe if that were not true. A case of reliability without knowledge is a case that is usually thought to be a counterexample to a general reliabilist theory of knowledge: we might be reliable because we believe whatever an infallible Dalai Lama says (Putnam 1981). This was supposed to be an example of reliability without knowledge, and was, therefore, supposed to be a counterexample to a general reliability theory of what knowledge *is*, supposing that we were tempted by such a theory. But the example is also a case where one of the usual roles of knowledge obtains without knowledge.

Thus, there can be reliability without knowledge and knowledge without reliability, even though in many cases reliability is a role that knowledge plays, and it is one that knowledge explains. Knowledge is not identical with reliability, because there can be knowledge without reliability and reliability without knowledge; nevertheless, knowledge often explains reliability.

Now add that we are, and may be, reliable in a variety of different ways: in virtue of causal dependencies, in virtue of discriminatory abilities, in virtue of possessing justification, and so on. All sorts of different things make us reliable. We might be causally related to the fact in question. We might have perceptual experiences of the fact in question. We might ask the right people. We might be an infallible God. We might have made a Faustian contract with the devil. There are many ways to be reliable. If so, there is no plausibility in a unitarian theory of what makes for reliability. The things that make a person reliable are too diverse to build into a single embracing theory of reliability. But that in turn means that a pluralist theory of *knowledge* is also plausible, at least for the cases where knowledge explains reliability. Given that the reliability role of knowledge is multiply realized, it is plausible that the same is true of knowledge itself. How could we combine a unitarian theory of knowledge with a pluralist theory of

what makes us reliable given that knowledge explains reliability in many cases?

The reply to this argument cannot be that reliability is not the role but is the unifying essence of knowledge, in all cases. For it is not in hinge cases, where we know but are not reliable. So, the argument cannot be met by identifying knowledge and reliability. They are distinct, and the diversity of realizations of the reliability role speaks in favour of the diversity of realizations of knowledge.

Consider a different role of knowledge, where causation runs the other way—to knowledge rather than from it. Education plays a role with respect to knowledge; in particular, one thing that education aims to produce is knowledge (among other things). Producing knowledge is one of the roles of education. But education takes a variety of forms. Teachers sometimes impart knowledge by testimony; the children passively listen and remember by rote. More modern methods aim to develop skills to enable the children to acquire knowledge for themselves. In the latter kinds of methods, justification seems to play a role, but not in the former. Or perhaps if we think we have reasons to trust testimony the two routes provide different kinds of justification. Or perhaps it is that in one case the knowledge derives from understanding, unlike in the other. Again, children can gain knowledge by interacting with other children or by thinking on their own; gaining it can be more collectivist or more individualistic. Education takes different forms, and so there are different educational ways of producing knowledge. Therefore, by an argument parallel to the one given for the reliability role, which is a role that is a consequence of knowledge, it is plausible that what knowledge depends on is multiply realized. For if what produces knowledge is multiply realized, then so is the knowledge produced. Compare the philosophy of mind. Suppose that there are many diverse causes of pain in different circumstances. While there might be one kind of thing, pain, that is produced, it is likely that it is variously constituted, given the different causes. It is similar with knowledge: given the diversity of causes of knowledge, it is plausible that the knowledge that is produced is variously constituted.

Reliability and education are not the only roles of knowledge. Knowledge does all sorts of things for us and arises in all sorts of ways. But in all such cases, it is plausible that there are a variety of ways to do those other things and there are a variety of ways of producing knowledge. If so, it is plausible that there is a variety of ways of knowing. That is, there is a plurality of knowledge makers.

6. Reflections on the Role Argument

    (A) This role argument compares favourably with common argument(s) for multiple realization in the philosophy of mind. One common

argument asserted a tendentious reduction of mental kinds to second-order causal roles and then, with false ease, attempted to deduce the multiple realization of the second-order causal roles in physical properties; but there were rarely any plausible reasons offered in favour of the second-order reduction. Another argument invoked an incredible faculty of imagination, which was supposed to tell us (somehow) about metaphysical possibilities. But that looks like magic. A better argument for multiple realization, by contrast, would begin with uncontroversial observations about the actual causal roles of the property in question—roles that need not be universal. Then, equally modest uncontroversial observations are made about the variety of ways in which those roles can be fulfilled. Then conclusions about the plurality of ways that properties can be realized can be drawn. The argument is thus more low-key, not employing tendentious metaphysical reductions or magical faculties of imagination, just familiar observations about actuality.

(B) Edward Craig (1990) appealed to the role of the concept of knowledge. His appeal to role is to be applauded, but the role of the *concept* of knowledge is not the same thing as the role of knowledge itself. Furthermore, he focused on just *one* role of the concept of knowledge, the interpersonal one of identifying reliable informants. But this is surely over-restrictive and over-essentialist. Knowledge does and can do all sorts of things. Perhaps we can understand knowledge to an extent via its role(s). Nevertheless, knowledge and its roles are different things. And facts about knowledge explain its roles.

(C) The role of knowledge is important in considering the value of knowledge, or rather the value we attribute to it. This role of knowledge—that it is something we think important—should figure as a criterion of adequacy of theories of knowledge: whatever account we give must be consistent with the kind of value we think knowledge has (compare Zangwill 2007 on art). But, again, this is to accord the role of knowledge derivative importance, as something that constrains our views of what knowledge is.

(D) It might be objected that epistemic pluralism is a rather empty view—merely that the missing link is just whatever ties beliefs to facts when there is knowledge. Moreover, it seems to leave open an explanatory question: it does not explain why in many cases, although not all, that link is a casual relation—often a causal dependence of beliefs on the facts they are about. Often, perhaps even usually, a belief-fact causal dependence is a knowledge maker, even though there are also cases of knowledge without casual

dependencies, and causal dependencies without knowledge. This general but not universal fact needs to be explained, but pluralism appears to back off from any such explanation, since it is just a datum that there is a chaotic plurality of makers, at least in so far as the link is concerned. Now, appealing to the role of knowledge can help the cause of pluralism with respect to this complaint. Knowledge has its various roles, and these roles are contingent, although they are very common. Consider the reliability and educational roles of knowledge. Knowledge often (but not always) makes us reliable. And education often (but not always) produces knowledge. But if many cases of knowledge are constituted in part by causal links between beliefs and facts, then that would be a good explanation of those common roles of knowledge. For, given that the causal dependence relations are not one-off flukes (that they are robust in Woodward's sense [2006]), it would generate similar consequences on other occasions; and, thus, such cases of knowledge would generate a degree of reliability. A similar argument can also be run with education: education of different forms produces knowledge that in many cases is constituted in part by a causal dependence of belief on fact. Direct inculcation, by rote and memory, where it produces knowledge, is itself based on belief-fact dependencies, and inculcating habits of inquiry often generates the capacity in students to form beliefs when caused in the right way by the facts they are about. The fact that knowledge is often constituted by belief-fact causal dependence explains why it is often produced by standard educational techniques. Thus, these common (but not universal) roles of knowledge are well explained by knowledge often (but not always) being constituted by causal dependencies. At least, common roles and typical makers are connected.

(E) Of course, we can then go on to ask *why* knowledge has its common roles and typical makers. But that is to ask a deep question of evolutionary biology or cultural anthropology. Why are we the sort of creatures we are? Knowledge could have had very different common roles and perhaps could have had very different typical makers. The knowledge of alien beings might be very different from human knowledge in terms of roles and makers. And God's knowledge is alleged to be different from human knowledge, and His knowledge is not produced by education. But our nature is different, and it explains the roles and makers of *human* knowledge. There are interesting issues to be pursued here, but nothing to cast doubt on pluralism. (It is interesting that so many of the titles of important works of British philosophy in the seventeenth and eighteenth centuries, by Locke, Berkeley, Hume, and Reid, have a reference to our *humanity*—human nature, knowledge, and so on—by

contrast with works emanating from Continental Europe in the same period.)

(F) Pluralism does not say much about what knowledge is—being concerned instead with the makers of knowledge. Knowledge might be one—have one nature—even though it depends on a plurality of makers. Moreover, some might argue that the particularity of the one nature explains why it has a plurality of makers. This line of thought would assume that knowledge itself is one—that is, has one underlying nature—despite the plurality of realizations. This assumption might be thought to be controversial, to be sure. There are unaddressed questions here about whether knowledge has one essential nature despite plural realizations, and there are unaddressed questions here about human nature. These are deep and difficult issues; but consideration of the plurality of the makers of knowledge and the role of knowledge are good preliminary steps to take before addressing those grand topics.

7. Coda

I conclude that we should embrace a pluralist account of the missing link and feel no anxiety that we should be seeking a unified account. That is good news given half a century of trouble that philosophers have had achieving a satisfactory unified account. Let us relax with a mess without an urge to tidy up.

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