

Knowledge, intuition, and culture

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Introduction

The question that will be center stage in this chapter is: *Do intuitions about knowledge vary across cultures?* There is no need to motivate the focus on knowledge, since the theme of this volume is metacognitive diversity and the concept of knowledge plays a central role in metacognition. But why focus on *intuitions* about knowledge? To answer that question I will have to

- ◆ Say what I mean by “intuition.”
- ◆ Explain how intuitions are used in philosophy.
- ◆ Explain why the existence or absence of cultural and other demographic differences in philosophical intuitions would be important for both philosophy and cognitive science.

Those are the tasks I will undertake in the following three sections of the chapter. In the fifth section, I will offer an overview of one line of research aimed at determining whether intuitions about knowledge do indeed vary across cultures and draw some very tentative conclusions about the implications of this work for philosophical accounts of knowledge.

What are philosophical intuitions?

In the recent philosophical literature, there has been a great deal of debate about how philosophical intuitions are best characterized (Bealer, 1998; Cappelen, 2012; Deutsch, 2015; Devitt, 2015; Pust, 2016; Sosa, 1998; Weinberg, 2014; Williamson, 2007). But this is not the place to plunge into that debate. Instead, I propose to simply *stipulate* what I will mean by “philosophical intuition.” As I will use the term, a philosophical intuition is a spontaneous judgment about whether the people or events or objects in a (usually imaginary) situation have some interesting philosophical property or relation. Philosophical intuitions are typically produced very quickly and are preceded by little or no conscious reasoning. In that respect, they are analogous to the linguistic intuitions that play an important evidentiary role in contemporary linguistics. To gather data, linguists will often present a native speaker of a language with a sequence of words in that language (typically a sequence that the speaker has never encountered before) and ask whether

it is a grammatical (or acceptable) sentence.¹ In most cases, speakers will immediately judge that it is—or that it isn't—though they will have no awareness at all of the mental processes that gave rise to that judgment. Similarly, philosophers often present their audience with a brief story (sometimes described as “a philosophical thought experiment”) and ask, for example, whether a protagonist in the story knows a specified proposition or whether the protagonist's action was morally wrong. Typically, members of the audience will immediately form a judgment with little or no awareness of the mental processes that gave rise to the judgment. Trolley problems, which have become a familiar tool in recent moral psychology, provide a familiar example of the practice. When asked whether a protagonist did something morally wrong when she threw the switch diverting a runaway trolley from a track on which it would kill five innocent people to a track on which it would kill only one innocent person, many people rapidly offer a judgment, though they have little or no conscious access to the mental processes underlying the judgment.

Although some philosophers would impose additional constraints on what is required for a judgment to count as an intuition, the account of philosophical intuition that I am adopting does not; thus it is very inclusive. On this point, though on little else, I agree with the Oxford philosopher Timothy Williamson, who notes that

[a]lthough we could decide to restrict the term “intuition” to states with some list of psychological or epistemological features, such a stipulation would not explain the more promiscuous role the term plays in the practice of philosophy.

(Williamson, 2017, p. 218)

How intuitions are used in philosophy

It is widely agreed that intuitions—characterized as I have characterized them, or perhaps more narrowly—are used as evidence in philosophy. There are some dissenters, of course (Hey, it's philosophy!), but this is another debate that I will sidestep in this chapter, since pursuing it would take us too far afield. Instead, I will simply *assume* that the vast majority of philosophers who agree that intuitions are used as evidence are correct.² It is important to note that intuitions are used as evidence in two very different kinds of philosophical projects. One of these is *conceptual analysis*. The analysis of central philosophical concepts has played a prominent role in philosophy since antiquity, and in the middle years of the twentieth century, some philosophers, under the influence of Logical Positivism, maintained that it is the *only* legitimate philosophical activity.

On one influential account, concepts are mentally represented packets of information that characterize a category or an individual, though the details of these mentally

¹ Linguists also ask a variety of other questions, like: Is the sentence ambiguous? What does a specified pronoun in the sentence refer to? Are a pair of sentences related as active and passive? Etc.

² For those who wish to pursue the debate, the best place to start would be recent books by the two leading dissenters, Cappelen (2012) and Deutsch (2015). The traditional view is set out clearly in Pust (2000). For a perceptive response to the skeptics, see Nado (2016).

represented packets are typically not consciously accessible (Goldman, 2007; Goldman, 2010). Intuitions are used as evidence about the application of a concept, because it is assumed that they typically provide accurate information about the application of the concept. Here is how Alvin Goldman makes the point:

It's part of the nature of concepts ... that possessing a concept tends to give rise to beliefs and intuitions that accord with the contents of the concept. If the content of someone's concept F implies that F does (doesn't) apply to example x, then that person is disposed to intuit that F applies (doesn't apply) to x when the issue is raised in his mind ...

(Goldman, 2007, p. 15)³

Goldman, along with a number of other philosophers, maintains that the only defensible use of intuitions as evidence in philosophy is in conceptual analysis. However, other philosophers hold that this is far too restrictive a view. According to these philosophers, intuitions are often, and appropriately, used as evidence for or against theories about objective features of the world that are not dependent on how anyone conceives of them. Ernest Sosa, a leading exponent of this view, defends it in the following passage:

It is often claimed that analytic philosophy appeals to armchair intuitions in the service of "conceptual analysis." But this is deplorably misleading. The use of intuitions in philosophy should not be tied exclusively to conceptual analysis. Consider some main subjects of prominent debate: utilitarian versus deontological theories in ethics, for example, or Rawls's theory of justice in social and political philosophy, or the externalism/internalism debate in epistemology; and many others could be cited to similar effect. These are not controversies about the conceptual analysis of some concept. They seem moreover to be disputes about something more objective than just a description or analysis of our individual or shared concepts of the relevant phenomena. Yet they have been properly conducted in terms of hypothetical examples, and intuitions about these examples. The questions involved are about rightness, or justice, or epistemic justification. Some such questions concern an ethical or epistemic subject matter, and not just our corresponding concepts.

(Sosa, 2007, p. 100)

Whether this use of intuitions is justifiable is a question we will take up later. But Sosa is surely right that many philosophers, both historical and contemporary, have used philosophical intuitions as evidence in favor of (or against) theories intended to characterize objective features of the world. The goals of these philosophers include

- ◆ Giving an account of what causation really is, not an account of some person's or group's concept of causation (in metaphysics).
- ◆ Giving an account of what justice really is, not an account of some person's or group's concept of justice (in ethics).
- ◆ Giving an account of what knowledge really is, not an account of some person's or group's concept of knowledge (in epistemology).

And so on for many other topics of philosophical inquiry. When intuitions are used as evidence in these projects, it is assumed that the *content* of the intuition is likely to be

³ For a similar view, see Chalmers & Jackson (2001).

true. Thus, a philosophical theory that is compatible with the content of an intuition is supported, and a philosophical theory that is not compatible with the content of an intuition is challenged. There is no standard term for philosophical theories of this sort. In this chapter, I'll call them *objective phenomena theories*.

Why demographic differences are important

When intuitions are used as evidence for objective phenomena theories, the existence of cultural differences or other demographic differences poses an obvious problem. Projects of this sort assume that the contents of intuitive judgments are likely to be true. But if one group of people have the intuition that the protagonist in a thought experiment knows that *p* (or that her action was morally wrong), and another group of people have the intuition that the protagonist does not know that *p* (or that her action was not morally wrong), then obviously these two groups cannot both be right. So, unless the philosopher who is using intuitions as evidence for an objective phenomena theory can give a plausible reason why the intuitions of one group (typically the group that disagrees with him!) can be ignored, *demographic differences pose a fundamental challenge to the venerable philosophical tradition of using intuitions as evidence for objective phenomena theories*. Some of the defenders of the practice of using intuitions as evidence in philosophy reject this conclusion, and insist that the only intuitions that are important are the intuitions of professional philosophers.⁴ But Sosa is not among them. On his view, “there will definitely be a *prima facie* problem for the appeal to intuitions in philosophy if surveys show that there is extensive enough disagreement on the subject matter supposedly open to intuitive access” (Sosa, 2007, p. 102).

When intuitions are used as evidence for conceptual analysis, the problem posed by demographic differences is rather different. If different groups have different intuitions about thought experiments focused on causation or justice or knowledge, this suggests that these groups have different concepts of causation or justice or knowledge. And if a philosopher engaged in conceptual analysis is *only* interested in describing commonsense concepts, that need not be viewed as a problem. Instead, it can be taken as a discovery, one that broadens the scope and interest of conceptual analysis. Rather than analyzing just one concept typically expressed by the term “know,” the conceptual analyst now has several different concepts to analyze. But for many philosophers engaged in conceptual analysis, it is not an endeavor pursued for its own sake. These philosophers hope to *use* the analysis in further philosophical work. For example, the analysis of the concept of knowledge might be invoked in a normative theory of belief revision. And here demographic differences *do* pose a problem, since the philosopher must decide *which* concept of knowledge she will use in her normative theory, and she must justify her choice by

⁴ Those who urge this view typically maintain that philosophers are “experts” and that the intuitions of ordinary folks should be discounted, just as they are in other fields like mathematics, physics, or chess. See, e.g., Horvath (2010). For critiques of this “expertise defense,” see Nado (2015) and Stich & Tobia (2016, 2018).

explaining why that concept is more appropriate than the concept of knowledge used by some other demographic group.

For cognitive science, either the existence or the absence of demographic differences in philosophical intuition poses fascinating questions. If some philosophical intuitions are pan-cultural, this is a striking fact that needs to be explained. *Why* do people in all cultures have the same intuitions about (say) knowledge, or causation, or moral permissibility? One obvious hypothesis is that these intuitions (or the mental processes that give rise to them) are *innate*. But if that is true, it raises further questions: How did they get to be innate? Is it an evolutionary accident? Or did these pan-cultural intuitions provide a selective advantage in ancestral environments? If they did, do they still provide a selective advantage in the modern world? If some philosophical intuitions vary across cultures, then it is important to know what explains this variation, and what constraints, if any, limit the range of variation.

Gettier intuitions and the analysis of knowledge (or: Are Gettier intuitions universal?)

In the preceding three sections, I have tried to make the case that it is important to know whether there are cultural differences in philosophical intuition. But I have said nothing about whether or not such differences exist. Do they? That's the topic we will take up in this section. The story begins in at the beginning of the century, when Weinberg, Nichols, and Stich (2001) published a study reporting that American students with different cultural backgrounds had different intuitions about some well-known epistemological thought experiments, most notably Gettier cases. But before telling that story, I have to fill in some background.

From Plato until the middle of the twentieth century, the dominant account of knowledge was that knowledge is *justified true belief*. However, in 1963, Edmund Gettier published a short paper in which he proposed two counterexamples to this venerable view. In each of them, Gettier described the situation of a protagonist who, Gettier maintained, had a justified true belief in a proposition but did not know the proposition. Here is one of Gettier's famous counterexamples:

Suppose that Smith and Jones have applied for a certain job. And suppose that Smith has strong evidence for the following conjunctive proposition:

(d) Jones is the man who will get the job, and Jones has ten coins in his pocket.

Smith's evidence for (d) might be that the president of the company assured him that Jones would in the end be selected, and that he, Smith, had counted the coins in Jones's pocket ten minutes ago.

Proposition (d) entails:

(e) The man who will get the job has ten coins in his pocket.

Let us suppose that Smith sees the entailment from (d) to (e), and accepts (e) on the grounds of (d), for which he has strong evidence. In this case, Smith is clearly justified in believing that (e) is true.

But imagine, further, that unknown to Smith, he himself, not Jones, will get the job. And, also, unknown to Smith, he himself has ten coins in his pocket. Proposition (e) is then true, though

proposition (d), from which Smith inferred (e), is false. In our example, then, all of the following are true: (i) (e) is true, (ii) Smith believes that (e) is true, and (iii) Smith is justified in believing that (e) is true. But it is equally clear that Smith does not *know* that (e) is true; for (e) is true in virtue of the number of coins in Smith's pocket, while Smith does not know how many coins are in Smith's pocket, and bases his belief in (e) on a count of the coins in Jones's pocket, whom he falsely believes to be the man who will get the job.

(Gettier, 1963, p. 122)

Overwhelmingly, philosophers who read Gettier's paper agreed that Smith's belief, (e), is both justified and true, and they shared Gettier's intuition that Smith does not *know* that the man who will get the job has ten coins in his pocket. Thus most philosophers concluded that Gettier's counterexample posed a serious challenge to the *justified true belief* account of knowledge.

During the following decades, philosophers constructed many additional hypothetical cases in which, it was claimed, a protagonist had a justified true belief but did not have knowledge. They were quickly labeled "Gettier cases." While there is no universally accepted definition for that term, in this chapter I will use it for any case in which it seems clear to most philosophers that a protagonist has a justified true belief in a proposition but does not know the proposition. I will use the term "Gettier intuition" for the intuition that a protagonist in a Gettier case does not have knowledge.

In response to the discovery of Gettier cases, philosophers attempted to formulate some additional condition (or conditions) that, when conjoined with justification, truth and belief would yield an account of knowledge that was not challenged by Gettier-style counterexamples. This project yielded dozens of proposals, none of which has been widely accepted.⁵

That was the state of play when Weinberg, Nichols, and Stich, inspired by the work of Richard Nisbett and other cultural psychologists who had shown some dramatic psychological differences between Asians and Westerners, set out to explore whether epistemic intuitions might differ across cultures. Their participants were American university undergraduates whose cultural backgrounds were European, East Asian, or South Asian. And among the thought experiments they asked their participants to consider was the following Gettier case:

Bob has a friend, Jill, who has driven a Buick for many years. Bob therefore thinks that Jill drives an American car. He is not aware, however, that her Buick has recently been stolen, and he is also not aware that Jill has replaced it with a Pontiac, which is a different kind of American car.

After reading the vignette, participants were asked

Does Bob really know that Jill drives an American car, or does he only believe it?

Figure 17.1 summarizes the responses of the European (= Western) and South Asian (= Indian Subcontinent) participants. The responses of the East Asian participants were similar to those of the South Asians.

⁵ For a review of the literature through the early 1980s, see Shope (1983). For a more recent review, see Lycan (2006).

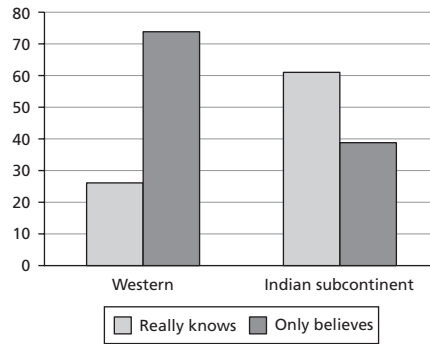


Fig. 17.1 Graph illustrating the responses of European and South Asian participants.

This paper launched a lively and sometimes heated debate about how philosophers should react to these findings. Initially, much of the discussion was philosophical, with some writers defending views similar to those urged in the preceding section of this chapter (“Why demographic differences are important”), while others offered a variety of arguments aimed at showing that the findings posed much less of a problem for traditional philosophical methodology. But with the growing acceptance of “experimental philosophy”—as studies like this one were dubbed—a new concern emerged early in the current decade. Had the Weinberg, Nichols, and Stich study really shown that people in different groups had different epistemic intuitions? It was, after all, only one study and the sample size was small ($N = 23$ for both East Asian and South Asian participants). Moreover, when other researchers began conducting studies on other Gettier cases, the results were decidedly mixed. Starmans and Friedman (2012) found that their American participants, surveyed online, did *not* have Gettier intuitions on many, though not all, of the Gettier cases they used. But Nagel et al. (2013) reported that most of their Canadian student participants *did* have Gettier intuitions. They also reported that they found no significant difference between the ethnic groups represented in their sample of participants. Turri (2013) found that participants in India, surveyed online in English, did have Gettier intuitions in response to Weinberg et al.’s Gettier cases, when those cases were presented in stages. And, perhaps most disquieting, two other studies, by Seyedsayamdost (2015) and Kim and Yuan (2015), failed to replicate the findings of Weinberg et al.

Confronted with these partially conflicting and hard-to-interpret findings, Edouard Machery and I began thinking about designing additional studies that might move the debate forward. Our first step was to assemble a list of weaknesses in existing studies. We focused on three:

1. In some studies, as already noted, the sample size was small. Moreover, all the studies of epistemic intuitions we were aware of had been conducted in English and all but one was restricted to participants located in the United States or Canada. If the goal was to determine whether epistemic intuitions vary across cultural groups, clearly a larger and more diverse participant population would be needed.

2. In Gettier cases, a protagonist has a justified true belief in a proposition but does not know the proposition. But in most of the studies exploring people's intuitive responses to Gettier cases, participants were not asked whether *they* thought that the protagonist's belief was justified. If they did not, then the intuition that a protagonist does not have knowledge ought not to be counted as a Gettier intuition. So, following the lead of Nagel et al. (2013), we decided to include a question asking participants to what extent they thought the protagonist's belief was justified.
3. A final shortcoming in most studies, also noted by Nagel et al., is the failure to take account of the phenomenon of "protagonist projection." Sometimes, when speakers attribute knowledge to an agent, what they really mean is that the agent *feels* that she has knowledge, and that because of this the agent would *say* that she knew. Thus, we sometimes say things like: "Before the game, Fred *knew* that the White Sox would win. But they lost." Obviously, if participants are engaging in this sort of projection when they say that a protagonist in a Gettier case has knowledge, they should not be counted as not having a Gettier intuition about the case. So, in our studies, in addition to simply asking participants whether the protagonist knows the relevant proposition, we also asked the following question, adapted from Nagel et al., designed to rule out protagonist projection:

"In your view, which of the following sentences better describes [the protagonist's] situation?" followed by two choices, (i) "[Protagonist] knows that [relevant proposition]," and (ii) "[Protagonist] feels like s[he] knows that [relevant proposition] but [s]he doesn't actually know [this]."

We called this the *Knowledge 2 question*.

Our next step was to recruit colleagues in three countries—India, Japan, and Brazil—who agreed to translate our questionnaire (into Bengali, Japanese, and Brazilian Portuguese) and to collect data. Our questionnaire included two Gettier cases, one unproblematic knowledge case, and one false-belief case. Here is the English version of one of the two Gettier cases:

Paul Jones was worried because it was 10 pm and his wife Mary was not home from work yet. Usually she is home by 6 pm. He tried her cell phone but just kept getting her voicemail. Starting to worry that something might have happened to her, he decided to call some local hospitals to ask whether any patient by the name of "Mary Jones" had been admitted that evening. At the University Hospital, the person who answered his call confirmed that someone by that name had been admitted with major but not life-threatening injuries following a car crash. Paul grabbed his coat and rushed out to drive to University hospital. As it turned out, the patient at University Hospital was not Paul's wife, but another woman with the same name. In fact, Paul's wife had a heart attack as she was leaving work, and was at that moment receiving treatment in Metropolitan Hospital, a few miles away.

A total of 245 participants successfully answered our comprehension questions and indicated that when he grabbed his coat and rushed to the hospital, Paul's belief that his wife had been hospitalized was justified. When asked the *Knowledge 2 question*, the vast majority of participants (89.8%) said that the second option:

- (ii) Paul feels like he knows that his wife has been hospitalized but doesn't actually know that his wife has been hospitalized.

was a better description of his situation than the first option:

- (i) Paul knows that his wife had been hospitalized.

Moreover, the responses were quite similar in all four countries: 85.9% of the Americans, 94.6% of the Brazilians, 87.5% of the Indians, and 91.3% of the Japanese chose (ii) rather than (i). These results were quite similar to the results in the false-belief case, where 90.2% of participants chose option (ii), and dramatically different from the results in the unproblematic-knowledge case, where only 6.9% chose option (ii). There is, of course, much more to be said about these results, a task we have undertaken in a more technical paper (Machery et al., 2017). But, for present purposes, the take-home message comes across loud and clear: *People in all four of these countries clearly have some Gettier intuitions.*

The four cultures and the four languages used in this study are notably different from each other. And in the paper in which these results were originally reported, we took the results to be evidence for the conclusion that people in *all* cultures have some Gettier intuitions, and thus that in all cultures the concept of knowledge requires more than justification, truth, and belief. We had, we thought, discovered a universal of folk epistemology. But since *only* four languages and cultures were studied, it would not be unreasonable for a skeptic to resist this conclusion. To deal with that concern, we included the same Gettier case in a subsequent, much larger cross-cultural study of philosophical intuitions. In that study, data were collected at 26 sites in 23 countries using 18 different languages. After reading the Gettier case, participants were asked the following *Knowledge 2 question*:⁶

In your personal opinion, which of the following sentences better describes Paul's situation?

- (i) When Paul rushed out to drive to University Hospital, he knew that his wife was hospitalized.
- (ii) When Paul rushed out to drive to University Hospital, he thought he knew that his wife was hospitalized, but he did not actually know this.

There were 2081 participants who correctly responded to our comprehension question, and indicated that Paul's belief was justified, and, of these, 1656 (79.6%) chose option (ii)—the option consistent with the Gettier intuition. Moreover, with a single exception, a substantial majority of participants at each site chose the Gettier intuition response. The percentage of participants who opted for that response ranged from 67% to 99%.⁷ Table 17.1 is a summary of the data. Here again, there are many technical details that we

⁶ The wording of this *Knowledge 2 question* was slightly different from the wording of the *Knowledge 2 question* in the earlier study.

⁷ The one outlier was the data collected in an Arabic-speaking Bedouin community in Israel. It was our smallest sample—only 12 participants—and in addition to the sample size there were a number of practical problems that led to concerns about the data.

Table 17.1 Summary of responses to the question about the Gettier case

Collected	Knows	Thinks	Total	%Thinks
France	60	121	181	67
Germany	21	64	85	75
Spain	39	81	120	68
UK	22	94	116	81
USA	12	103	115	90
Bedouin	7	5	12	42
Bulgaria	25	106	131	81
China	4	47	51	92
Israel	12	54	66	82
Switzerland	6	20	26	77 77
Indonesia	21	47	68	69
Italy	12	71	83	86
Japan	28	88	116	76
South Korea	6	35	41	85
Lebanon	22	54	76	71
Lithuania	22	124	146	85
Mexico	12	47	59	80
Mongolia	7	39	46	85
Portugal	6	66	72	92
Brazil	8	55	63	87
Colombia Colombia	10	36	46	78
Iran	27	60	87	69
India	22	59	81	73
Hong Kong	7	59	66	89
Guangzhou, China	1	69	70	99
Mainland China	6	52	58	90

will publish elsewhere. However, I think that even this very brief sketch of the study and the results lends substantial support to the conclusion urged in Machery et al. (2017):

[W]e think it is plausible to hypothesize that Gettier intuitions may be a reflection of an underlying innate and universal *core folk epistemology*. If this hypothesis is correct, then people in all cultures will possess epistemic concepts that require more than justification, truth and belief, and in most cultures that concept will be expressed by the epistemic term commonly translated into English as “know.”

Conclusion

It might be thought that we have now come full circle. We began with the Weinberg, Nichols, and Stich study, which was widely interpreted as showing that Gettier intuitions and other epistemic intuitions varied across cultural groups, thus challenging the use of intuitions as evidence in epistemic projects aimed at characterizing the nature of knowledge and other objective epistemic phenomena. But that study proved to be problematic in a variety of ways, and could not be replicated. Better studies, like the two cross-cultural studies recounted in the preceding section, lend support to the hypothesis that there is an innate and universal core folk epistemology. So, it might be thought, we no longer need to worry about cultural variation in intuitions about knowledge, and philosophers—or at least epistemologists—can return to business as usual. I think that sanguine conclusion is much too hasty.

What the core folk epistemology (CFE) hypothesis claims, and the evidence presented earlier suggests, is that in every culture there will be an epistemic concept, typically expressed by a term that is standardly translated into English as “knows,” which requires more than justification, truth, and belief. Thus, in all cultures, there will be a concept of knowledge (K) that has the following structure:

$$(CFE) \quad K=J+T+B+G$$

where G is an additional condition (or set of conditions) that excludes Gettier cases.⁸ But it is important to see that this hypothesis can be elaborated in a variety of ways. One possibility is that G is a cultural universal, a single condition that is part of the knowledge concept in every language and culture. This version of the core folk epistemology might be represented as (CFE-1), where the box enclosing G is intended to indicate that the same condition is part of the knowledge concept in all cultures:

$$(CFE-1) \quad K=J+T+B+\boxed{G}$$

Another possibility, suggested by Chomsky’s “principles and parameters” theory in linguistics, is that what is innately specified is a relatively small number of values that G

⁸ (CFE) should not be construed as committed to a “classical” theory of concepts which requires concepts to provide necessary and sufficient conditions. Rather, it is intended to be compatible with a wide range of theories, including prototype and exemplar theories, which do not yield necessary and sufficient conditions for the application of the concept. For further discussion of this point, see Machery et al. (2017 and forthcoming). CFE maintains that belief and truth are components of the knowledge concept. Both of these claims have been challenged. Murray et al. (2012) and Myers-Schulz and Schwitzgebel (2013) report that in some cases people are prepared to attribute knowledge of a proposition to a protagonist when they deny that the protagonist believes the proposition. For evidence pointing in the opposite direction, see Rose and Schaffer (2013) and Buckwalter, Rose, and Turri (2015). Hazlett (2010) argues that the English verb “knows” is not factive. Buckwalter (2014) offers evidence that “knows” is factive. Whether these apparently conflicting claims can all be accommodated by prototype or exemplar versions of CFE is a question requiring further study.

can take. In every culture, the knowledge concept must take one of those values, though which one of the innately specified conditions is used in a given culture is determined by culturally local factors and cultural history. This version of the core folk epistemology hypothesis might be represented as (CFE-2):

$$(CFE-2) \quad K=J+T+B+\left\{ \begin{array}{l} G_1 \\ G_2 \\ G_3 \end{array} \right\}$$

A third option is that while a “fourth condition,” G, is required, details of the condition are not innate and the constraints on G are much less restrictive. This version of the core folk epistemology hypothesis might be represented as (CFE-3):

$$(CFE-3) \quad K=J+T+B+\left(\begin{array}{ccccc} G_1 & G_6 & G_{11} & G_{16} & G_{21} \\ G_2 & G_7 & G_{12} & G_{17} & G_{22} \\ G_3 & G_8 & G_{13} & G_{18} & G_{23} \\ G_4 & G_9 & G_{14} & G_{19} & G_{24} \\ G_5 & G_{10} & G_{15} & G_{20} & G_{25} \end{array} \right)$$

(CFE-1), which might be called the *rigid nativist* version of the core folk epistemology hypothesis, predicts that there will be little or no variation in intuitions about Gettier cases either across or within cultures. However, our data indicate that there are often quite substantial disagreements about Gettier cases within cultures. In Table 1, for example, 33% of the French participants (60 out of 181 participants) judged that our protagonist, Paul, *knew* that his wife was hospitalized. To accommodate these data, (CFE-1) would have to attribute these judgments to performance errors of various sorts.

The other two versions of the core folk epistemology hypothesis, (CFE-2) and (CFE-3), both expect to find significant variation in intuitions about Gettier cases in different demographic groups. This prediction is compatible with the substantial within-culture disagreements that we find in our data. It is also compatible with Starmans and Friedman’s (2012) finding that a substantial majority of their English speaking non-philosopher participants attribute knowledge to protagonists in a number of Gettier cases that English-speaking philosophers typically judge *not* to be cases of knowledge. More recently, Starmans and Friedman (2014) have found that there are striking differences in intuitions about Gettier cases between philosophers and academics in other disciplines. While I do not take any of this evidence to be decisive, I am inclined to think that the evidence we now have favors either (CFE-2) or (CFE-3) over (CFE-1). To confirm that judgment, and to decide between (CFE-2) and (CFE-3), we will need additional cross-cultural studies that use a much wider range of Gettier cases.

What makes all of this important is that of the three versions of (CFE), only (CFE-1) is compatible with the sanguine conclusion that epistemologists can ignore the worry about cross-cultural differences in epistemological intuition and carry on with business as usual. On the question of cultural variation in epistemological intuition, the jury is still out.

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