

The Problem of Independence in Justification by Coherence

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ABSTRACT: Independence in the formation of cognitive mental states plays a crucial role in many accounts of their justification by coherence. Since most epistemologists who take strong interest in justification by coherence are internalists, the requirement of independence gives rise to the problem of whether independence in the formation of cognitive states can be confirmed by internal evidence alone. I shall point out first that in light of the independence requirement beliefs are not a good candidate for justification by coherence since they are formed under the coherence constraint. Appearances are a better candidate. I shall then propose two tests of independence in the formation of cognitive states. One of them, the selective coherence test, has some limitation. It can confirm independence only when some cognitive states are coherent because of the reliability of their formation while others are coherent because of the lack of independence. The other test, the complexity test, can confirm independence even when there is no such division, but it is inconsistent with the strict form of internalism in epistemology. The complexity test requires that the internalist restriction on epistemic justification be weakened.

1. Introduction

Independence in the formation of beliefs is taken by many philosophers to be a critical element in the epistemic justification of beliefs by coherence.¹ For example, Laurence Bonjour argues in *The Structure of Empirical Knowledge* (1985, p.148) that coherence of *independently* obtained beliefs makes them credible. This is because when beliefs are obtained independently of each other but still coherent, it demands an explanation, and one straightforward explanation is the reliability of their formation (*ibid.* §8.3). Thus, in the absence of plausible alternative explanations, coherence of independently obtained beliefs indicates their truth. In this reasoning, independence in the formation of beliefs plays a critical role in their epistemic justification by coherence.²

Meanwhile the foundationalist C. I. Lewis maintains in *An Analysis of Knowledge and Valuation* (1946, Ch.11) that coherence – or what he

calls “congruence” – never generates epistemic justification from scratch; it only *enhances* existing epistemic justification when each of the coherent beliefs already has some credibility of its own. However, as Lewis also notes, in order for coherence to play even this limited role, coherent beliefs must be obtained independently of each other. It is easy to see why. Suppose I believe on somewhat credible evidence that the skater shown on TV is Chinese and then come to believe by probabilistic inference – relying on some background beliefs – that she speaks Chinese and that she likes Chinese food, and hold these two beliefs solely because of this inference. The inferred beliefs have some credibility since the original belief from which they are derived has some credibility. Furthermore, the three beliefs, including the original one, are mutually supportive and thus coherent. However, their coherence makes the original belief no more credible than it is by itself despite the fact that all of the coherent beliefs have positive credibility. This is because these beliefs are not obtained independently of each other – they are all based on the same evidence, the evidence that prompted me to form the original belief.

It seems crucial then for the success of justification by coherence – whether it is justification from scratch or for enhancement – that the coherent beliefs are obtained independently of each other. When we also consider the fact that most epistemologists who take strong interest in justification by coherence – such as Bonjour and Lewis – are internalists, the requirement of independence gives rise to a challenging problem. For, from the internalist perspective, justification by coherence would require that independence in the formation of beliefs – or more generally independence in the formation of cognitive states – be confirmed by internal evidence alone that is accessible to the epistemic agent. This paper examines whether this is possible.

2. The Coherence Constraint on Beliefs

Most philosophers speak of beliefs when they discuss epistemic justification by coherence, but beliefs are actually a poor candidate for justification by coherence. This is because we do not form beliefs independently of other beliefs we hold. I am not suggesting here that all beliefs are formed by inference. We do come to believe many new things that could not have been derived even probabilistically from our old beliefs alone. But even such non-inferential beliefs are not formed independently of other beliefs we hold. For, we make efforts to avoid incoherence in our belief system by rejecting propositions that are at odds with existing beliefs or in some cases by revising some of the existing beliefs to accommodate new ones. In other words, our beliefs are formed (acquired, retained, modified, or discarded) under the normative constraint of coherence. Since coherence is a matter of degree, the constraint is not

rigid. We may at times knowingly allow some degree of probabilistic incoherence – e.g., retain a well-confirmed belief even though it is unlikely to be true if other beliefs we hold are true – but we try to minimize such dissonance and make our beliefs mutually supportive. We may also occasionally overlook hidden incoherence and violate the constraint, but it is not surprising that our beliefs are mostly coherent. Coherence of our beliefs then does not require a special explanation, such as the reliability of their formation.

Fortunately for friends of coherence, not all our cognitive states are formed under the coherence constraint. What we need to do is to determine the extent of this constraint. But in order to do so, we need to be clearer about the reason for the coherence constraint. G. E. Moore (1944, p.204) points out the absurdity of saying, “I believe he has gone out, but he has not” despite its obvious consistency – i.e., the fact that I *believe* he has gone out is perfectly consistent with his not having gone out in reality. One way to explain the absurdity of the statement is our commitment to the truth of our beliefs. To believe something is to believe it to be true. This is so even when we believe something for non-epistemic reasons. For example, when you decide for some pragmatic reason to believe that your husband is faithful despite the mounting evidence to the contrary, you still believe this ill-supported proposition to be true. You do not really believe it unless you believe it to be true. This commitment to the truth of one’s own beliefs explains why it is absurd to deny the truth of what we claim to believe.

More importantly for our present purposes, the commitment to the truth of one’s own beliefs also explains why beliefs are formed under the coherence constraint. We assume truth to be coherent, and since we cannot believe propositions without believing them to be true, we cannot believe propositions unless we believe them to be coherent. This is why beliefs are formed under the coherence constraint. We can generalize this point. Any cognitive states that carry the commitment to their truth are formed under the coherence constraint. This means that cognitive states with truth commitment are poor candidates for justification by coherence since justification by coherence requires independence in the formation of the cognitive states.

3. Appearances and the Possibility of a Coherence Bias

Supporters of justification by coherence must then turn to cognitive states that carry no commitment to their truth. Let us call such states *appearances*. Because of the lack of truth commitment, appearances are free from the coherence constraint – they can be even blatantly inconsistent. I may be appeared to as if the same water is warm (to my right hand) and not warm (to my left hand) at the same time, and I reject neither of them unless I try

to elevate them to beliefs. The term “appearance” as I use it here does not refer exclusively to perceptual appearances. A thought may occur to me for no obvious reason that Japan will win the next World Cup Soccer. If this cognitive state carries no commitment to its truth, then it is an appearance – it need not be revised in the face of incoherence with existing beliefs. Appearances are not always precursors of beliefs. We may form a belief first when we touch water that it is warm, but then retreat from the commitment to its truth for various reasons and may later only be appeared to as if it is warm. As we will see shortly, however, appearances that are newly acquired cognitive states (“new appearances” for short) play a more prominent role in the justification of cognitive states by coherence.

If most appearances turn out to be highly coherent with each other despite the absence of the coherence constraint on them, we would like to have an explanation for that. It is, however, somewhat unrealistic to expect many appearances to be coherent with each other since we do not retain many cognitive states as appearances – a new appearance is usually either elevated to a belief in case it is coherent with existing beliefs or else discarded. But we can still evaluate the coherence of an appearance with existing beliefs. In the absence of the coherence constraint, a new appearance need not be coherent with existing beliefs. Thus, if most of new appearances turn out to be coherent with existing beliefs, we would like to have an explanation, and an obvious one is still the reliability of the formation of our cognitive states, including both beliefs and appearances.

The question remains, however, even with regard to appearances whether they are formed truly independently of existing beliefs. Indeed it is doubtful that appearances are formed with no influence at all from existing beliefs. Even in the case of perceptual appearances, we seem to have *some* tendency to perceive things the way our existing beliefs make us expect them to be. In other words, although the normative *constraint* of coherence does not apply to appearances, there may still be a considerable amount of bias toward coherence in the formation of appearances. Of course, we do not need complete independence in the formation of appearances for the purpose of justification by coherence. If the coherence bias in the formation of appearances is relatively weak and thus their formation is *largely* independent of existing beliefs, then a high degree of coherence between new appearances and existing beliefs still demands an explanation. The pertinent question is then whether we can determine with sufficient accuracy the degree of independence in the formation of appearances based on internal evidence alone.

We are faced here with a dilemma, though. If most of new appearances are highly coherent with existing beliefs, we must take seriously the possibility of a strong bias toward coherence in the formation of

appearances. If, on the other hand, the degree of their coherence is not high in most instances, then we do not have a case for justification by coherence in the first place. Obviously we need a sufficiently high degree of coherence for the purpose of justifying cognitive states by coherence, but we also want to avoid a high degree of coherence raising suspicion of a strong coherence bias. This is the problem of independence in the formation of appearances in the justification of cognitive states by coherence.

4. Selective Coherence Test

In order to break the impasse we need to make a distinction between different types of beliefs and appearances. So far we have talked as if all beliefs were of one kind, but obviously there are many types of beliefs we can distinguish by their internally recognizable features. Let us suppose for the sake of simplicity that there are two types of beliefs with distinct features, f_1 and f_2 – for example, perceptual beliefs and clairvoyant beliefs. There are correspondingly two types of appearances with the same features, f_1 and f_2 – perceptual appearances and clairvoyant appearances. Let us examine what we should expect if one of them, say perceptual appearances, is coherent with existing beliefs because perceptual cognitive states are reliably formed, while the other, clairvoyant appearances, is coherent with existing beliefs because of a strong coherence bias in the formation of clairvoyant cognitive states.

Obviously, new perceptual appearances should be coherent with existing perceptual beliefs (due to their reliable formation) and so should new clairvoyant appearances with existing clairvoyant beliefs (due to their strong coherence bias). Further, new clairvoyant appearances should also be coherent with existing perceptual beliefs since clairvoyant appearances are formed with a strong bias toward coherence with existing beliefs. Meanwhile – and this is the critical point – we should not expect new perceptual appearances to be coherent with existing clairvoyant beliefs. Here are the reasons. By hypothesis perceptual appearances are reliably formed but clairvoyant beliefs are not reliably formed. Thus we should not expect the former to be coherent with the latter for the reason of reliability. On the other hand, the formation of perceptual appearances is not strongly biased toward coherence with existing beliefs, and thus we should not expect them to be coherent with existing clairvoyant beliefs for the reason of a strong coherence bias. There is then no reason to expect new perceptual appearances to be coherent with existing clairvoyant beliefs.³

If we put these expectations together, new perceptual appearances should be *selectively coherent* with existing perceptual beliefs while new clairvoyant appearances with a coherence bias should be *indiscrimi-*

nately coherent with all existing beliefs. This means that when we do find out that new perceptual appearances are selectively coherent with existing perceptual beliefs while new clairvoyant appearances are indiscriminately coherent with all existing beliefs, we have a good reason to think that the coherence is due (largely) to the reliability of formation in the case of perception while it is due (largely) to a coherence bias in the case of clairvoyance. More generally, when a certain type of new appearances are selectively coherent with existing beliefs of the same type, we have a good reason to think their coherence is due to the reliability of their formation, and not because of a strong coherence bias.

We have found a way of distinguishing different reasons for coherence – a reliable formation or a coherence bias – by selective coherence. The test of selective coherence is an internal test of (relative) independence since we can confirm selective coherence based solely on internal evidence, and when it is persistent, selective coherence practically eliminates the possibility that coherence is largely due to a coherence bias. Unfortunately, there is some limitation to this test. It may turn out that no type of appearances is selectively coherent with existing beliefs of the same type. If all new appearances that are coherent with existing beliefs are indiscriminately so, then we cannot tell whether their coherence is due to the reliability of the formation of our cognitive states or due to a strong coherence bias. Suppose, for example, we have no clairvoyant beliefs because clairvoyant appearances are incoherent with existing beliefs and thus they never attain the status of beliefs. As a result, there are – let's suppose – only perceptual beliefs. We may still distinguish different types of perceptual beliefs – visual and tactile, for example – by some internal features. But if all new perceptual appearances are indiscriminately coherent with all existing perceptual beliefs – for example, new visual appearances are as coherent with existing tactile beliefs as they are with existing visual beliefs and so are new tactile appearances – then we cannot tell whether they are all formed reliably or they are all formed under a strong coherence bias. In other words, the selective coherence test of independence requires the existence of two kinds of cognitive states, one of which must be reliably formed while the other is formed under a strong coherence bias. In the absence of such a division, the test is not effective. In the next section we explore an alternative test of independence that does not require such a division of cognitive states.

5. Complexity Test

Let us think of the consequences of a ubiquitous coherence bias, where no cognitive states that are coherent with existing beliefs are formed independently of them. Clearly, all new appearances that are coherent

with existing beliefs should be so indiscriminately. This is unhelpful for detecting a coherence bias since it would also be true if they were all formed independently but reliably. I suggest at this point that we think of the situation historically. What will happen as the body of existing beliefs grows more and more complex over time? One thing we should expect is that the adjustment of new appearances to existing beliefs becomes more and more difficult. If there are only a few simple beliefs, it is fairly easy to adjust an unreliably formed appearance so that it becomes coherent with the few existing beliefs. However, given our limited computational capability, it is much more difficult to make an unreliably formed appearance coherent with a complex web of existing beliefs.

In contrast, if appearances are coherent with existing beliefs because our cognitive states are reliably formed, and not because of a coherence bias, then as the body of existing beliefs grows more complex, we should expect new appearances to be even more strongly coherent with the existing beliefs. For, as the body of reliably formed beliefs grows more complex, a new appearance, if it is also reliably formed, has more chances to get connected to some of the existing beliefs. This means that if new appearances have the tendency of being coherent more strongly with existing beliefs as the body of existing beliefs becomes more complex, then we have a good reason to think that their coherence is due to the reliability of their formation. If, on the other hand, new appearances tend to be less strongly coherent with existing beliefs – or even become incoherent with them – as the body of beliefs becomes more complex, then it is more likely that their coherence is due to a coherence bias and not because of the reliable formation of our cognitive states.

We have found another test of independence in the formation of cognitive states, which works even in the absence of selective coherence. The test requires that we track the change in the degrees of coherence over time as the body of existing beliefs becomes more and more complex. This complexity test of independence is in accord with BonJour's (1985, p.170) claim that what demands an explanation is not the coherence of beliefs at one particular moment but the stable coherence of beliefs over a long period of time. For the reason mentioned already, I think BonJour's claim should be restated in terms of *appearances* rather than beliefs, but that seems to be consistent with BonJour's overall view.

There remains, however, one difficult issue to deal with. Recall that our challenge is to confirm independence in the formation of cognitive states on the basis of *internal evidence* alone. The problem is whether the complexity test of independence is congenial to this internalist restriction. Note that the basic assumption of the complexity test of independence is our limited computational capability that impedes the adjustment of new appearances to a complex web of existing beliefs. This computational limitation has an unwelcome underside – namely, as

the body of existing beliefs becomes more complex, we become unable to *evaluate* with sufficient accuracy the degree of coherence between new appearances and the body of existing beliefs. Without a sufficiently accurate evaluation of coherence, we cannot track the change in the degrees of coherence that new appearances have with the increasingly complex body of existing beliefs. Consequently, we cannot apply the complexity test with sufficient accuracy. The situation remains the same if we formulate the complexity test of independence, as BonJour does, in terms of stable coherence over a long period of time. For, our limited computational capability – as well as constraints on our memory – prevents us from evaluating with sufficient accuracy the degree to which a new cognitive state is coherent with a variety of beliefs we had over a long period of time in the past. Without sufficiently accurate evaluation of coherence over a long period of time, BonJour's reasoning for the epistemic justification of beliefs by their coherence is incomplete.

It appears that the complexity test of independence forces us to step outside the limited perspective of the current consciousness of the epistemic agent and conduct epistemic evaluation from a third-person perspective. The question is whether this means that the complexity test of independence is inconsistent with internalism in epistemology. The answer depends on how we interpret internalism in epistemology. If by "internalism in epistemology" one means the view that the agent must have an epistemic access to all grounds of epistemic justification and further she must be able to recognize the adequacy of these grounds, then the complexity test of independence is inconsistent with internalism in epistemology. However, the test seems consistent with weaker forms of internalism – for example, the view that the agent must have had an epistemic access to all grounds of epistemic justification *at some point in her epistemic history* and that she need not be able to recognize the adequacy of these grounds.

The challenge for those who wish to invoke the complexity test of independence for the purpose of justification by coherence is then to motivate such a weak form of internalism. They must explain in particular why epistemic evaluation need not be constrained by the current perspective of the epistemic agent, but at the same time explain why we should not accept outright externalism that allows epistemic evaluation to be based on factors to which the agent has no epistemic access at all. I think this challenge could be met, but that is beyond the scope of this paper.⁴

Notes

¹ It is understood throughout this paper that coherence requires not only logical consistency but also mutual support. See Shogenji (1999) for a probabilistic measure of coherence that captures this notion formally.

² Independence in the *formation* of cognitive states must be distinguished from probabilistic independence of their *contents*. BonJour's reasoning requires that cognitive states be formed independently of each other while their contents be mutually supportive and thus not probabilistically independent.

³ We assume here that these existing clairvoyant beliefs were formed independently of perceptual beliefs—e.g., because there had been no perceptual beliefs on the same subject when these clairvoyant beliefs were formed. Without this assumption new perceptual appearances may be coherent with some perceptual beliefs that are in turn coherent with the clairvoyant beliefs. Although coherence is not a transitive relation if my formalization of it (Shogenji 1999) is correct, there may be some plausible additional conditions that make us expect from these coherence relations that new perceptual appearances should be coherent with existing clairvoyant beliefs. The assumption eliminates this complication.

⁴ Earlier versions of this paper were read at *Symposium: Coherentism in Epistemology* held in Dominican College in September 2001 and at the Pacific Division Meeting of the American Philosophical Association in March 2002. I am grateful to the participants of these two sessions, particularly to the commentator at the APA meeting, Branden Fitelson, for helpful discussions.

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