Unreliable Knowledge*

John Turri
john.turri@gmail.com

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ABSTRACT — There is a virtual consensus in contemporary epistemology that knowledge must be reliably produced. Everyone, it seems, is a reliabilist about knowledge in that sense. I present and defend two arguments that unreliable knowledge is possible. My first argument proceeds from an observation about the nature of achievements, namely, that achievements can proceed from unreliable abilities. My second argument proceeds from an observation about the epistemic efficacy of explanatory inference, namely, that inference to the best explanation seems to produce knowledge, even if it isn't reliable. I also propose a successor to standard versions of reliabilism, which I call 'ecumenical reliabilism'. Ecumenical reliabilism is consistent with unreliably produced knowledge and helps explain why unreliably produced knowledge is possible.

Keywords: knowledge | reliabilism | ability | achievement | explanatory inference

1. Introduction

A consensus view in contemporary epistemology is that knowledge must proceed from reliable processes, abilities or dispositions.[1] (We find no such consensus when it comes to epistemic justification, but that is a different matter.) I doubt that the consensus is correct. This paper advances two arguments that unreliable knowledge is possible.[2]

[1] Alvin Goldman, in his classic defense of process reliabilism, argues that knowledge requires justified belief, and that a belief's justification "is a function of the reliability of the process or processes that cause it," (1979: 345). Christopher Hill follows suit, claiming, "to say that a cognitive process is reliable is to say that beliefs produced by that process are, as a matter of objective, empirical fact, quite likely to be true," and furthermore maintaining that a belief's justification requires that it be produced by a "highly reliable" cognitive process (1996: 567–8). Ernest Sosa argues that knowledge must be produced by a competence, which is a disposition "that would in appropriately normal conditions ensure (or make highly likely) the success of any relevant performance issued by it" (2007: 29). John Greco identifies knowledge as true belief produced by "reliable cognitive abilities or powers" (2002: 308). Linda Zagzebski identifies knowledge as true belief "arising from" intellectual virtue, where a virtue is an entrenched character trait enabling "reliable success" (1996: II.4.1.2 and III.2.), in which case "reliability is entailed" by her definition of knowledge (1996: 300). Duncan Pritchard argues that knowledge must be "the product of the agent's reliable cognitive ability" (2009: 415.). Wayne Riggs argues that "one's theory of knowledge must contain a reliabilist component" (2002: 81). Wilfrid Sellars claims that your belief amounts to knowledge only if your believing it is a "reliable symptom" or "reliable indicator" that the belief is true (1956: 97). Laurence BonJour reminds us that "what is needed for knowledge, according to the traditional conception, is a reason or justification of the distinctive sort that is *truth-conducive*," where a truth-conducive reason "increases or enhances" the "likelihood that the belief is true" (2002: 39) to at least the point where the belief is "more likely to be true than not" (2003: 96). Perhaps somewhat less sanguinely, Timothy Williamson tells us that he finds "no reason" to "doubt the intuitive claim that reliability is necessary for knowledge" (2000: 100). Stewart Cohen (2002: 309) says that it is "a natural intuition . . . that a potential knowledge source, e.g., sense perception, can not deliver knowledge unless we know the source is reliable." And of course knowledge is factive, so Cohen's view entails that knowledge requires reliability. See also Ramsey 1931, Russell 1948, Dretske 1971, Armstrong 1973, Alston 1991, and Lehrer 1997. Goldman 2008 offers historical background and insight into how widely reliabilist intuitions about knowledge are shared.

[2] Juan Comesaña (2005) argues that unsafe knowledge is possible. (See also Neta and Rohrbaugh 2004.) Your belief is safe just in case it is true and you wouldn't (easily) have held that belief (on the same basis) if it were false. But Comesaña denies that the possibility of unsafe knowledge demonstrates the possibility of unreliable knowledge, because reliability needn't be understood in terms of safety (2005: 401). It is possible, Comesaña contends, to know based on a reliable but unsafe source. In such a case, your belief is reliable, but "unreliably reliable" (2005: 402). Ultimately, whereas Comesaña accepts that knowledge "tolerates near unreliability," he still considers reliability to be a

Let me first clarify what I mean by 'reliable', relying on standard formulations by leading reliabilists. A process, ability or disposition is (epistemically) reliable just in case it "will or would yield mostly true beliefs," and it yields *mostly* true beliefs only if "considerably more than half" of its outputs are true (Alston 1993: 8–9). Alternatively, we might say that it is reliable just in case the beliefs it "produce[s] are generally true" (Goldman 1979: 345). Either of these characterizations will suffice for present purposes.[3] I will take it for granted that a process, ability or disposition that does and would usually fail is unreliable in the sense of 'reliable' that leading reliabilists have in mind (in addition to the quotes from earlier in this paragraph, compare the quotations in footnote 1). From here onward, I will often speak simply of a 'process', an 'ability', or a 'disposition', rather than constantly repeating the disjunction 'process, ability or disposition'. By 'reliabilism' I shall mean the view that reliability is necessary for knowledge. By 'unreliable' I shall simply mean 'not reliable'.

2. The Argument from Achievements

Here is my first argument:

1. Achievements don't require reliable abilities. (Premise)
2. If achievements don't require reliable abilities, then unreliable knowledge is possible. (Premise)
3. So unreliable knowledge is possible. (From 1 and 2)

The argument is valid. I'll defend the premises in order.

Line 1 is supported by reflecting on cases. Ted Williams is the best baseball hitter ever. But he normally failed to get a hit. The relevant ability could at best be counted on to produce a hit about four in ten times: his best yearly average ever was .407 and his lifetime average much lower. But certainly many of his hits were achievements. And many hits by many lesser hitters are no doubt achievements too, despite the fact that these hitters fail to get a hit seventy-five percent of the time or more. Alexander Ovechkin was the most prolific goal scorer in the National Hockey League from 2005 to 2010. In that period, he scored 269 goals on 2159 shots, which means he scored on approximately only one out of every eight shots. Nevertheless, certainly many of these goals were achievements. And many goals by lesser players were also achievements, despite their having shot percentages well below Ovechkin's, scoring on perhaps one in twenty shots (or worse). No ability that normally fails is reliable. Thus many athletic achievements are unreliable.[4]

Consider also this case.

> (**BABY STEPS**) Geno is eleven months old. He has daily been gaining confidence in his ability to balance on two feet. Today he stood holding onto the couch when an object in Dad's hand commanded his attention. Inspired, Geno let go and, to his parents' delight, took his first two steps in Dad's direction.

Those first steps were an achievement. They manifested Geno's blossoming bipedalism. But of course at eleven months old he's still a highly unreliable walker. So achievement can issue from even highly *un*reliable ability.

And baby steps are not unique. Achievements populate the road to proficiency in many spheres. A child's first grammatical sentence manifests her incipient linguistic ability. A rookie golfer's first par manifests his incipient putting skill. A pleasing chord manifests a novice musician's incipient musical ability. Old Scrooge's first charitable donation might manifest his fledgling conscience. An undergraduate's essay might even manifest nascent composition skill. Even though their authors could not reliably produce such results, that first sentence, first par, first pleasing chord, first donation, and first decent essay are achievements.

Reflection shows that this result is expected. Abilities are closely related to powers, and outcomes often manifest weak or unreliable powers in mundane cases. A car's starting might manifest an unreliable starter's power. A room's being illuminated might manifest an unreliable flashlight's power. A candle's burning might

"plausible necessary condition on knowledge" (2005: 402).

[3] Various *stronger* reliability requirements have been proposed. For instance, Henderson and Horgan (2006) require that a belief be produced by a "transglobally reliable" process, where this requires that it be not only actually reliable, but that it would be reliable across a range of other possible worlds. And on one reading of Descartes (1641), he insists on utilizing processes that are not only reliable but necessarily reliable. If I'm right that the more modest reliabilist condition discussed in the text is false, then these stronger reliabilists conditions are false too. Also, for present purposes we needn't enter into the distinction between "belief-dependent" and "belief-independent" processes (see Goldman 1979: 347) or how this affects reliabilism's definitive statement, in either its stronger or weaker forms.

[4] Statistics gleaned from http://espn.go.com, accessed April 2010.

manifest an unreliable lighter's power. A door's opening might manifest an unreliable sensor's power. Such outcomes are possible *even if unexpected* from unreliable items. Likewise, successful outcomes are possible even if unexpected from unreliable athletes, orators, writers and artists.

Line 2 is very plausible. If athletic, artistic, social and academic achievements can manifest unreliable abilities — and especially if some extremely impressive accomplishments can manifest unreliable ability — it stands to reason that it is possible for knowledge to do so too. Knowledge is an intellectual achievement, so absent a special reason to think otherwise, we should expect it to share the profile of achievements generally.[5]

Before moving on to consider objections, it's worth noting that line 2 is further bolstered by the fact that the likelihood of failure sometimes seems to enhance rather than extinguish or even diminish an achievement. For example, Tiger Woods won the 2008 U.S. Open playing on a damaged knee and multiply fractured leg. The unlikelihood of his victory makes it seem like more of an achievement, not less. It is a greater credit to him that he triumphed under such conditions. And this still seems true even if we suppose that he couldn't reliably reproduce such an outcome because, say, the pain was too intense or his abilities too impaired. It stands to reason that the same is true for intellectual outcomes, such as true beliefs, and the corresponding intellectual achievement of knowledge.

One objection to line 2 is that knowledge is valuable, and this explains why it must be reliably produced, whereas the other achievements discussed above don't have to be. But this objection fails because many of those other achievements are valuable too. A second, related objection to line 2 doesn't deny that those other achievements are valuable, but insists that knowledge is somehow *specially* valuable, such that it must be reliably produced. For this objection to succeed — indeed, for it to even be evaluated — knowledge's special status would need to be explained.

A third objection to line 2 is that knowledge is something for which we deserve credit, and this explains why it must be reliably produced. To deserve credit for an outcome, it can't just be luck that you produced it. But the objection fails because people deserve credit for many of the unreliably produced achievements discussed above. Unreliable novices deserve credit for their athletic, artistic, social and academic achievements. Ted Williams deserves credit for many of his hits, and so do many lesser hitters. Alexander Ovechkin deserves credit for many of his goals, as do many lesser scorers. If they deserve credit for those outcomes, then so can unreliable believers who get it right through their ability. The fact that someone cannot reliably produce an outcome does not entail that it's "just luck" when she does produce it. Unreliable performers usually still have *some* ability or power to produce the relevant outcome. *Unreliability* does not equal *inability*.

The last point also undermines one primary motivation for reliabilism. Reliabilism "seeks to exclude luck or accidentality by some permutation of the reliability theme" (Goldman and Olsson 2009: 38); it is an "anti-luck" theory of knowledge (Heller 1995: 501; 1999: 115). Yet if an agent's success manifests her weak but nevertheless real ability to produce the relevant outcome, then whatever residue of luck that remains is consistent with achievement. It is *her* achievement, a status not undermined by the fact that she *could* have failed, that she *might* have failed, that she might *easily* have failed, or even that she was *likely* to fail.[6] She succeeded through ability and that's good enough. True, she might, in some sense, be lucky to have succeeded through ability. But being lucky to have succeeded through ability isn't the same thing as succeeding just by

[5] In an earlier note I pointed out that Comesaña argues for the possibility of unsafe knowledge, but resists the possibility of unreliable knowledge. Relatedly, Neta and Rohrbaugh (2004: 404) argue for the possibility of unsafe knowledge, based on the fact that knowledge is plausibly regarded as a cognitive achievement, and in general achievements needn't be safe. Say Neta and Rohrbaugh, "Like other achievements worth pursuing, it must be earned and is not assured. Indeed, the most dramatic achievements are those which are earned despite substantial risk of failure. The horse which wins by a nose, the leap across a chasm which almost results in a fatal plunge, and the Nobel Prize which could easily have gone to a competitor are all achievements earned despite the nearby possibility of failure. In general, earned achievements are not safe from failure, and knowledge is no different on this score. When one succeeds in forming a true belief in an epistemically respectable way, the nearby possibility of having gone wrong is not a reason to revoke the title of knowledge." What they seem to have overlooked, though, is that similar considerations point to the possibility of unreliable knowledge too, as I have argued here. Not only is the nearby *possibility* of failure consistent with achievement, but so is the *likelihood* of failure. Processes or abilities that are likely to fail are not reliable, in the relevant sense of 'reliable'.

[6] Indeed, we're often tempted by the thought that the likelihood of failure makes it *more* of an achievement, not less; see the Tiger Woods example above.

luck.

A fourth objection is that the argument equivocates on 'achievements don't require reliable abilities'.[7] That sentence could mean 'no achievement requires reliable abilities', or it could mean 'some achievements don't require reliable abilities'. If it means the former, then the first premise is doubtful. If it means the latter, then the second premise is doubtful, because the fact that *some* intellectual achievements can be unreliably produced doesn't lend much support to the claim that knowledge itself can be. And it's only by trading on these different readings that the argument overall appears sound.

In response, the objection fails because it's possible to go between the horns of the dilemma. A third reading of the sentence in question is possible, and on this reading the argument is still formidable. We could understand 'achievements don't require reliable abilities' in the way we normally understand statements of a similar form, such as 'humans don't have eleven fingers' and 'cats don't have two faces'. These latter statements, as ordinarily understood, don't express propositions made true simply by virtue of some humans not having eleven fingers, or by some cats not having two faces. Nor are they best understood as universal generalizations, because they seem true even though we know that there are some eleven-fingered humans and two-faced cats. Rather they are understood as expressing propositions about dominant tendencies, or what is typical, or what is natural and normal for a kind. Occasional cases of human polydactyly or astonishing feline genetic mutations don't render these statements false; the occasional exception doesn't disprove the rule. And given these tendencies, the fact that, say, Alice is a human makes it likely that Alice doesn't have eleven fingers, and the fact that Dinah is a cat makes it likely that Dinah doesn't have two faces. Likewise if we understand 'achievements don't require reliable abilities' to express a tendency proposition, then line 2 would still be very plausible. It would still be plausible because, as already mentioned, we would expect knowledge to fit the profile of achievements generally, unless we're given a special reason to think otherwise. And line 1 would remain very plausible too, because of the long and varied list of types of achievement that don't require reliability.

In the end, it seems to me that anything that can be reliably achieved can be unreliably achieved, so I would endorse the reading of 'achievements don't require reliable abilities' as a (necessarily true) universal generalization, even though such a reading isn't strictly necessary for my argument to pose a serious challenge to reliabilism. Any outcome that can be produced by a reliable ability can also be produced by an unreliable ability to produce that same outcome. And there is a perfectly good reason for this, which was already mentioned earlier, namely, that unreliability is not the same as inability.

A fifth objection says that any achievement is the product of a reliable ability, in the following way.[8] A particular hit by Ted Williams was an achievement because it manifested a reliable ability, namely, his ability to get a hit four in ten times. Williams is reliable at doing that. Likewise, the objection goes, anytime someone has an ability to achieve a certain outcome *n*% of the time, that person is reliable at: producing that outcome *n*% of the time. So whenever someone achieves an outcome, it is the result of a reliable ability. The same goes for true belief and, hence, knowledge. If someone's true belief is the result of a genuine ability to detect the truth *n*% of the time, then that true belief is produced by a reliable ability; so all cases of knowledge are produced by reliable abilities; so reliabilism is true. In response, the objection simply abandons the original reliabilist view, which, to put matters in the terminology suggested by the objection, is that knowledge must be produced by *a reliable ability that yields mostly true beliefs*. Reliabilism requires truth-conducive reliability, not just any kind of reliability. A reliable ability to produce mostly false beliefs is not what Alston, Goldman, Sosa and others had in mind. In the end, I take the objection to be proposing a mere verbal variant of my own non-reliabilist view, which is that knowledge is true belief manifesting intellectual ability, without requiring the ability to be reliably truth-conducive.

A sixth objection is that non-reliabilist epistemology fails because it can't handle certain general problems for a theory of knowledge, such as the Gettier problem or the lottery problem. For example, consider someone who has inside information that a certain ticket in a large, biased, single-winner lottery has a 30% chance of winning, and on this basis guesses that the ticket will win, which in turn forms the basis of her true belief that the ticket will win. It seems that such a person doesn't know, the objection continues, but nothing in the non-reliabilist proposal can explain why this is so.[9]

[7] Thanks to Bruce Russell for raising the objection.

[8] Thanks to Juan Comesaña for raising the objection.

[9] Thanks to Matthias Steup for raising the objection. For actual data on epistemic intuitions in lottery cases, see Turri

Or consider someone who has an unreliably formed true belief that is also Gettiered. It seems that such a person doesn't know either. In response, this objection is ineffective because my proposal isn't intended to solve these problems, and because adding a reliability requirement doesn't solve these problems either. Non-skeptical reliabilists accept that you don't know that you'll lose the lottery, even when the odds are 999,999-to-1 that you will lose (e.g. Williamson 2000: 246 ff, 117); and there are Gettier cases where the subject is perfectly reliable about the proposition in question (Turri 2012a). It might be suspected that a reliability requirement will be a necessary part of the solution to these problems, even if it isn't sufficient. But mere suspicion isn't enough to undermine the present argument, let alone underwrite an entire paradigm in contemporary philosophical research. Other resources are required to solve these problems (Greco 2000, Sosa 2007, Zagzebski 2009, Greco 2010), but there is reason to believe that those resources are equally available to non-reliabilists (Turri 2012b; see also Turri 2010, Turri 2011a, Turri 2011b, Turri 2012c, Turri 2013, Turri forthcoming a, Turri forthcoming b; Turri, Buckwalter and Blouw, under review).

3. The Argument from Explanatory Inference

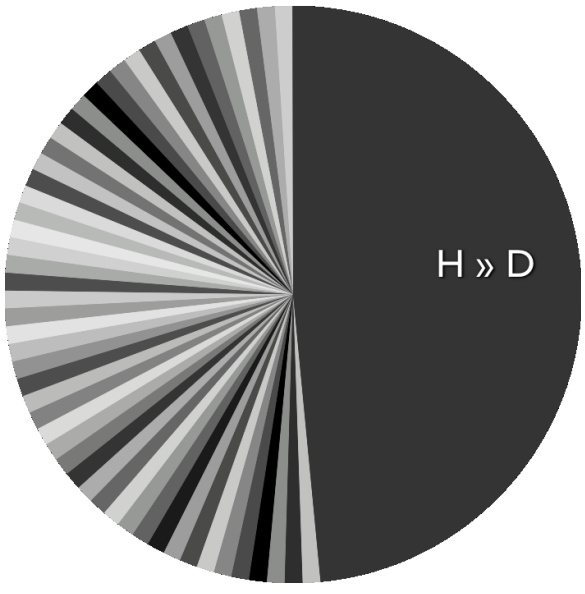
We now know that space-time is curved. We know this because the curved-space-time hypothesis best explains a wealth of data. (At least, *some of us* know it via explanatory inference; the rest of us know it based on testimony, but set that aside for now.) Among other things, it explains why we observe the Sun bend light through a 1.7-second angle and delay by 200 microseconds radar signals sent from Mars to Earth. We also know that humans and chimpanzees share a common ancestor. We know this because the common-ancestor hypothesis best explains some striking data. Among other things, it explains our observed genetic, morphological and social similarities.

The epistemic efficacy of explanatory inference supports the view that unreliable knowledge is possible. Inference to the best explanation yields knowledge if the explanation we arrive at is true. But even when it is true, the best explanation might not be very likely. So our disposition to infer to the best explanation might not be reliable. So unreliable knowledge is possible.

Why think the best explanation might not be very likely? Let 'D' name a robust set of well confirmed data and 'H' the hypothesis that best explains it. What makes H the best explanation? Take the set of possible worlds where D obtains. Call these the 'D-worlds'. Take the set of worlds where H explains D. Call these the 'H»D worlds'. Now suppose a plurality of D-worlds are H»D worlds. This makes H the most likely and so best explanation of D. But H»D is still not likely given D (in the same sense of likelihood). A plurality of D-worlds are H»D-worlds, but most D-worlds are *not* H»D-worlds.

Let the pie chart below represent a partition of the D-worlds. Suppose that forty-nine percent of them are H»D worlds and fifty-one percent are not. And further suppose that the fifty-one percent is equally divided among fifty-one competitors, ~H1»D through ~H51»D. ('~H1' names the first of H's competitors, '~H2' names the second, etc.) H is by far the best explanation of D, even though it's more likely that one of ~H1 through ~H51 explains D. (To say that something other than H explains D is not to offer an explanation of D.) In such a case, it's reasonable to accept that H explains D. And if it's true that H explains D, it seems that you could thereby know that H explains D.

Here is a case-study to help make the point vivid. Gregory House is the main character of the popular medical drama *House*. House is a world renowned diagnostician and head of diagnostic medicine at Princeton-Plainsboro Teaching Hospital. House leads a team of diagnosticians who collectively deal primarily with cases that other doctors have been unable to solve.



and Friedman, forthcoming.

They try to "diagnose the undiagnosable."[10] Nearly every episode of the show revolves around House's team trying to diagnose and treat a patient. Most episodes unfold similarly. The patient presents with symptoms that House finds "interesting" enough to investigate. House's team then deliberates, makes a diagnosis, prescribes a course of treatment which fails, revisits the matter in light of the failed treatment, new information, or a change in symptoms, then issues another diagnosis, prescribes a new course of treatment which fails, revisits the matter in light of the failed treatment, new information, or a change in symptoms, etc. This cycle continues until they finally solve the case and save the patient's life.

House and his team explicitly reason abductively. The patient's symptoms are the data, and the diagnosis is a theory offered to explain the data. When House concludes, for instance, that the patient has Wegener's Granulomatosis, he does so because Wegener's best explains the patient's symptoms — "it all fits," it "explains everything beautifully."

For present purposes, a crucial aspect of the series is that, in the end, House knows what disease the patient has. And he knows despite being unreliable. Both in the fiction and in the audience's mind as they watch along, when House correctly diagnoses that the patient has Wegener's, he knows that the patient has Wegener's. But House usually gets it wrong, even when employing his method and trying his best. Usually he gets it wrong at least two or three times before finally getting it right. House, his colleagues and the audience all recognize this, often times explicitly, but this doesn't detract from the intuition that when he gets it right, he knows.

In the episode "DNR," a member of House's team, Foreman, reminds House, "You've been wrong every step of the way." At least, House had been wrong every step of the way up until he claimed that a stroke caused paralysis in the patient's arm. Foreman scoffs, judging the suggestion to be unlikely. When the team does an MRI and identifies a clot in the patient's brain, Cameron and Chase, the two other members of House's team, chide Foreman for not giving House the credit he deserves. Chase points out the clot on the MRI and Cameron concludes, "It was a stroke. House called it." Foreman comes across as impudent when he dismissively remarks, "You make enough calls, one of them is bound to be right," to which Chase sarcastically responds, "*Yeah*, he's just a lucky, lucky guy."

House himself recognizes that his method is not reliable. For instance, in the episode "Poison" an adolescent male has been poisoned, but House and his team repeatedly misidentify the relevant poison. The boy's mother, Margo, rightly resents House and his team for their string of misdiagnoses and ineffective treatments. When House finally does figure it out, he approaches Margo and requests permission to treat her son's condition (again). Margo looks at him and asks, "What makes you think you're right this time?" House responds, "Same reason as last time." The reason is that the diagnosis best explains the data. (The data changed from the previous diagnosis.) But the fact that this method already led House astray several times in the present case doesn't lead him or the audience to conclude that he doesn't know. On the contrary, it's clear that he does know. In the episode "No Reason," an assailant shoots House with a handgun, but House keeps trying to solve his patient's illness despite severe physical and psychological complications from his gunshot wound.[11] Eventually House asks his team, "How come you guys have never tried to yank me off this case? I'm having hallucinations, blackouts." Foreman responds, "Well, you're always insane. And you're always right." House corrects him, "I'm *almost* always *eventually* right. You have no way of knowing when *eventually* is."

House tolerates a fairly high risk of error when settling on a diagnosis, so long as other diagnoses wouldn't "*just* as easily" be true, given the evidence (the episode "All In"). He is even willing to accept a "long shot" diagnosis, so long as it is considerably more likely than its main competitors. In the episode "Occam's Razor," for example, House's team is left to decide between two potential diagnoses, described as "a ten-million-to-one shot" versus "a million-to-one shot"; House settles for the latter. Would even *this* diagnosis yield knowledge, if true? It can easily seem like a stretch to say 'yes', and one suspects that the show's writers are here deliberately exaggerating one of the show's central themes, namely, intellectually overcoming unfavorable odds to save a patient's life. Fortunately nothing so radical is needed for my argument against reliabilism to go through.[12] After all, to accept that less-than-reliable

[10] "The Concept" in the bonus material on the Season One DVD set of *House*.

[11] He is actually just imagining the entire diagnostic process — it's an extended dream-like state induced by having been shot. But that's immaterial presently.

[12] Thanks to Trent Dougherty for helpful conversation on this point.

methods can underwrite knowledge doesn't require us to accept that *massively unreliable* methods can do so too. It's enough for my purposes that inference to the best explanation can yield knowledge, even though it doesn't yield the correct verdict most of the time.[13]

Without much injustice, then, we could put the second argument like so:

1. If House knows, then unreliable knowledge is possible. (Premise)
2. House knows. (Premise)
3. So unreliable knowledge is possible. (From 1 and 2)

The argument is valid. Line 1 is supported by the fact that House's method usually produces false beliefs. Line 2 is supported by intuition, and by the fact that millions of viewers, including trained epistemologists, detect no incoherence in the story line, week after week, over many seasons.

It might be objected that line 1 is false because the relevant method isn't *inference to the best explanation*, but rather *trying to solve the case*. And House is nearly perfectly reliable when he tries to solve the case.[14] This objection has two principal weaknesses. First, it looks to be an example of what Earl Conee and Richard Feldman call "*ad hoc* case-by-case selections of types [of processes] that match our intuitions" about whether the subject knows (Conee and Feldman 1998: 4). Second, House's method for trying to solve the case *just is* to employ inference to the best explanation. And since the latter is unreliable, it's difficult to see how appealing to the former saves the day for reliabilism. House may be reliable at *eventually* solving the case, but as he himself admits, most of his attempts to solve the case fail.

It might also be objected that line 1 is false because House *is* reliable when he employs inference to the best explanation. The standards for reliability vary considerably across different tasks, even for tasks within the same general domain. In basketball a .400 three-point shooter is reliable, but a .400 free-throw shooter is not — you need a free-throw percentage about .800 or better to be reliable. In baseball a .400 batting average is reliable, but a .400 fielding percentage is not — you need a fielding percentage well over .900 to be reliable (*how much over* depends on which fielding position is at issue, but set that aside). Likewise, the objection continues, when we're talking about knowledge, and when it comes to inference to the best explanation, a forty-percent success rate is reliable, even if it's woefully inadequate for reliable memory or vision.[15]

In response, this objection seems to concede the point I'm arguing for. If some processes are reliable in virtue of succeeding forty-percent of the time, then some processes that usually fail can be reliable, and we're no longer using 'reliable' in the same sense used by reliabilists in epistemology (see section 1).

Relatedly, reliabilists who are also contextualists (e.g. Heller 1999; see also Lewis 1996) tend to require *infallibility* with respect to all the relevant alternatives in a context, and they allow contextual factors to make the set of relevant alternatives more of less inclusive. But instead of requiring infallibility relative to context, they could simply require reliability relative to context. And if they did this, they could also appeal to contextually variable standards for reliability. It might be that reliability requires ruling out all relevant alternatives in some contexts, most alternatives in other contexts, and some nontrivial proportion less than half (say, 4/10) in yet other contexts. However, this sort of view is not reliabilist in the sense of 'reliability' we are concerned with here. For it allows that a process that produces mostly false beliefs (say, 6/10) can be reliable and, in turn, produce knowledge.

4. Reliability and Trust: Ecumenical Reliabilism

In this section I propose a new kind of reliabilism about knowledge, which has two principal advantages: it can

[13] 'But *where's the cutoff point*?' it might be asked. I don't need to answer this question to achieve my purpose here. Whether we accept reliabilism or we accept my non-reliabilist view, the question 'where's the cutoff point?' will arise. The reliabilist will be asked 'at what point greater than 50% is a process reliable enough to yield knowledge?'. Reliabilists haven't answered this question and don't seem to view it as a very pressing matter. I agree with them that it isn't a very pressing matter for their view. Likewise I don't view it as very pressing if I am asked 'at what point less than 50% is a process unreliable enough to not yield knowledge?'. In any case, neither side gains any advantage from such questions, so we can safely set the matter aside.

[14] Thanks to Heather Battaly for suggesting the objection, without necessarily endorsing it.

[15] Thanks to John Greco and Ernest Sosa for (independently) suggesting the objection, without necessarily endorsing it. To acknowledge the difference between belief-dependent and belief-independent processes — and the corresponding difference between conditional and unconditional reliability — would complicate the discussion at this point, but it wouldn't affect the basic point I'm making, so I leave those distinctions aside.

explain the epistemic efficacy of explanatory inference, and it coheres well with some very plausible points about the nature of abilities in general. My proposal is naturally understood as a successor to standard reliabilism.

In one perfectly respectable sense of 'reliable', you're reliable if you do (and would) succeed most of the time. This is the sense that reliabilists in epistemologists have favored. Call this the *truth-conducive sense* of reliability. But in another respectable sense of 'reliable', you're reliable if you're *trustworthy*. Call this the *trustworthiness sense* of reliability.[16] You're trustworthy (in some respect, in some circumstance) if it's appropriate to trust you (in that respect, in that circumstance). (I will hereafter drop the parenthetical qualifications.) In short, you're trustworthy if you merit the emotion of trust. Or to put it in a way that makes explicit the underlying connection between reliability and trust to which I'm calling attention, you're *trustworthy* if it's appropriate to *rely* on you.

You might merit trust even if you're more likely to fail than succeed. This might be so if trusting you was the best way to promote a good outcome. Ted Williams merits trust when he is at the plate. He might not get a hit most of the time, but he is the best option, so it's appropriate to trust him, to rely on him. House merits trust when he is on the case. He might not get the diagnosis right most of the time, but he is the best option, so it's appropriate to trust him, to rely on him. And what can be said of individuals in these cases can likewise be said of abilities, processes, methods, powers, and the like.

Even though an ability is likely to fail, it could still improve your prospects for success *well beyond chance*, and far enough beyond any available alternative.[17] Consider a complicated set of symptoms, along with a set of one hundred competing diagnoses. For simplicity suppose that these hundred exhaust all the alternatives and that there is a unique correct diagnosis. Even with no ability to discriminate among the hundred competitors, you would have a one percent chance of selecting the correct diagnosis. Someone with a thirty percent chance of selecting the correct diagnosis has diagnostic abilities far beyond yours. If no other diagnostician has even, say, a fifteen percent chance of succeeding, then it is eminently reasonable to trust the diagnostician who gets it right thirty percent of the time.

One promising successor hypothesis to truth-conducive reliabilism, then, is that knowledge must proceed from either truth-conducive or trustworthy abilities. Call this view *ecumenical reliabilism*. If we suppose that truth-conducive abilities merit trust, then the thesis statement of ecumenical reliabilism could be simplified: knowledge must proceed from trustworthy abilities.

Before concluding, I will offer a hypothesis about why epistemologists have mistakenly accepted truth-conducive reliabilism and overlooked ecumenical reliabilism.

Arguably, in order to have an ability to produce an outcome, it must improve your prospect of success beyond chance. If you succeed at a rate no better than chance, then it's tempting to say that you lack the relevant ability. And if you succeed at a rate worse than chance, then it's tempting to say that you have a *dis*ability: you're better of just trusting to luck than relying on your own efforts. With these points in mind, we can glimpse one reason why truth-conducive reliabilism might seem unavoidable.

Suppose that when we're considering whether someone knows Q, we think, "In order for her to know Q, she must have an ability to get at the truth of the matter. And if she has such an ability, then she gets the truth at a rate better than chance. Moreover, here chance is 50/50 because there are only two options: either Q is true, or it isn't. So knowledge requires truth-conducive reliability."

If we accept this reasoning, then ecumenical reliabilism collapses into truth-conducive reliabilism. But we shouldn't accept this reasoning. It takes too narrow a view of the potential options, focusing myopically on Q's truth or lack thereof. Sometimes we're faced with the *binary question* 'is Q true?'. But often we're faced with *open-ended questions*, such as 'what condition is causing his symptoms?', 'when will it happen?', 'who committed the crime?', or 'why is the honeybee population declining?' (see Schaffer 2007). It's no accident that one of my two main arguments against truth-conducive reliabilism featured explanatory reasoning: explanatory reas-

[16] Zagzebski (2009: ch. 4) speaks of "trust" and says some things that suggest she would be sympathetic to my proposal here. Nevertheless, her overall discussion seems wedded to the truth-conducive conception of reliability, which featured prominently in her earlier work (e.g. Zagzebski 1996). She says that her present view "roughly coincides" with her previous view (2009: 127), and remarks that it also "closely corresponds" to the views of Riggs, Greco and Sosa, all of whom endorse the standard truth-conducive reliabilist condition on knowledge.

[17] Thanks to Kristoffer Ahlstrom-Vij for helpful conversation on this point.

oning is our main tool for answering such open-ended questions. It is precisely these cases that the binary model poorly fits.

5. Conclusion

I have presented two arguments against truth-conducive reliabilism, one concerning achievements, the other concerning explanatory inference. Each argument is valid with plausible and defensible premises. I submit that it is more likely that at least one of these arguments is sound than that truth-conducive reliabilism is true. It seems more likely than not that unreliable knowledge is genuinely possible. I conclude that the conventional wisdom is wrong about the relationship between knowledge and reliability. I also proposed a new view about the requirements of knowledge, ecumenical reliabilism, which is not only consistent with unreliable knowledge, but also helps us to understand why it is possible.[18]

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