

Witness agreement and the truth-conduciveness of coherentist justification

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ABSTRACT: Some recent work in formal epistemology shows that “witness agreement” by itself implies neither an increase in the probability of truth nor a high probability of truth—the witnesses need to have some “individual credibility.” It can seem that, from this formal epistemological result, it follows that coherentist justification, i.e., doxastic coherence, is not truth-conducive. I argue that this does not follow. Central to my argument is the thesis that, though coherentists deny that there can be noninferential justification, coherentists do not deny that there can be individual credibility.

1

Some recent work in formal epistemology shows that (given certain assumptions) “witness agreement” *by itself* implies neither an increase in the probability of truth nor a high probability of truth—the witnesses need to have some “individual credibility.” It can seem that, from this formal epistemological result, it follows that coherentist justification, i.e., doxastic coherence, is not truth-conducive. I aim to show that this does not follow. Central to my argument is the thesis that, though coherentists deny that there can be *noninferential justification*, coherentists do not deny that there can be *individual credibility* (in the sense in question).¹

2

Some clarifications are in order. I begin with the notion of “coherentist justification.”

Coherentists on justification (i.e., *epistemic* justification, or positive epistemic status) hold that *all* justification is *inferential*; all justification requires evidential support from

¹ This paper is meant to improve on, in several respects, my (2010).

beliefs.² Coherentists thus hold that justification has no foundation—no class of beliefs the justification of which is noninferential and serves as the basis of all inferential justification. Beliefs, when justified, get their justification together, not in isolation, as members of a coherent belief system. Let's say (simplifying a bit) that coherentist justification is solely a matter of *doxastic coherence*: *S*'s belief in *p* is justified just in case *S*'s belief system is coherent.³

Is doxastic coherence *truth-conducive*, that is, does doxastic coherence imply an *increase* in the probability of truth and a *high* probability of truth?⁴ This is a pressing question for coherentists. For, it seems, justification is truth-conducive (in the sense in question), and so unless doxastic coherence is truth-conducive, coherentism is false.⁵

² Here, and elsewhere in the paper, “evidential support” is to be understood so that evidential support can be inductive and thus does not require logical entailment. See Cling (2008) on “implication.”

³ More precisely: *S*'s belief in *p* is justified just in case *S*'s belief system is (at least) *highly* coherent. For a more detailed presentation of coherentism, see Roche (forthcoming). For general discussion of the elements of coherence, see BonJour (1985, Ch. 5, sec. 5.3). For discussion of *probabilistic* conceptions of coherence, see, e.g., Douven and Meijs (2007), Olsson (2005a, secs. 6.1 and 6.2), and Siebel (2005). For discussion of forms of coherentism on which coherence is a matter not just of the subject's beliefs (or, the propositional contents of the subject's beliefs), but also of her experiences (e.g., perceptual experiences), see Cohen (2002), Horgan and Potrc (2010), Kvanvig (1995), Kvanvig and Riggs (1992), and Roche (forthcoming). It might be that coherentists should hold that what matters for justification is the coherence not of the subject's belief system *as a whole* (or “belief-and-experience” system as a whole), but of a certain *proper subset* (or “module”) of that system. See Kvanvig (this journal), Lycan (1996), and Olsson (1997). For defense of a form of coherentism requiring (for justification) more than just coherence, see BonJour (1985). It might be that coherentists should, hence *can*, hold that some justification is noninferential. See Lycan (1988, 1996) and Poston (this journal).

⁴ A related, but distinct, question is whether, *ceteris paribus*, *greater* coherence implies a *greater* probability of truth. For discussion, see Angere (2007, 2008), Bovens and Hartmann (2003a, 2003b, 2005, 2006), Bovens and Olsson (2000, 2002), Cross (1999), Huemer (2007), Klein and Warfield (1994, 1996), Meijs and Douven (2007), Merricks (1995), Olsson (2001, 2002, 2005a, 2005b), Schupbach (2008), Shogenji (1999, 2005b, 2006, 2007), and Wheeler (2009).

⁵ I shall assume, as seems plausible, that justification is truth-conducive. If justification is *not* truth-conducive, and it is *not* incumbent on coherentists to show that coherentist

I shall let “ b_p ” stand for the claim “ S believes p ,” and “ C_S ” stand for the claim “ S ’s belief system is coherent.” The question of whether doxastic coherence is truth-conducive can then be put as: Is it the case that $\Pr(p \mid b_p \ \& \ C_S) > \Pr(p \mid b_p)$ and $\Pr(p \mid b_p \ \& \ C_S) \gg .5$?⁶

Note that coherentism of the sort under consideration does *not* require that S believe that his belief system is coherent, or that S believe that $\Pr(p \mid b_p \ \& \ C_S) > \Pr(p \mid b_p)$ and $\Pr(p \mid b_p \ \& \ C_S) \gg .5$. The requirement is just that S ’s belief system *be* coherent.⁷ Perhaps if p is an *epistemic* proposition, e.g., *My belief in p is justified*, then S needs to believe that his belief system is coherent, and believe that $\Pr(p \mid b_p \ \& \ C_S) > \Pr(p \mid b_p)$ and $\Pr(p \mid b_p \ \& \ C_S) \gg .5$. But not otherwise. What I argue below, though, could be recast in terms of a form of coherentism requiring that S believe that his belief system is coherent, and that S believe that $\Pr(p \mid b_p \ \& \ C_S) > \Pr(p \mid b_p)$ and $\Pr(p \mid b_p \ \& \ C_S) \gg .5$.

It is crucial to bear in mind that the claims “ $\Pr(p \mid b_p \ \& \ C_S) > \Pr(p \mid b_p)$ ” and “ $\Pr(p \mid b_p \ \& \ C_S) \gg .5$ ” are to be evaluated by *us* (not by S). The situation can be seen as follows. We want to determine whether coherentism is true. We believe that coherentism is true only if doxastic coherence is truth-conducive, that is, only if $\Pr(p \mid b_p \ \& \ C_S) > \Pr(p \mid b_p)$ and $\Pr(p \mid b_p \ \& \ C_S) \gg .5$. We thus want to determine whether $\Pr(p \mid b_p \ \& \ C_S) > \Pr(p \mid b_p)$ and $\Pr(p \mid b_p \ \& \ C_S) \gg .5$, and will try to do exactly that.⁸

We face a problem, though, due in part to the fact that, like many claims of probability, the claims “ $\Pr(p \mid b_p \ \& \ C_S) > \Pr(p \mid b_p)$ ” and “ $\Pr(p \mid b_p \ \& \ C_S) \gg .5$ ” are true or false depending on what information k is codified in \Pr . Consider the second claim to illustrate. Suppose k includes the information that p . Then, $\Pr(p \mid b_p \ \& \ C_S) = 1$ and so the claim “ $\Pr(p \mid b_p \ \& \ C_S) \gg .5$ ” is true. Suppose instead k includes the information that not- p . Then $\Pr(p \mid b_p \ \& \ C_S) = 0$ and the claim “ $\Pr(p \mid b_p \ \& \ C_S) \gg .5$ ” is false. The question is:

justification is truth-conducive, then the formal epistemological result set out in section 3 below poses no threat to coherentism. Even if, contrary to what I shall argue, the result in question showed that coherentist justification is not truth-conducive, it might still be that coherentism is correct. For discussion (in addition to that in this paper) of how to understand the “truth connection,” i.e., the connection between justification and truth, see, e.g., Cohen (1984), Conee (2004), Kvanvig (2007), and Lehrer and Cohen (1983).

⁶ The question could instead be put as: Is it the case that $\Pr(p \mid b_p \ \& \ C_S) > \Pr(p \mid b_p)$ and $\Pr(p \mid b_p \ \& \ C_S) \geq t$ (where t is the threshold for *high* probability)?

⁷ I am assuming, as seems plausible, that S ’s belief system can be coherent even if S does not believe that his belief system is coherent, and does not believe that $\Pr(p \mid b_p \ \& \ C_S) > \Pr(p \mid b_p)$ and $\Pr(p \mid b_p \ \& \ C_S) \gg .5$.

⁸ I can imagine other reasons for wanting to determine whether $\Pr(p \mid b_p \ \& \ C_S) > \Pr(p \mid b_p)$ and $\Pr(p \mid b_p \ \& \ C_S) \gg .5$. I do not mean to suggest otherwise.

What information, if any, should be included in k ? Better put: What information, if any, is appropriate for inclusion in k , for the purpose of *fairly* testing doxastic coherence for truth-conduciveness?⁹

One point is clear: Not just *any* information is appropriate for inclusion in k . For example, the information that not- p is not appropriate for inclusion in k . This can be seen as follows. If the information that not- p were appropriate for inclusion in k for the purpose of fairly testing *doxastic coherence* for truth-conduciveness, then, presumably, the information that not- p would be appropriate for inclusion in k for the purpose of fairly testing *process-reliabilist justification* for truth-conduciveness.¹⁰ The result would be that process-reliabilist justification implies neither an increase in the probability of truth nor a high probability of truth, hence is not truth-conducive. For, if k includes the information that not- p , then $\Pr(p \mid b_p \ \& \ S\text{'s belief in } p \text{ was produced by a highly reliable process}) = 0 = \Pr(p \mid b_p)$, and $\Pr(p \mid b_p \ \& \ S\text{'s belief in } p \text{ was produced by a highly reliable process}) = 0 < .5$. Clearly, however, process-reliabilist justification *is* truth-conducive.

More could be said about what it takes for justification of a certain sort to be truth-conducive. The above, though, should suffice for my purposes. Let's turn to a case of witness agreement, and to the formal epistemological result referred to above (section 1).

3

Suppose a crime has been committed. There are ten suspects. One of the suspects is Smith. Initially, the probability that Smith committed the crime is .1. The same is true with respect to each of the other suspects. Then, several witnesses come forward. Each witness is just as likely to be a liar as a truth-teller. But, the witnesses all testify, independently (no collusion), that Smith committed the crime. The testimonies, it seems, together constitute a case of (very high, perhaps maximal) coherence; the testimonies are in perfect agreement with each other, and so could not better "hang together." Moreover, it is highly probable, it seems, that the witnesses are telling the truth (hence that Smith committed the crime); if the witnesses were lying, then, given that they testified

⁹ The claim that doxastic coherence implies an increase in the probability of truth could instead be written as " $\Pr(p \mid b_p \ \& \ C_S \ \& \ k) > \Pr_k(p \mid b_p \ \& \ k)$ " or " $\Pr_k(p \mid b_p \ \& \ C_S) > \Pr_k(p \mid b_p)$." Likewise, the claim that doxastic coherence implies a high probability of truth could instead be written as " $\Pr(p \mid b_p \ \& \ C_S \ \& \ k) \gg .5$ " or " $\Pr_k(p \mid b_p \ \& \ C_S) \gg .5$." Nothing of substance hinges in which formulations are used.

¹⁰ Process reliabilism is the view (roughly) that S 's belief in p is justified just in case S 's belief in p was produced by a highly reliable process. See Goldman (1979).

independently, and had many ways in which to lie, their agreement would be rather surprising (not something to be expected).¹¹ If, then, witness agreement is a case of coherence, and, given certain assumptions, witness agreement implies an increase in the probability of truth and a high probability of truth, perhaps it follows that, given analogous assumptions, doxastic coherence implies an increase in the probability of truth and a high probability of truth. And if so, perhaps it follows that doxastic coherence is truth-conducive.

C. I. Lewis (1946, Ch. XI), though, argues that coherence (or “congruence”) by itself implies neither an increase in the probability of truth nor a high probability of truth—there needs to be some individual (or *prima facie* or initial) credibility. Here, in the passage below, Lewis makes this point with respect to “mnemonic presentations” and the coherence thereof:

It is essential to the argument that any item of our sense of past fact be *prima facie* credible; that such mnemonic presentation itself should, before any further examination as to congruence, afford some probability of past fact. Just what degree of credibility thus attaches initially to the remembered, merely because remembered, we do not need to ask. It does not appear that we could, candidly, assign any particular degree to it. . . . But it does not need to be assigned. A larger or a smaller such initial probability would have no appreciable effect upon the eventually determinable probabilities in question beyond that of a difference in the extent of congruity with other mnemonic items and with sense presentation which would be required for building up eventual probabilities sufficient for rational and practical reliance. If, however, there were *no* initial presumption attaching to the mnemically presented; no valid supposition of a real connection with past experience; then no extent of congruity with other such items would give rise to any eventual credibility. (1946, 356-357, emphasis original)

Some recent work in formal epistemology shows that, at least with respect to witness agreement, and on a certain understanding of “individual credibility,” Lewis is correct about the need for some individual credibility. Michael Huemer (1997), Erik Olsson

¹¹ Admittedly, the case is underdescribed. If, say, the witnesses were lying, and each witness had a strong reason (pragmatic) to testify against Smith, and no reason to testify against any of the other suspects, and so on, then, though the witnesses testified independently, and had many ways in which to lie, their agreement would be *not at all* surprising (something to be expected). See Elgin (2005, pp. 157-159) for relevant discussion.

(2002, 2005a), and Tomoji Shogenji (2005a) establish the thesis that (to put the point in line with the discussion above in section 2):

- (A) When k is such that each of witnesses w_1, w_2, \dots, w_n has no individual credibility with respect to p , $\Pr(p \mid w_1, w_2, \dots, w_n \text{ all testified that } p) = \Pr(p)$.¹²

The notion of individual credibility is here understood as follows:

- (B) A witness w_i has no individual credibility with respect to p if and only if $\Pr(p \mid w_i \text{ testified that } p) = \Pr(p)$.¹³

Consider the crime case from above. Suppose there are twenty witnesses: w_1, \dots, w_{20} . Suppose each of w_1, \dots, w_{20} has no individual credibility with respect to the claim that Smith committed the crime. Then, by (A) it follows that $\Pr(\text{Smith committed the crime} \mid w_1, \dots, w_{20} \text{ all testified that Smith committed the crime}) = \Pr(\text{Smith committed the crime}) = .1$.

How can this be? Initially, the probability that Smith committed the crime is .1. Then, w_1, \dots, w_{20} come forward. Each of w_1, \dots, w_{20} is just as likely to be a liar as a truth-teller. But w_1, \dots, w_{20} all testified that Smith committed the crime—this despite the fact that they testified independently and could have singled out any of nine other suspects. It can seem that *even if* each of w_1, \dots, w_{20} has no individual credibility with respect to the claim that Smith committed the crime, it is highly probable that they are telling the truth, thus that Smith committed the crime.

Olsson (2005a, pp. 66-72, pp. 218-219) and Shogenji (2005a, pp. 311-315, pp. 317-318) address this line of reasoning,¹⁴ arguing that it overlooks the fact that:

¹² Or establish a variant of (A). Huemer, for one, establishes a thesis like (A) but restricted to cases of witness agreement involving just *two* witnesses. I have omitted from (A) a clause stating that the various testimonies (viz., the claims “ w_1 testified that p ,” “ w_2 testified that p ,” and so on) are probabilistically independent of each other given the truth or falsity of p . This clause is quite important. See Huemer (2007). See also Olsson (2005a, pp. 58-60) and Shogenji (2005a, p. 321). But, for the purposes of this paper, it may be ignored.

¹³ Individual credibility need not be construed as attaching to *witnesses* (relative to propositions). It may instead be construed as attaching to *witness reports*. Nothing of substance hinges on which construal is used. I shall continue to speak of individual credibility as attaching to witnesses.

- (C) When there are many (i.e., two or more) ways for a witness to lie, a witness with no individual credibility is more likely to be a liar (a witness who invariably produces false reports) than a truth-teller (a witness who invariably produces true reports).¹⁵

More precisely, when there are $n - 1$ ways for a witness to lie, for $n > 2$, a witness with no individual credibility is $n - 1$ times more likely to be a liar than a truth-teller. So, if each of w_1, \dots, w_{20} has no individual credibility with respect to the claim that Smith committed the crime, then, since there are ten suspects and, thus, nine ways for the witnesses to lie, it follows that, contrary to the line of reasoning given in the previous paragraph, each of w_1, \dots, w_{20} is *nine times more likely to be a liar than a truth-teller*.

It might seem, still, that even if each of w_1, \dots, w_{20} is nine times more likely to be a liar than a truth-teller, it is highly probable that the witnesses are telling the truth. For, the idea goes, even if each of w_1, \dots, w_{20} is nine times more likely to be a liar than a truth-teller, it remains the case that if the witnesses were lying, then, given that they testified independently, and had many ways in which to lie, their agreement would be rather surprising. Shogenji replies to this sort of worry as follows:

We should note that as the number of matching reports increases, it becomes more and more unlikely that the witnesses happen to be lying in the same way. *However, this improbability is offset by the rapid decrease in the probability that all witnesses are truthful since each witness with no individual credibility is already unlikely to be truthful*. For example, the probability of all three witnesses being truthful is only 9^{-3} of the probability that all of them are lying. This surely makes us much less confident that in the absence of individual credibility coherence of evidence has a positive impact on the probability of the proposition, and the formal result in the preceding section bears out this doubt. (2005a, p. 315, emphasis mine)

¹⁴ So too does Huemer (1997, pp. 470-471).

¹⁵ (C) relies on several assumptions. One assumption is that a witness is a truth-teller, a liar, or a “randomizer.” A randomizer is a witness who testifies randomly. Suppose, in a particular case, there are n suspects, s_1, \dots, s_n , and they are all equally likely to be the criminal. Suppose a certain witness is a randomizer, and is set to incriminate one of the suspects. Then, regardless of which of the suspects is guilty, the probability of the witness’s incriminating s_i (for any i) is $1/n$.

Let's grant (A) and (C); (B) is simply a specification of how to understand the notion of no individual credibility. I want to consider the question: Does it follow from (A) and (C) that doxastic coherence is not truth-conducive?

4

It might seem that witness agreement is not a case of coherence *of the right sort or degree*. James van Cleve, for one, argues that (as a case of coherence) witness agreement is very much oversimplified:

Although the agreement of witnesses on the stand has been called a paradigm of coherence . . . , it is in one respect a drastically oversimplified model of coherence. The agreement of the witnesses is literal identity, or at least logical equivalence, of content: Alice says X and Bert says X, too. But the coherence that figures in epistemology is typically a matter of hanging together in a looser sort of way. The coherence of ostensible memories is not their all being memories that P, for the same P or something logically equivalent. Nor is the coherence of beliefs or cognitions more generally like that. Rather, it is a type of coherence that is exemplified by the following list of items:

I seem to remember hearing a commotion last night.

I seem to remember smelling a skunk last night.

I seem to remember that the lid was on the garbage can when I went to bed.

I seem to remember reports of a skunk in the neighborhood.

I now see that the can has been knocked over and trash strewn about.

There was a skunk here last night.

and so on. In other words, it is not identity or even equivalence of content, but rather something like the relation Lewis calls congruence: a matter of each of the contents being more probable given the rest than it is on its own. (2011, pp. 367-368)

Further, it might seem that if witness agreement is not a case of coherence of the right sort or degree, then (A) and (C)—claims about witness agreement—do nothing to show that doxastic coherence implies neither an increase in the probability of truth nor a high probability of truth.

I want to set aside this worry. Olsson (2005a, sec. 7.1) considers cases of witness agreement in which the witnesses testify not to the truth of the same claim, but to the

truth of different (and nonequivalent) claims. Olsson argues that here too the witnesses need to have some individual credibility.¹⁶

A second worry can be put as follows. Coherentism (of the sort under consideration) is a theory of justified *belief*. Coherentism says that what matters for the justification of a belief is *doxastic* coherence. Nothing in coherentism says that *nondoxastic* coherence, of any sort, e.g., the coherence of a novel, implies an increase in the probability of truth and a high probability of truth. Witness agreement, though, is a case of nondoxastic coherence (assuming it is a case of coherence). Hence, nothing in coherentism says that witness agreement implies an increase in the probability of truth and a high probability of truth. Moreover, it is not the case (or at least not obviously) that any one sort of coherence implies an increase in the probability of truth and a high probability of truth only if the same is true of every other sort of coherence. So, (A) and (C) do nothing to show that coherentism is false, or to show that doxastic coherence implies neither an increase in the probability of truth nor a high probability of truth.

I am very much sympathetic to this worry. But it too I want to set aside (so as to develop what I take to be a deeper worry), and simply suppose that (A) and (C), understood in terms of (B), carry over to the case of doxastic coherence (as follows):

- (A*) When k is such that S has no individual credibility with respect to the propositions he believes, $\Pr(p \mid b_p \ \& \ C_S) = \Pr(p \mid b_p)$.
- (B*) S has no individual credibility with respect to p if and only if $\Pr(p \mid b_p) = \Pr(p)$.
- (C*) When there are many (i.e., two or more) ways for a subject to get things wrong, a subject with no individual credibility is more likely to have unreliable processes (processes which invariably produce false beliefs) than reliable processes (processes which invariably produce true beliefs).

I want to consider the question: Does it follow from (A*) and (C*), understood in terms of (B*), that doxastic coherence is not truth-conducive?

I shall argue in the negative. If I am correct in this, it follows that (A) and (C), too, leave it open that doxastic coherence is truth-conducive. Also, it follows that even if (A*) and (C*) can be established directly (Bovens and Olsson 2000; Olsson 2002, 2005a; Olsson and Shogenji 2004; Shogenji 2005a), it might be that doxastic coherence is truth-conducive.

¹⁶ This is also argued in Shogenji (2005a).

Note that (A*) leaves it open that when k is such that S has no individual credibility with respect to the propositions he believes, $\Pr(p \mid b_p) = \Pr(p) \gg .5$. But let's understand (A*) so that: When k is such that S has no individual credibility with respect to the propositions he believes, $\Pr(p \mid b_p \ \& \ C_S) = \Pr(p \mid b_p) < .5$, and so it is not the case that $\Pr(p \mid b_p \ \& \ C_S) \gg .5$.

5

Consider:

- (D) Doxastic coherence is truth-conducive only if: When k is such that S has no individual credibility with respect to the propositions he believes, $\Pr(p \mid b_p \ \& \ C_S) > \Pr(p \mid b_p)$ and $\Pr(p \mid b_p \ \& \ C_S) \gg .5$.

(D) implies that information such that S has no individual credibility with respect to the propositions he believes is appropriate for inclusion in k . If (D) is correct, then, given (A*), it follows that doxastic coherence is not truth-conducive. But suppose, contra (D), that information such that S has no individual credibility with respect to the propositions he believes is *not* appropriate for inclusion in k . Then, even if (A*) is correct, it might be that doxastic coherence is truth-conducive. Is (D) correct?

If (D) is correct, then, given (C*), and assuming that when S forms, say, a perceptual belief, there are two or more ways for her to get things wrong, it follows that:

- (D*) Doxastic coherence is truth-conducive only if: When k is such that S is *more likely to have unreliable processes than reliable processes*, $\Pr(p \mid b_p \ \& \ C_S) > \Pr(p \mid b_p)$ and $\Pr(p \mid b_p \ \& \ C_S) \gg .5$.

But (D*), it seems, is too demanding. Information such that S is more likely—indeed, *much* more likely, where there are *very* many ways for S to get things wrong—to have unreliable processes than reliable processes is not appropriate for inclusion in k .

I find it at least somewhat plausible that k should include *no information as to whether S 's processes are reliable or unreliable*, and that *the* test should be whether: When k includes no information as to whether S 's processes are reliable or unreliable, doxastic coherence implies an increase in the probability of truth and a high probability of truth. More precisely:

- (E) Doxastic coherence is truth-conducive if and only if: When k includes no information as to whether S 's processes are reliable or unreliable, $\Pr(p | b_p \& C_S) > \Pr(p | b_p)$ and $\Pr(p | b_p \& C_S) \gg .5$.¹⁷

Suppose (E) is correct. Suppose, further, if k includes no information as to whether S 's processes are reliable or unreliable, then k is such that S is just as likely to have unreliable processes as reliable processes. Then it follows that:

- (E*) Doxastic coherence is truth-conducive if and only if: When k is such that S is just as likely to have unreliable processes as reliable processes, $\Pr(p | b_p \& C_S) > \Pr(p | b_p)$ and $\Pr(p | b_p \& C_S) \gg .5$.¹⁸

If (E*) is true, (D*) is false.¹⁹ Hence, if (E) holds, and (E) leads to (E*), it follows that (D*) is incorrect. Then, since (D*) follows from the conjunction of (D) and (C*), and since, as I grant, (C*) is correct, it follows that (D) is false.

The approach just described, of supposing k includes no information as to whether S 's processes are reliable or unreliable, seems to be Laurence Bonjour's approach in Bonjour (1985). In Chapter 1 (sec. 1.3), Bonjour argues that when an epistemologist gives a theory of justification, she needs to give a "metajustification" for the theory, i.e., an *a priori* argument showing that justification of the sort in question is likely to lead to truth.

¹⁷ I am simplifying a bit. I find it at least somewhat plausible that k should include no information as to whether S 's processes are reliable or unreliable. Perhaps too k should include no information vis-à-vis certain other matters, e.g., whether S 's beliefs were formed independently of each other.

¹⁸ (E*) does not say or imply that doxastic coherence is truth-conducive only if: Only when k is such that S is just as likely to have unreliable processes as reliable processes, $\Pr(p | b_p \& C_S) > \Pr(p | b_p)$ and $\Pr(p | b_p \& C_S) \gg .5$.

¹⁹ (E*) says (in part) that doxastic coherence is truth-conducive if: When k is such that S is just as likely to have unreliable processes as reliable processes, $\Pr(p | b_p \& C_S) > \Pr(p | b_p)$ and $\Pr(p | b_p \& C_S) \gg .5$. (E*) thus implies the falsity of the thesis that doxastic coherence is truth-conducive only if: When k is such that S is more likely to have unreliable processes than reliable processes, $\Pr(p | b_p \& C_S) > \Pr(p | b_p)$ and $\Pr(p | b_p \& C_S) \gg .5$. (Note that (E*) entails (D*) if the following conditional holds: If when k is such that S is just as likely to have unreliable processes as reliable processes, $\Pr(p | b_p \& C_S) > \Pr(p | b_p)$ and $\Pr(p | b_p \& C_S) \gg .5$, then when k is such that S is more likely to have unreliable processes as reliable processes, $\Pr(p | b_p \& C_S) > \Pr(p | b_p)$ and $\Pr(p | b_p \& C_S) \gg .5$. But this conditional, it seems, is false.)

Then, in Chapter 8, Bonjour attempts to give a metajustification for his coherentism. Bonjour attempts to show *a priori* that if, over a long run, a subject's belief system has remained coherent, stable, and in accord with the "Observation Requirement" (i.e., the requirement that a belief system "contain laws attributing a high degree of reliability to a reasonable variety of cognitively spontaneous beliefs" (1985, p. 141)), then his beliefs are likely, to a degree proportional to the longness of the run and the coherence and stability of the system, to be true. This argument is meant to help in answering external-world skepticism. A subject, armed with such an argument, could argue (or reason) that, though *he initially was ignorant as to the reliability of his processes*, as well as to all other external-world matters, he now has (at least relatively) strong evidence that his processes are reliable and his beliefs are true—viz., that, over a long run, his belief system has remained coherent, stable, and in accord with the Observation Requirement.²⁰

I do not claim to have shown that (E) and (E*) are true. The point is that (E) and (E*) are at least somewhat plausible, and that if (E) and (E*) are true, then, even if (A*) and (C*) were correct, it might be that doxastic coherence is truth-conducive.

I now want to consider whether coherentists themselves are committed to (D), and, with (C*), to (D*) and not-(E*).

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(E*) implies that information such that *S is just as likely to have unreliable processes as reliable processes* is appropriate for inclusion in *k*. (C*) implies that information such that *S is just as likely to have unreliable processes as reliable processes* is information such that *S has some individual credibility with respect to the propositions he believes*.²¹ So, (E*) and (C*) together imply that information such that *S has some individual credibility with respect to the propositions he believes* is appropriate for inclusion in *k*. Is this implication acceptable?

Olsson, I take it, would answer in the negative, at least with respect to Bonjour's coherentism. Olsson writes:

²⁰ Reliability should here be understood so that reliability comes in degrees, and a process can be reliable (though not fully reliable) even if it does not invariably produce true beliefs. Cf. (C*) in section 4.

²¹ (C), stated above in section 3, should be understood so that a witness who is just as likely to be a truth-teller as a liar has some individual credibility. See Olsson (2005a, p. 71, pp. 218-219). (C*) should be understood accordingly.

What is the import of this result? Well, we remember that Bonjour's main application is his attempted radical justification of belief, in which case our imagined initial position presumably is one of ignorance as to whether our information is reliable or not. In the absence of a better way of representing ignorance probabilistically, we seem obliged to assign to each possibility the same probability. . . . Moreover, given an initial ignorant state, there seems to be no reason to restrict the number of possible contents a given cognitively spontaneous belief may have to 2. . . . Now what we have shown is that invoking these two assumptions—'uniform prior over the possible reliability profiles' and 'more than two possible report contents'—automatically confers a positive degree of credibility on each individual report. It would seem difficult to avoid the conclusion that each cognitively spontaneous belief is to some degree credible even before any appeals to coherence have been made. But this conclusion contradicts Bonjour's contention that cognitively spontaneous beliefs are initially lacking in credibility.

The incompatibility is serious because it involves a fundamental assumption in Bonjour's epistemology. After all, he takes as the hallmark of his coherence theory that it does not require given data to be individually credible; this is the very feature that is supposed to distinguish his theory from Lewis's weak foundationalism. (2005a, pp. 71-72)

But consider Bonjour's reply to Lewis, noting in particular how Bonjour characterizes the notion of "negative" credibility:

What Lewis does not see, however, is that his own example shows quite convincingly that no antecedent degree of warrant or credibility is required. For as long as we are confident that the reports of various witnesses are genuinely independent of each other, a high enough degree of coherence among them will eventually dictate the hypothesis of truth telling as the only available explanation of their agreement—even, indeed, if those individual reports initially *have a high degree of negative credibility, that is, are much more likely to be false than true* (for example in the case where all the witnesses are known to be habitual liars). And by the same token, so long as apparently cognitively spontaneous beliefs are genuinely independent of each other, their agreement will eventually generate credibility, without the need for any initial degree of warrant. (1985, p. 148, emphasis mine)

Bonjour's view (when reworded so that individual credibility is construed as attaching to *witnesses*), as I read it, is that w_i has *positive* individual credibility with respect to p just in case $\Pr(p \mid w_i \text{ testified that } p)$ is greater than .5, *negative* individual credibility with

respect to p just in case $\Pr(p \mid w_i \text{ testified that } p)$ is less than .5, and *no* individual credibility (positive or negative) with respect to p just in case $\Pr(p \mid w_i \text{ testified that } p)$ is equal to .5.²² Bonjour's claim in answer to Lewis is *not* that witness agreement implies (or at least can imply) an increase in the probability of truth and a high probability of truth even if $\Pr(p \mid w_i \text{ testified that } p)$ is *equal to* $\Pr(p)$. The claim, rather, is that witness agreement implies (or at least can imply) an increase in the probability of truth and a high probability of truth even if $\Pr(p \mid w_i \text{ testified that } p)$ is *less than or equal to* .5, indeed, even if $\Pr(p \mid w_i \text{ testified that } p)$ is *much less than* .5.²³ Likewise with respect to doxastic coherence.

Perhaps, however, Bonjour is committed to much more than this. Perhaps coherentists *as such* hold (or should hold) that doxastic coherence implies an increase in the probability of truth and a high probability of truth even when k is such that, *in the sense of* (B^*), S has no individual credibility with respect to the propositions he believes. Indeed, perhaps coherentists *as such* hold that (D).

One argument for this claim (that coherentists *as such* hold that (D)) is the following:

- (1) Coherentists *as such* deny that there can be *noninferential justification*, and *thereby* deny that there can be *individual credibility*.

Therefore

- (2) Coherentists *as such* hold that (D).

(2), it seems, follows from (1); if (1) is true, then, presumably, coherentists *as such* hold that information such that S 's beliefs have *some noninferential justification* is inappropriate for inclusion in k , and thus hold that information such that S has *some individual credibility* (with respect to the propositions he believes) is inappropriate for inclusion in k . Is (1) correct? The first part of (1) is correct, that coherentists *as such* deny that there can be noninferential justification (though see note 3). Do coherentists *as such* *thereby* deny that there can be individual credibility?

²² This view implies that w_i has positive individual credibility with respect to p if $\Pr(p) = 1$. I thank Ted Poston for noting this implication. The view thus implies that w_i has positive individual credibility with respect to p if p is a logical truth.

²³ I am not alone in reading Bonjour's view in this manner. See van Cleve (2005, p. 171; 2011, pp. 342-343) and Shogenji (2005a, pp. 314-315). Cf. Olsson (2005a, p. 67, n. 4). If this reading of Bonjour's view is correct, and if Lewis understands "no individual credibility" as in (B), then Bonjour's and Lewis's claims are compatible with each other. There might be reason, however, for doubting that Lewis understands "no individual credibility" as in (B). See van Cleve (2005, pp. 170-171; 2011, pp. 340-343).

I think not. Suppose (adapting a case from BonJour 1985, p. 41) we include in k the information that Norman's process of clairvoyance is highly reliable, and we include in k information such that $\Pr(\text{the President is in New York City})$ is low. Then, $\Pr(\text{the President is in New York City} \mid \text{Norman believes, as a result of his process of clairvoyance, the President is in New York City})$ is greater than—*much* greater than— $\Pr(\text{the President is in New York City})$, and, thus, Norman has some individual credibility with respect to the claim that the President is in New York City.²⁴ Coherentists would not, or at least should not, dispute this. Coherentists can allow that Norman has some individual credibility with respect to the claim that the President is in New York City, and yet deny that Norman's belief about the President has any noninferential justification (positive epistemic status not dependent on any evidential support from beliefs). Indeed, coherentists can allow that Norman has some individual credibility with respect to the claim that the President is in New York City, and yet deny that Norman's belief about the President has *any* justification whatsoever. The mere fact that, given the information we included in k , $\Pr(\text{the President is in New York City} \mid \text{Norman believes, as a result of his process of clairvoyance, the President is in New York City})$ is greater than $\Pr(\text{the President is in New York City})$ leaves it open that Norman's beliefs provide no evidential support to his belief about the President, and, further, leaves it open that Norman's belief system is not coherent.

It is crucial to bear in mind the distinction between, on one hand, the information in k and, on the other hand, the information in S 's possession (the contents of S 's beliefs). The information in k need not be the same as the information in S 's possession. Consider the case of Norman. The information in k includes the information that Norman's process of clairvoyance is highly reliable. This information (along with whatever other information is in k) makes it such that Norman has some individual credibility with respect to (*inter alia*) the claim that the President is in New York City. The information in Norman's possession, however, need not include the information that his process of clairvoyance is highly reliable, and, in fact, need not include any information evidentially supporting the claim that the President is in New York City. If so (that is, if the information in Norman's possession does not include the information that his process of clairvoyance is highly reliable, and does not include any information evidentially supporting the claim that the President is in New York City), and *if* coherentists are right that all justification is inferential, requiring evidential support from beliefs, it follows that Norman's belief about the President is not justified.

²⁴ Analogously, if we include in k the information that w_i is highly trustworthy, and we include in k information such that $\Pr(p)$ is low, then $\Pr(p \mid w_i \text{ testified that } p)$ is greater than $\Pr(p)$, and so w_i has some individual credibility with respect to p .

If, by contrast, the information in Norman's possession included, *inter alia*, the information that his process of clairvoyance is highly reliable, and was such that Norman's belief system is coherent, then coherentists would judge that Norman's belief about the President *is* justified. Coherentists would also judge, however, that this justification is *inferential*.

Coherentists hold (or at least are committed to the claim) that individual credibility is *not sufficient for justification* (of any degree). But, importantly, coherentists do not hold that there can be no individual credibility. Therefore, (1) in the argument four paragraphs above is incorrect.

The point that coherentists do not hold that there can be no individual credibility is perhaps obscured by the fact that in some contexts the terms "justification" and "credibility" are used interchangeably. *Credible* beliefs, in such contexts, are simply *justified* beliefs, and *individually* credible beliefs are simply *noninferentially* justified beliefs. But, when "credibility" is used so that *S* has some individual credibility with respect to *p* just in case $\Pr(p \mid b_p)$ is greater than $\Pr(p)$, coherentists need not, and do not, hold that there can be no individual credibility.

It might be wondered how coherentists, as I have construed them, differ from *weak* foundationalists.²⁵ I answer thus. Weak foundationalists hold that (at least) *some* beliefs have, at least initially, *some* (a small degree of) noninferential justification. Coherentists, in contrast, hold that *no* beliefs have *any* noninferential justification. Coherentists allow that there can be individual credibility. But if coherentists are right, individual credibility is not sufficient for noninferential justification. Consider, again, the case of Norman. Coherentists would grant that, given the information we included in *k*, Norman has some individual credibility with respect to the claim that the President is in New York City; $\Pr(\text{the President is in New York City} \mid \text{Norman believes, as a result of his process of clairvoyance, the President is in New York City})$ is greater than $\Pr(\text{the President is in New York City})$. But coherentists would add that this fact (that Norman has some individual credibility with respect to the claim that the President is in New York City) leaves it open that Norman has *no evidence* in support of the claim that the President is in New York City, and thus leaves it open that Norman's belief about the President has *no* justification—hence no *noninferential* justification.

Coherentists are not alone in holding that individual credibility is not sufficient for noninferential justification. Suppose we include in *k* the information that *S*'s process of clairvoyance is highly reliable, and we include in *k* information such that $\Pr(p)$ is low.

²⁵ I thank Tomoji Shogenji (private communication) for raising this question. See BonJour (1985, sec. 2.2) for discussion of the differences between strong, moderate, and weak foundationalism.

Then, $\Pr(p \mid b_p) > \Pr(p)$, thus S has some individual credibility with respect to p . However, at least some *foundationalists* would deny that it follows that S 's belief in p has some noninferential justification. Evidentialists (Feldman and Conee 2004) would say that whether S 's belief in p has some noninferential justification hinges on whether S 's believing p fits her experiences. If S 's believing p fails to fit her experiences, because, say, her belief in p was produced by her process of clairvoyance, her process of clairvoyance is non-experiential (it does not produce or involve any experiences), and S has no relevant visual, auditory, etc. experiences, then, despite the fact that S has some individual credibility with respect to p , S 's belief in p has no noninferential justification.

The situation is this. It might seem that coherentists themselves are committed to (D), and, with (C*), to (D*) and not-(E*). For, it might seem that coherentists as such deny that there can be noninferential justification and thereby deny that there can be individual credibility. I have argued to the contrary—that though coherentists deny that there can be noninferential justification, coherentists do not deny that there can be individual credibility.

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Coherentists (I have argued) *hold* that individual credibility is not sufficient for noninferential justification. Perhaps, though, coherentists are incorrect in this position. Perhaps individual credibility *is* sufficient for noninferential justification. If so, it follows that information such that S has some individual credibility with respect to the propositions he believes is information such that S 's beliefs have some noninferential justification. It then follows that, for the purpose of fairly testing doxastic coherence for truth-conduciveness, information such that S has some individual credibility with respect to the propositions he believes is *not* appropriate for inclusion in k . So the question is: Is individual credibility sufficient for noninferential justification?

One point is clear (if what I have argued is correct): Not all epistemologists hold that individual credibility is sufficient for noninferential justification. Coherentists, in particular, reject the thesis that individual credibility is sufficient for noninferential justification. So, if we are to appeal to the thesis that individual credibility is sufficient for noninferential justification, we should first *show* the correctness of that thesis.²⁶

²⁶ Surely, when assessing coherentism, it should not be *assumed*—contra coherentism—that individual credibility is sufficient for noninferential justification. Analogously, it should not be *assumed*, contra coherentism, that high reliability is sufficient for noninferential justification.

This brings me to my next point. (A*) by itself does nothing to show that individual credibility is sufficient for noninferential justification. Nor does the conjunction of (A*) and (C*). *A fortiori*, (A) by itself does nothing to show that individual credibility is sufficient for noninferential justification, and neither does the conjunction of (A) and (C). So, the formal epistemological results under consideration leave it open that, as coherentists hold, individual credibility is not sufficient for noninferential justification.

I do not mean to suggest that the formal epistemological results under consideration are *supposed to* show that individual credibility is sufficient for noninferential justification. My point is just that *in fact* they do not show that individual credibility is sufficient for noninferential justification.

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If what I have argued in the prior two sections is correct, then it *might be* that, for the purpose of fairly testing doxastic coherence for truth-conduciveness, information such that *S* has some individual credibility with respect to the propositions he believes *is* appropriate for inclusion in *k*. But, also, it might be that this is not the case. A fair question to ask is: *Why* include in *k* information such that *S* has some individual credibility with respect to the propositions he believes? Why not instead include in *k* information such that *S* has no individual credibility with respect to the propositions he believes?

One answer has already been *suggested*: Because (E*) and (C*) are correct, and (E*) and (C*) together entail that information such that *S* has some individual credibility with respect to the propositions he believes is appropriate for inclusion in *k*. Here I repeat part of a passage (from Olsson 2005a) given above in section 6:

What is the import of this result? Well, we remember that Bonjour's main application is his attempted radical justification of belief, in which case our imagined initial position presumably is one of ignorance as to whether our information is reliable or not. In the absence of a better way of representing ignorance probabilistically, we seem obliged to assign to each possibility the same probability. . . . Moreover, given an initial ignorant state, there seems to be no reason to restrict the number of possible contents a given cognitively spontaneous belief may have to 2. . . . Now what we have shown is that invoking these two assumptions—'uniform prior over the possible reliability profiles' and 'more than two possible report contents'—automatically confers a positive degree of credibility on each individual report.

It remains to be seen whether (E*) is correct. The present point is just that (E*) and (C*) together provide a principled reason for holding that information such that *S* has some individual credibility with respect to the propositions he believes is appropriate for inclusion in *k*.

9

Some recent work in formal epistemology shows that witness agreement by itself implies neither an increase in the probability of truth nor a high probability of truth—the witnesses need to have some individual credibility. I have argued that, even granting that this formal epistemological result carries over to the case of coherentist justification, i.e., doxastic coherence, it does not follow that coherentist justification is not truth-conducive. It might be that, for the purpose of fairly testing doxastic coherence for truth-conduciveness, information such that *S* has no individual credibility with respect to the propositions he believes is *not* appropriate for inclusion in *k* (the information codified in *Pr*). If so, it might be that coherentist justification is truth-conducive.

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