Intuitions Are Inclinations to Believe

We hold that intuitions are a subclass of inclinations to believe:[1] Not all inclinations to believe are intuitions, but all intuitions are inclinations to believe.[2] We contend that the proposal unifies too much of the extant data to be wrong.[3] In particular, it explains why intuitions *appear* to be used, in philosophical methodology, as evidence, without conceding either that they are evidence or even that they are *really* treated as such.[4] Our position therefore falls outside the traditional dialectic, where the two sides disagree over whether intuitions *should* play the evidential-role that they do[5]. We deny the presupposition: We say that whether or not they should, they do not. [6]

In section 1, we distinguish between something being *evidence* and its playing an *evidential-role*. In section 2, we introduce the notion of a *credence-entailing mental state* and use it to sort good from bad mental inferences. In section 3, we use the conceptual machinery developed in the first two sections to argue that intuitions are not treated as

[1] If intuitions are classificatory (see Kornblith 1998) then perhaps they are inclinations to judge, not inclinations to believe. The distinction is immaterial to this paper. Our arguments support either version.

[2] Elizabeth Barnes worries that our thesis does not tell us what kind of inclinations to believe intuitions are. However, we think it is possible to informatively classify a species as belonging to a genus without giving a full specification of its nature (consider the case of classifying a platypus as a mammal). We hold that, in counting intuitions as a species of inclination, we are able to perform a great deal of explanatory work.

[3] Williamson (2007) suggests that, phenomenologically, intuitions are akin to inclinations to believe. However, he sometimes says that intuitions are a species of judgment. Since judgments are belief entailing where intuitions are not, we deny this latter possibility.

[4] How does our view bear on the possibility of *a priori* justification? This much: If it turns out that those inclinations to believe that are intuitions do not track the truth, and if they are the only connection to the *a priori*, then the *a priori* theorist is in trouble. For discussion of the connection between intuitions and the a priori, see Henderson and Horgan (2002).

[5] Overviews of the dialectic can be found in Levin (2004) and Nagel (2007). For an actual example of this sort of back and forth, Weinberg et al. (2001) find that the intuitions of different demographics disagree; Sosa (forthcoming, 2008) questions the philosophical significance of such work.

[6] Bealer (1992) argues that anti-evidential views of intuitions are self-defeating because their proponents treat intuitions as evidence while arguing the contrary. First of all, we consider the self-defeating charge a dialectical confusion. As Hume made clear, the skeptic is allowed the tools of his opponent under the authority of *reductio*. Moreover, we deny that, in this paper, we use our intuitions as evidence. We are merely *inclined to believe* their contents. We hope these inclinations are common.

evidence by philosophers – that they do not play an evidential-role in philosophy. This leaves several demands for explanation that are met by the inclinations-to-believe-hypothesis in section 4, where we also show that the proposal predicts and explains phenomena with which more structurally simplistic rivals struggle. We conclude in section 5 by considering and rejecting a major objection to the positive proposal.

We use the term 'intuition' for the attitude one has towards a proposition when one finds it intuitive. One might protest that John could find a proposition P intuitive without having an intuition that P - for example, if P is the intuitive conclusion of a detailed proof. In other words, intuitions are (perhaps) basic and unsupported whereas P, though intuitive, is too well supported to count as an *intuition*.[7] Perhaps this is right. But even if it is, the more interesting notion is the broader one of *finding intuitive.* For in determining what it is for a proposition to be intuitive, no one should care whether it is *also* supported by an independent argument. Thus, we use 'intuition' in the broader sense that allows all *findings intuitive* to count.

1 Introduction

1.1 Evidence vs. Evidential-role

Many researchers are persuaded that intuitions are a kind of evidence or, at the very least, that they are *treated* as evidence by philosophers. As Alvin Goldman and Joel

[7] Objection: *Finding it intuitive that P* differs from *having the intuition that P*, for the former is community-relative in a way the latter is not. Response: We distinguish between *finding it intuitive that P* and *finding that it is intuitive that P*. S might find *that* it is intuitive that P if it appeals to people in general, but S herself finds it intuitive that P only if she stands in the right attitudinal relation to it. (With thanks to Magdalena Balcerak, Cody Gilmore and Robert May, among others.)

Pust (1998) put it:

> **Philosophers frequently appeal to intuitions in constructing and arguing for philosophical theories...This suggests that philosophers take intuitions to have a kind of evidential value. (p. 179)**

In a similar vein, here's Timothy Williamson (2007):

> **When contemporary analytic philosophers run out of arguments, they appeal to intuitions. It can seem, and is sometimes said, that any philosophical dispute, when pushed back far enough, turns into a conflict of intuitions about ultimate premises: 'In the end, all we have to go on is our intuitions'. Thus intuitions are presented as our evidence in philosophy. (p. 214)**

And here's George Bealer (1998):

> **To see the prevalence of the use of intuitions in philosophy recall some standard examples... Chisholm's abnormal conditions refutation of phenomenalism, Chisholm and Putnam's refutations of behaviorism, the use of multiple-realizability in refuting narrow identity theses, the Twin-Earth arguments for a posteriori necessities and externalism in mental content, Burge's arthritis argument for anti-individualism in mental content, Jackson's Mary example, and so on... As the examples illustrate, it is intuitions about concrete cases that are afforded primary weight by our standard justificatory procedure. (p. 205)**

Here, Bealer claims that "according to our standard justificatory procedure intuitions are used as evidence" (p. 205) where by "standard justificatory procedure" we take Bealer to mean the standard use to which philosophers put intuitions in philosophical argument. That is to say, intuitions are put to use in philosophical argumentation, and, it seems obvious to Bealer, they are put to evidential use.

There are two possible phenomena that the philosophers here cited could be highlighting:

> **(i) Intuitions are treated as evidence in philosophy. (Henceforth, the evidential-role view.)**
>
> **(ii) Intuitions are evidence in philosophy. (Henceforth, the evidential view.)**

What is the relation between (i) and (ii)? Something plays an evidential-role but is not

evidence, if the community treats it as evidence but it is not. For example, all manner of non-evidence played evidential-roles in medieval times - say, in "proving" the guilt of witches. Conversely, one might have something that is in fact evidence for P, because, perhaps, it correlates with P in some appropriate way, but which is not treated as evidence, and hence does not play an evidential-role: Ralph's testimony is ignored because he is a liar, but his twin Tom's testimony is also ignored because he gets confused with Ralph. Tom's testimony is evidence in some appropriate sense – it is truth indicative – but it is not treated as evidence. It plays no evidential-role. Similarly, the hunch of an experienced cop might be evidential – being an apprehension of a barely perceptible pattern in the data - even if he and his colleagues do not treat it as such.

Because the notions of evidence and evidential-role come apart, one could have an evidential view of intuitions that was not an evidential-role view, or vice versa. However, if intuitions were *merely* evidence but - like Tom's testimony - were not treated as such then they would play little role in argumentation and theory construction. They would be inert - indicative of the truth but not in a way to which we have access. Hence, intuitions can explain the behaviors of the philosophical community only if they are *treated* as evidence; simply *being* evidence is not enough. We therefore take it that any evidential view that aspires to explain the role intuitions actually play in philosophical methodology includes an evidential-role view as well.

Our continuing focus, from here on, is on the evidential-role view. We argue that intuitions *do not play an evidential-role in philosophy.* Hence, we show that any evidential view of intuitions that is motivated by the way intuitions are actually used in philosophy is wrongheaded. This sets us aside, we think, from the traditional debate, in

which one side argues that they play an evidential-role and so they should, because they are genuine forms of evidence, whereas the other argues that they do, but they should not, because they are not. We argue that they do not, whether or not they should.[8]

2 Belief-Entailing and Credence-Entailing States

We begin with the notion of a *belief-entailing mental state.* An attitude is belief-entailing if and only if having it towards P means P is among one's beliefs. The paradigm belief-entailing state is, of course, belief. But there are others; if one is glad that P, sad that P or mad that P; or is dismayed or disappointed that P; or if one remembers or regrets that P; then P is among one's beliefs. Hence, the above are all belief-entailing states. Other states are clearly *not* belief-entailing. One can hope, doubt or desire that P, or wonder whether it's so, without thereby having a belief that P.

2.1 The Conjunction Test for Belief-Entailment

The *conjunction test* (CT) checks whether one can have a mental state without having a content-identical belief; for instance, whether one can have a desire that P while having no belief that P. If not, then we know that the state is belief-entailing. We apply CT by putting the opposing states into a single conjunction. In the trivial case, we see that:

[8] We argue that a) they cannot play an evidential-role and b) an alternative, non-evidential, view explains why they *seem* to. If we are right about (a), then the only tenable evidential view treats intuitions as evidence that plays no evidential-role; a view we call the "inert evidence theory". As far as we know, no-one defends this view. As far as we know, there is no motivation for it. (With thanks to John Bengson.)

I believe that P, but I don't believe that P.

is a contradiction, so we know that beliefs are belief-entailing. But other states also produce contradictions when tested:

I am glad that P, but I don't believe that P.

This too is contradictory. Hence, being glad that P is belief-entailing. Likewise…

I regret that P but I don't believe that P.

I realize that P, but I don't believe that P.

I am very sad that P, but I don't really believe it.

I judge that P, but I don't believe that P.[9]

are all contradictions.

Beliefs and desires, on the other hand, do not form contradictory conjunctions:

I desire that P, but I don't believe that P.

…expresses a commonplace and entirely coherent state of affairs, hence desires are not belief-entailing. Similarly, hopes, wishes, doubts and wonders are all non-belief-entailing, for each of the following is coherent:

[9] Some count intuitions as a species of judgment (see Devitt 2006 or Williamson 2005). In fact, Goldman and Pust (1998) regard this as a minimal common commitment:

> Although different approaches to intuitions have different detailed accounts of what intuitions are, we assume, at a minimum, that intuitions are some sort of spontaneous mental judgment. Each intuition, then, is a judgment "that P" for some suitable class of propositions P. (p. 179)

We don't think they are a species of mental judgment, however, since judgments are belief-entailing whereas intuitions are not (see section 3.2.1 for more on this)

I hope that P, but I don't believe it.

I wish that P but I don't believe it.

I doubt that P, and of course I don't believe it.

I don't yet believe that P, but I wonder whether it is true.

2.2 Inferences Involving Mental States

Note that belief-entailing states are straightforwardly deployed in reasoning. Take the following sequence:

1. **I'm sad that it's raining outside.**
2. **If it is raining outside, I must grab my umbrella before leaving.**
3. **Hence, I must grab my umbrella before leaving.**

The thinker here makes a perfectly respectable inference. Contrast with:

1a. I hope it's raining outside.

2a. If it is raining outside, I must grab my umbrella before leaving.

3a. Hence, I must grab my umbrella before leaving.

- an inference that lacks the same coherence and power. The reasoning looks equally bad when *hope*, in premise (1a), is replaced with any other non-belief-entailing state – "I wish it was raining outside" "I wonder if it's raining outside" etc. We have an interesting phenomenon to explain; the contents of belief-entailing states play inferential roles that non-belief-entailing-states do not.

What's going on? The situation is clarified by bringing out what's implicit in the use of the first-person, namely, that the propositions expressed are beliefs:

1. **I'm sad that it's raining outside.** **(belief)**
2. **If it is raining outside, I must grab my umbrella before leaving.** **(belief)**

3. Hence, I must grab my umbrella before leaving. (belief)

Here, the mental state expressed by the proposition is indicated to the right in parentheses. We see that the sentence written in (1) expresses one of the speaker's beliefs – a belief that she is sad it is raining. Now, *ceteris paribus*[10], one believes that one is in a mental state only if one is; hence it's likely (from 1) that the following also holds:

(1*) It's raining outside. (sad that)

(note the different mental state on the right.) In other words, the subject, who expressed a belief to the effect she was sad it was raining, was (probably) sad it was raining. But being sad that P is belief-entailing; so it follows that:

(1) It's raining outside. (belief)**

I.e. the subject believes that it's raining outside. And of course the content of (1**) matches the antecedent of (2). Thus the conclusion follows from (1**) and (2) by modus ponens. In summary, the thinker has available the belief required, and that explains the inference's attractiveness. The same explanation would have worked whichever belief-entailing state was deployed in (1); thus the explanation is quite general.

We also explain why inferences typically *aren't* good when they involve non-belief-entailing states. To illustrate, we again parenthesize the mental state expressed:

[10] Believing oneself to be in a factive state (see Williamson 2000) is perhaps not sufficient indication that one is, since one lacks introspective access to the factive component. Hence , the ceteris paribus clause.

1a. I hope it's raining outside. (belief)

2a. If it is raining outside, I must grab my umbrella before leaving. (belief)

3a. Hence, I must grab my umbrella before leaving. (belief)

The belief expressed in (1a) is a belief about a hope, and it does not match the antecedent of (2a), which is purely about the weather. To see if the thinker has the right belief available we need to unpack the contents of (1a). But how? We can, as before, infer (*ceteris paribus*) that the thinker has the hope itself from the fact that she believes she does. So from (1a) we can help ourselves to:

1a* It's raining outside. (hope)

However, the procedure stops here. For we cannot, as we did before, infer that she has a belief with the same content, since hopes are not belief-entailing. Hence, *for all that the agent believes*, the antecedent of (2a) could be false – so she is in no position to infer the consequent.

2.3 Credence-entailing States

Not all non-belief-entailing mental states are created equal. Some, which we call *credence-entailing*, resemble the belief-entailing states. For the following inference seems respectable enough:

1c. I suspect that it is raining outside. (belief)

2c.	**If it is raining outside, I must grab my umbrella before leaving.**	**(belief)**
3c.	**Hence, I must grab my umbrella before leaving.**	**(belief)**

…even though one can suspect that P without thereby believing that P. It follows that the contents of some non-belief-entailing states figure appropriately in inference. Hence, whether a state is belief-entailing is not the relevant question.

To find the relevant question, note that there is something "*commitmentish*" about suspicions. One cannot suspect that P and yet, at the same time, believe that P is without a doubt false. Suspecting P excludes ruling P out, and vice versa. Hence we say that suspicions are *credence-entailing states*, where being in a credence-entailing state with content P is incompatible with placing no credence in P.

We test whether a state is credence-entailing by conjoining the test-state with the denial of credence in the opposing proposition:

I suspect that P even though I do not place any credence in the idea.

The above is incoherent, thus confirming that suspicions are, indeed, credence-entailing. Since all belief-entailing mental states are credence-entailing mental states, the latter is the broader notion, and the one we will use.

2.4 Deciding which Inferences are Bad

It is tempting to suppose that there are no good inferences of the following sort:

I ψ that P.

If P then Q.

Therefore Q.

where ψ is not a credence-entailing state. After all, if ψ is not credence-entailing then the reasoner could place absolutely no credence in P whatsoever, while still standing in ψ to it. In such a case, for all the credence the reasoner gives P, it may as well be false. Therefore, she ought not to be able to ground her belief in Q in it.

However, we are getting ahead of ourselves. Though it is hard to see how one could ground one's beliefs in propositions one gives no credence, what if one grounds the conclusion – not on P itself – but on the proposition that *One ψ's that P*? Perhaps the mental state itself, or the fact that one is in it, is evidence for its contents. In other words, ψ could be a *basic evidential state*, where ψ is a basic evidential state if a person's having attitude ψ towards P is evidence that P (Goldman and Pust 1998). The paradigm basic evidential state is the visual seeming, for seeming to see that P is prima facie evidence that P, but also on the list are auditory seemings, mnemonic seemings (seemings to remember) and perhaps introspections.

Substituting a basic evidential state for ψ, in the inference above, results in a respectable inference. For example:

1. I seem to see that it is raining outside.

2. If it is raining outside, I must take my umbrella.

3. Therefore I must take my umbrella.

is a perfectly good inference. It is respectable even though *seemings-to-see* are not

credence-entailing[11]. (To see this, simply consider the precise moment between the seeming and the resulting inference – one seems to see that P at that moment, but one has not yet invested any credence in P. Alternatively, one might know one is hallucinating, and so the inference might be defeated, in which case one would still seem to see that P, even though one gives it no credence.) Since the inference above is good, yet involves a non-credence-entailing state, inferences from non-credence-entailing states are not always bad.

What, then, is the importance of credence-entailing states, when it comes to sorting good inferences from bad? In fact, the notion is highly relevant, for if we write the inference above out in full, taking care to note the mental states expressed in parentheses on the right, we get the following:

1b**	**I seem to see that P.**	**(belief)**
	Therefore, via a prima facie inference:	
2b**	**P**	**(belief)**
3b**	**If P, then Q.**	**(belief)**
	Therefore, via modus ponens	
4b**	**Q.**	**(belief)**

Note that all the propositions used as evidence are the targets of beliefs, hence the contents of credence-entailing states. The right conclusion, then, is that inferences of the following form can sometimes be good even when ψ is not credence-entailing.

[11] With thanks to Brian Weatherson.

I ψ that P.	**(Φ)**
If P then Q.	**(belief)**
Therefore Q.	**(belief)**

(The inference is good, as in the examples above, if ψ is a basic evidential state and Φ is credence-entailing.) …but inferences of the following form are always bad:

P.	**(ψ)**
If P then Q.	**(belief)**
Therefore Q.	**(belief)**

…where ψ is a non-credence-entailing state. For in that case, one really might place no credence in P, and so no inference to Q can be based upon it. (Of course, taking attitude ψ towards P doesn't *preclude* placing credence in P. One might place credence in it as a separate matter of fact, and in that case one might legitimately infer things from P, even though it is the target of a non-credence-entailing state. But that simply means that it is the target of another state, a credence-entailing state like a suspicion or a belief, and *that* is the state that makes the proposition available for inferential work.)

Naturally, there is nothing important about the second premise being a conditional. The same observations apply to anything matching the following schema:

I.	**P.**	**(ψ)**
II.	**<statements that, with P & only with further propositions, yield Q for S>**	**(beliefs)**
III.	**Therefore Q.**	**(belief)**

If ψ is not a credence-entailing state, the inference above does not work. For suppose that ψ is not credence-entailing, then there is a situation in which S ψ's that P, and where S believes all the statements in the collection referenced in (II), but where S has no legitimate inferential process via which she can acquire a belief in Q. It is that situation where S ascribes no credence to any proposition except the ones referred to in (II). In that situation, she cannot infer Q from the total set of propositions she believes, since they yield Q only with the help of further propositions (as specified in II) and she invests credence in no other propositions at all. Hence she cannot make the inference to Q by any means. But if the inference form above were legitimate, then she *would* be able to infer that Q, since she adopts some non-credence-entailing attitude towards P (e.g. she desires it, wishes it, or wonders if it is true). Thus, the inference form above is not legitimate.

3 Intuitions

Given the foregoing we are now in a position to ask what kind of evidential-role intuitions play. We will find that they do not play any.

To start with, we rehearse Lycan's (1988) distinction between *intuitings* – which are attitudinal mental states - and *intuiteds* – which are the contents of intuitings. Both are common interpretations of the term "intuition", and this easily leads to confusion. For example, if one were to say "P is an intuition of mine, and also a belief" then one might come to think that some intuitions are also beliefs. Though it's true that some *contents* of intuitings are also the *contents* of believings it does not follow from this that any intuiting is identical to any believing. The attitudes themselves are different attitudes, even if they

share the same content. Similarly, we must mind the distinction in asking whether philosophers treat intuitions as evidence. Are we asking whether they treat the *intuitings* as evidence, or whether they use the *intuiteds* as evidence? We shall take both questions in turn and show that neither are treated as evidence by philosophers.

3.1 Treating Intuitings as Evidence in Philosophy

Goldman and Pust (1998) ask whether intuitions are basic evidential states. Clearly they are asking about intuitings, not intuiteds, since the class of basic evidential states is "the class… of contentful *mental states* such that being in one of these mental states is prima facie evidence for the truth of its content" (p. 180 - our emphasis). In fact, since when we ask whether intuitings are evidence we ask whether they are evidence for their contents, and since every view that counts an intuiting as evidence for its content is a view that counts it as a basic evidential state, every view that counts an intuiting as evidence *at all* is one that counts it as a basic evidential state. Hence the whole question of whether intuitions are evidence, posed as a question about intuitings, is a question about whether they are basic evidential states. The question for Goldman and Pust, then, is whether intuitions are in this class; I.e. whether intuitings are *prima facie* evidence for their contents. In pursuing this question, they naturally ask whether intuitions bear the right causal and counterfactual relations to their contents so that, when one intuits that P, P is generally so. If they bear the right relations, then people are right to treat them as evidential states. If not, then people are not. We set such questions aside. Our interest is in whether people *do in fact* treat intuitings as pieces of evidence, not whether they

should.

One can check whether a community treats a mental state ψ as a basic evidential state by determining whether the members of that group are willing to accept, *prima facie*, inferences of the following sort:

S ψ's that P

Therefore P.

One can see quickly that the standard basic evidential states pass the test. One is usually willing to infer P from the fact that S seems to see that P, *prima facie*, provided that one believes that S has a normal, functioning visual system, that conditions are normal, and that nothing else is amiss (e.g. one does not believe S to be a liar). Similarly, one would infer P from the fact that S seems to hear that P, or seems to remember that P, or seems to introspect that P, given S's perceived reliability, and given that all else is believed to be well. The question is whether we would show a similar willingness to infer P from the fact that S finds P intuitive.

One can quickly get misled here, by placing too much emphasis on the first person state of affairs. For one is often willing to believe P when one finds P intuitive. So it might seem, on this basis, that one is willing to infer P from the intuition that P. Curiously, however, one is *not* typically inclined to believe P on the basis of *someone else* intuiting that P. In this way, intuitions come apart from the standard basic evidential states, for no standard basic evidential state is subject sensitive in this way. One is willing to treat what other people seemed to see, what they seemed to hear, and what they seem to remember, as evidence, in the sense that one will base one's beliefs upon it. But one is

not willing to base one's philosophical beliefs on the intuitions of another. At the very least, this indicates a dissimilarity between intuitings and the standard basic evidential states.

But the dissimilarity is telling. For a given kind of mental state is either evidence for its contents, or it is not. If it is, then it does not matter who has it. For example, if someone else has a clear visual perspective of a state of affairs that concerns me, I am happy to be informed by their testimony, since visual seemings are, quite generally, evidential, no matter which (honest, reliable) person has them. Since we are all so disposed, we must generally hold something like the following:

GP: In general, perceptual reports are reliable indicators of the truth of their contents.

This needn't be an explicit belief, but it is at least held implicitly, for it governs our inferential and general epistemic behavior.

On the other hand, if I care whether it is myself or someone else who is in state ψ towards P, basing my beliefs only on *my own* ψ-states, then I am not treating ψ-states, in general, as being reliable indicators of the truth of their contents. *It is this generality requirement that intuitions fail*. We clearly hold nothing like GI:

GI: In general, intuitions (intuitings) are reliable indicators of the truth of their contents.

For if we did hold something like GI, then inferences like the following:

Jones has the intuition that P.

Therefore P.

would seem as solid, *prima facie*, as the corresponding inference from one's own intuitions. But they do not. This shows that we, in practice, are not committed to anything like GI. In fact, we are hardly affected by the intuitions of others, *no matter how strongly they are professed and no matter how many others have the intuition*. Thus we are not treating intuitions as basic evidential states. Something else, clearly, is going on.

3.1.1 The Comparison with Beliefs

Here's an objection to the foregoing:

1. Beliefs are subject sensitive in their effect. I am willing to infer things from my beliefs, but not from yours.

2. But beliefs are the very paradigm of entities that play an evidential-role. My beliefs are typically inferred from and evidentially supported by *other beliefs*.

3. Hence being subject-sensitive is no impediment to evidential-role-hood.

4. Hence being subject-sensitive is no impediment to intuitings having an evidential-role.

The objection, however, arises from not keeping attitudes and their contents properly distinct. The term "beliefs" in the first premise refers to *believings,* whereas the same term in the second premise refers to the *propositions believed*. For it is attitudinal mental states that pass or fail the subject-insensitivity test depending on whether we generally treat them as evidence for their contents. So (1) is about believings – i.e. the attitudinal mental states. But the entities that are paradigmatic evidential-role players, in (2), are the *propositions believed*, not the *believings*. My evidence for believing that Socrates is

mortal includes the proposition *all humans are mortal* but not the proposition *I believe that all humans are mortal* (and certainly not the state of my believing). The proposition *All humans are mortal* is included among the evidence only in virtue of it being believed, of course, but it is the proposition that appears in the evidence, not the believing. Hence the argument above equivocates between the first and second step.

Still, one might salvage something from the objection. For one reasonably asks whether the propositions intuited play a similar role to the propositions believed. I.e. do propositions play a role in supporting our beliefs, in virtue of being intuited, the way they do in virtue of being believed? If propositions play a role as evidence in virtue of being the target of a psychological state, we say that they play a *psycho-evidential-role*. We wonder whether propositions ever play a psycho-evidential-role *purely in virtue of being intuited.* We contend in the next section, however, that they do not.

3.2 Treating Intuiteds as Evidence in Philosophy

One does not (typically) treat one's own believings as evidence of the proposition believed. Rather, the kinds of inference in which beliefs are involved look like this:

P	**(belief)**
If P then Q	**(belief)**
Therefore Q	**(belief)**

…where the inference takes place entirely on the left, but where the propositions are in play thanks to the mental state on the right. So, if we are to treat intuitions like beliefs,

then we must ask whether intuitings make their contents available as inferential and evidential support for beliefs, the way believings do. I.e. we must ask whether we generally make inferences akin to the following:

P	**(intuition)**
If P then Q	**(belief)**
Therefore Q	**(belief)**

Indeed, do we make any inferences that fit the following inference form, R?

I.	**P.**	**(ψ)**
II.	**<statements that, with P & only with further propositions, yield Q for S>**	**(beliefs)**
III.	**Therefore Q.**	**(belief)**

… where ψ is an intuiting. If we do make inferences like this, then propositions play a psycho-evidential-role purely in virtue of being intuited. Of course, as we established in 2.4, any such inference is illegitimate where ψ is not a credence-entailing state. Hence, on the assumption that intuitions are not being used erroneously in philosophical methodology, intuitions play this role only if they are credence-entailing states. However, we establish in the remainder of this section that they are not credence-entailing. Hence, they do not play this psycho-evidential-role.

Intuitions are definitely credence-entailing if they are belief entailing. We can test whether they are belief-entailing by applying CT (see 2.1 for more on this). But in fact they turn out to be non-belief-entailing, for the following is coherent:

I find it intuitive that P but I do not believe that it is the case.

Quantum physicists, for instance, find the premises of classical physics intuitive even though they do not believe them. Likewise, in response to Cantor, one might be convinced that the (infinite) set of real numbers is "greater" than the (infinite) set of rational numbers – yet still intuit that endlessness does not come in degrees. Similarly, one intuits that two sets are equinumerous when paired off perfectly, but also that subtracting the intersection of equinumerous sets leaves two equinumerous remainders. But here intuition does not even agree with itself – for the evens and the naturals can be paired off perfectly (hence they are equinumerous) yet we get unequal sets if we subtract their intersection (hence they are not.) By siding with one intuition, we withhold belief from the other. All of which tells us that intuitions are *not* belief-entailing states, and that the statement above is quite coherent.

We wonder, then, whether intuitions, like suspicions, are *merely* credence-entailing, though not fully belief entailing.[12] But, in fact, they are not that either, as we can tell from the coherence of the following:

I find it intuitive that P even though I place no credence in it.

For consider the naïve comprehension axiom - *for any property, there is a set of things having that property.* The axiom is, as proved by Bertrand Russell, *certainly* false. Despite knowing this, one can have a strong intuition in favor of it; thus, one finds

[12] A similar problem, raised by Magdalena Balcerak, arises if one can invest credence or degrees of belief in a state without actually believing it. It surrenders to a similar treatment.

intuitive a proposition in which one places no credence[13]. So intuitions are not credence-entailing: I.e. intuiting that P does not guarantee that one places any credence in P.[14] Intuitions are more like desires and wishes in assigning no credence to their contents, and quite unlike credence-entailing states like suspicions, fears and worries.

So all inferences conforming to the inference-schema R are poor, where ψ is an intuiting. Note, however, that R's form is extremely general: It includes every inference in which the intuition that P contributes to the support for Q.[15] Hence, if one cannot legitimately infer Q from the intuition that P via an inference of this form, then one cannot legitimately infer Q from the intuition that P period, for any P and Q. On the assumption that philosophers typically make good inferences, they must not put intuitions to use in them. Intuitions do not play a psycho-evidential-role in philosophy.

To wrap up, then, intuitings play an evidential-role only if they are treated as reliable indicators of the truth of their contents. But we do not treat them as such, for we do not treat the intuitings of others as an evidential source. An alternative was that the intuited propositions play a *psycho*-evidential-role; i.e. they play a role in virtue of being intuited, just as believed propositions do in virtue of being believed. This would explain why the propositions I intuit are unpersuasive to others - they do not stand in the right relation to them. However, this turns out to be a bad proposal. Believed propositions play a psycho-evidential-role because the belief guarantees that the subject invests credence in

[13] The example, used to slightly different effect, appears in Bealer (1992) and elsewhere. Bealer credits the example to George Myro (p. 130). Plantinga (1993 pp. 110) also notes that intuitions linger beyond refutation. Kagan (1989) argues that some moral intuitions are informationally encapsulated, i.e. tolerant of opposing beliefs. See Pust (2000 pp. 34-35) for discussion.

[14] To give a slightly different argument, note that it's coherent to claim: "I'm sad that my intuition that P is utterly, completely, and without any doubt, false" where this would not be coherent if intuitions were credence-entailing.

[15] One might think the unassisted (putative) inference from the intuition that P to the belief that P is not an instance of the schema. On the contrary, it's that instance where (II) is the empty collection.

them. But S's intuiting P is not sufficient for S investing credence in it. Thus, if an inference legitimately proceeds from an intuited proposition, it must be because the subject stands in some other, credence-entailing, attitude towards it. But if the proposition plays the role in virtue of this other state then it does not play the role in virtue of being intuited. At last, the evidential-role theorist runs out of options. It is time to look at a different proposal.

4 The Inclinations to Believe Thesis

4.1 Dealing with the Explananda

Obviously, one looming question stands open: *why does it appear that philosophers treat intuitions as evidence in philosophy?* This ultimate explanandum can be broken down into three sub-explananda. First, how do intuitions give rise to beliefs if they do not provide evidence for them? Note that not any old causal story will do, for we want to know why the transition is content-preserving - why intuitions that P give rise to beliefs *that P*, not beliefs that Q. And given that intuitions play no psycho-evidential-role, why do we appeal to intuitions in accounting for our beliefs? - when asked *why* one believes that P, why is it appropriate to reply that one finds P intuitive? And how, for that matter, have non-evidential intuitions been deployed so successfully in philosophical argument even though they are subject-sensitive in effect? We turn at last to our positive view.

Our suggestion is simple: intuitions are a kind of inclination to believe.[16] As a

[16] Focusing on Sosa (1998), Pust (2000) argues that inclination/disposition-to-believe views fail to capture the occurrent nature of intuitions, and that attempts to patch them up run into further difficulties. We deny,

result, it is not surprising that they give rise to beliefs with the same content. It is a psychological fact, after all, that S's inclination to X leads, typically, given opportunity, ability and no opposing inclinations, to S's X-ing, whether it be drinking, skiing or whatever you like. Hence, it's no mystery that S's inclination to believe that P leads, typically, given opportunity, ability and no opposing inclinations, to S's believing that P. Moreover, it is easy to see, on this account, why intuitions have a subject sensitive effect. My inclinations to believe give rise to beliefs in me, not in you.

Why can one appear to justify one's belief by appealing to one's intuitions? The answer, for us, is that an intuition is an inclination to believe, so:

I believe P because I find P intuitive

is akin to:

I believe P because I am inclined to believe P.

In other words, the agent is asked why she is taking a certain action (or why she continually takes it) and she responds by saying that she *is inclined* to. We therefore treat the believing as an ongoing action on the part of the believer and the question is a request for its motivation. The answer "because I find it intuitive" – being equal to the minimal

however, that intuitions are always (or even usually) occurrent. Firstly, statements about intuitions don't easily take the continuous form: It is wrong, for example, to say that, yesterday, one was intuiting that P (contrast this with paradigmatic occurrent states like thinking and feeling). For another, the truth conditions of intuition statements easily permit non-occurrency - the claim that Gettier has an intuition that P depends for its truth on what Gettier generally intuits, not on his contemporaneous occurrent state. None of this is to deny that intuitions have a certain phenomenology when they are occurrent. But to infer that they are always occurrent is to commit the "refrigerator-light fallacy": To confuse that which is always the case when you are looking with that which is always the case.

positive response "because I am inclined to" – meets the norms for praxic reason giving – "I ate that piece of cake because I really wanted to".

Finally, if intuitions are not treated as evidence in philosophy, why are they so prevalent in philosophical argumentation? We have a ready answer. The propositional contents of strong intuitions, being the targets of strong inclinations to believe, stand as persuasive premises in arguments. If Jones bases her argument on P, and everyone she aims to convince has a strong inclination to believe that P (and – even better – no competing inclination to believe otherwise) then Jones' argument is likely to be successful. That doesn't make *inclinations to believe* evidential. It just means that the argument Jones ran, being based on a proposition people are inclined to believe, will – as a psycho-social matter of fact - be convincing. And that is all one needs to run an effective argument.

Before moving on, it's worth noting that these findings accord with our ordinary linguistic practices. For one can be misled by one's intuitions, and one can refuse to be misled by one's intuitions. But one cannot be misled by one's beliefs. S's false beliefs do not mislead S – they constitute S's having already been misled. And the same goes for any false belief-entailing state. Once one is in a false belief-entailing state *one is already misled.* Intuitions are the kind of things that can mislead but are not belief-entailing, hence the kind of things that influence one's own worldview without being part of it. If we're right that intuitions are inclinations to believe, then this is exactly what we should expect. One's inclinations to believe are *exactly* the kinds of things that influence only one's beliefs without being among them.

4.2 The Structure of Intuitions

A good theory makes new claims and prompts new questions. In making new claims, it opens itself to possible falsification should those new claims be false. But at the same time, there is a payoff for the theory should the new claims turn out true. Our theory provides just such a new claim, for in claiming that intuitions are inclinations to believe we claim they have more internal structure than one otherwise might have thought. This claim turns out to be true *independently* of our thesis.

The locution:

John has an intuition that P.

suggests that intuitions are rather simple relations, two-place, holding between an agent a proposition (henceforth, this is "the simple view".) The problem with the simple view is that there are normal, distinct, bona fide, states of affairs that it is incapable of modeling. For we note that:

(A) John finds it intuitive that P.

corresponds to three distinct "negations",[17] N_1-N_3:[18]

N_1: John does not find P intuitive.

[17] Of course, they are not negations as such, but statements in rough opposition to A.
[18] The style of argument takes its inspiration from Unwin (1999). See also Schroeder (forthcoming).

N_2: John finds P not intuitive.

N_3: John finds not-P intuitive.

N_1-N_3 describe distinct states of affairs. To see this, note that the first, N_1, is consistent with John's thinking nothing about P. For instance, maybe John has no attitude towards P, having never considered it. But N_2 is clearly inconsistent with his having no attitude towards P – he finds P unintuitive. N_3 is different from both. Where N_1 is compatible with John having no attitude at all - having never considered P or its negation - N_3 is not. And where N_2 is compatible with John finding neither P nor not-P intuitive, N_3 is not. Hence the three statements are mutually inequivalent.

There are therefore three distinct ways that (A) can be opposed. But how do we model them given a simple two place propositional attitude? After all, a two-place attitude either holds between an individual and a proposition or it does not. The only other possibility is that it holds between the individual and the proposition's negation. But that gives us only two negative states for the one positive. Consequently, we have too little structure to handle the three negative states.

N_1*: John does not have an intuition that P. (i.e. the relation does not hold)

N_2*: ?

N_3*: John has an intuition that not-P. (i.e. the relation holds, but to the negation)

Hence, a two-place attitude model fails the structure test. It cannot model all the normal states of affairs involving intuitions.

We suggest, on the other hand, that finding P intuitive amounts to having some inclination to believe that P. The proposal has the structure needed to model the three negations. Here, (A) becomes:

(AA): John has an inclination to believe that P.

And the three negative states are described using N_1'-N_3':

N_1': John does not have an inclination to believe that P.
N_2': John has an inclination not to believe that P.
N_3': John has an inclination to believe that not-P.

It can be seen that the described states of affairs are independent, for N_1' (like N_1) is compatible with John's having no attitude towards P or its negation. N_2' (like N_2) is clearly inconsistent with his having no attitude towards P – he has an inclination not to believe it. N_3' is different from both. Where N_1' (like N_1) is compatible with John having no attitude towards P or its negation - N_3' (like N_3) is not. And where N_2' (like N_2) is compatible with John bearing the attitude neither to P nor its negation (for instance, if he is inclined to reserve judgment) N_3' (like N_3) is not. Hence the three negations are mutually inequivalent. They describe distinct states of affairs that correspond to the distinct states one can be in vis a vis one's intuitions. Moreover, the states relate to one another in the same ways as N_1-N_3.[19]

Maybe we can model intuitions as two-place attitudes if we introduce the notion of an *anti-intuition*. In that case, the three readings become:

N_1: Smith does not have an intuition that P.**

[19] Note that this is a metaphysical argument. The important fact is not that there are three negation opportunities in (AA). It's that each negation describes genuine, distinct states of affairs, all of which should be model-able by the appropriate theory.

N_2: Smith has an anti-intuition that P.**

N_3: Smith has an intuition that not-P.**

The problem now is that the new attitude is independent of intuition. Hence it fails to explain why having an intuition and an anti-intuition that P is problematic. One could add a law to the effect that "if one has an intuition that P then one does not have an anti-intuition that P, except with tension." Or something. But that would mean bloating the account with an *ad hoc* law; one that merely *asserts* the existence of the phenomenon to be explained.

We, on the other hand, can explain why there is tension in finding P both intuitive and not intuitive. For we analyze "Smith finds P intuitive" as "Smith has an inclination to believe that P" and "Smith finds P not-intuitive" as "Smith has an inclination not to believe that P." The tension follows from the fact that Smith has competing inclinations – to believe and to not believe that P - and it is impossible to satisfy both.

The difficulties for the anti-intuitions view ramify. For why is it that N_2 makes N_1 more likely (if John finds P unintuitive, he is likely not to find P intuitive.) but the inverse relation is not as strong? (If John does not find P intuitive, perhaps it's because he has not considered it. Or maybe it's a proposition to which intuition does not speak – like "Katmandu is in Nepal.") Moreover, why is it that N_3 (John finds not-P intuitive) is reasonably likely to be accompanied by N_2 (John finds P not intuitive)? On the simple view - plus anti-intuitions - there is no non-*ad-hoc* explanation for these facts. Because the analysis of N_2 involves an entirely distinct propositional attitude with no structural relation to the analyses of N_1 and N_3, it can only assert the explananda as laws. Anti-intuitions relate to intuitions in certain law-like ways, and *that's just the way it is*! But on

our view, once again, the relevant relations are explained. If John has an inclination *not* to believe that P then he probably does not have an inclination to believe that P, on pain of having unresolved competing inclinations. Hence there's a smaller likelihood of N_1 given N_2. And if he is in state N_3 (he finds not-P intuitive) then he is probably in N_2 (he finds P not-intuitive.) For John, being rational, strives to avoid believing P along with its opposite. So when he is inclined to believe not-P he's generally inclined *not* to believe that P.

In summary, then, the simple view can't model the situation without introducing anti-intuitions, and then it can't explain the relations except by introducing laws that merely assert the phenomena to be explained. So we conclude that findings-intuitive (or "intuitions") are best analyzed as *inclinations to believe*, since the latter explains the inter-relations between the relevant states.

5 Competitive vs Net Inclinations

Here's a fundamental objection to our proposal: There at least appear to be cases where one has an intuition without an accompanying inclination to believe. It seems coherent, that is, to claim:

(i) I have an intuition that P but I am not inclined to believe it.

One thinks, once again, of the naïve comprehension axiom - one might find it intuitive while having no inclination to believe it. Hence, it would seem, our thesis is mistaken. For there is no way that one can have an intuition that P without an accompanying

inclination to believe if intuitions *are* inclinations to believe.

We think that the objection can be met by making a distinction between *net* and *competitive* inclinations. Opposing competitive inclinations can be co-occurrent in the agent - for example, one can have a competitive inclination to eat the cake and a simultaneous competitive inclination to stay on one's diet. Net inclinations, on the other hand, are what's left after the competitive inclinations have fought it out: The net inclination is the one that wins. Hence, either one has a net inclination to eat the cake (and, ceteris paribus, one goes ahead) or one does not (and, ceteris paribus, one does not.) Given this, one can account for the seeming ability of intuitions to part from inclinations to believe by regarding the former as a species of *competitive* inclination. And by claiming that (i) should be read:

(ii) I have an intuition that P but no <u>net</u> inclination to believe it.

And since an intuition is some kind of *competitive* inclination to believe, the proper reading of (ii) (and therefore i) is:

(iii) I have a competitive inclination to believe that P but no net inclination to believe it.

That's fine since one can have a competitive inclination to believe without an accompanying net inclination, simply when the competitive inclination fails to win out. In the given example, one has a competitive inclination to believe in the naive comprehension axiom that's opposed by an overwhelming competitive inclination to

believe the opposite (arising from Russell's proof).[20] This results in a net inclination to not believe the axiom. Hence (i) is made coherent by reading it as (iii).

5.1 Still Not Buying It

A determined opponent might claim that the following expresses a possible truth:

(iv) I have an intuition that P but no competitive inclination to believe that P.

That, if true of someone, would negate our thesis. But it's not obvious that there are real cases of (iv) and, in fact, there are good reasons to think there are not. To see why, note that there are no cases of the following:

(v) I have an intuition that P yet no competitive inclination to believe that P and no competitive inclination to *not* believe that P.

And it's not even clear that there are *possible* cases. For the mind boggles at what it would be like to find a proposition intuitive and yet, *despite having no inclination to resist it*, have no inclination to believe it whatsoever.

Though there are no cases of (v), there *are* cases where the first and third conjuncts appear without the second. I.e. there are cases like (vi):

[20] Cummins (1998) suggests that intuitions might change via reflective equilibrium. Gendler (2007) argues that intuitions elicited by thought experiments often conflict with our abstract intuitions. See also Weatherson (2003). We would say that we have one collection of competitive inclinations (that we typically think of as intuitions) that concern cases and another (that we don't) that arise from general principles or theory.

(vi) I have an intuition that P but no competitive inclination to *not* believe that P.

For instance, one has a strong intuition that everything has the same properties as itself, and one has no inclination to doubt it.

There are also clear cases of the second and third conjunct appearing together:

(vii) I have no competitive inclination to believe that P and no competitive inclination to *not* believe that P.

Trivially, such cases occur when one has not contemplated P at all, or where the proposition in question is an empirical matter of little importance about which one is utterly uninformed.

So if the second and third conjunct are compossible, and the first and third conjunct are also compossible, then, given that all three are incompossible, the trouble is most likely with the first and second conjunct. I.e., the first two conjuncts are incompossible[21]. But that means that:

(iv) I have an intuition that P but no competitive inclination to believe that P.

is impossible, where this is the supposed possibility that the objection relies upon. Hence either the objection fails, or the objector needs to say why the conjunction expressed in (v) admits of no instances *even though* the pairs are all compossible.

[21] Since the first and third conjunct are compossible, neither is impossible. And since the second and third conjuncts are compossible, the second conjunct is possible. Hence the best explanation does not count any conjunct as singly impossible.

6 Conclusion

In identifying them with a sort of inclination, we are not suggesting that philosophers remove intuitions from their tool belts. Some intuitions may have great heuristic value. Some of our inclinations to believe, like our inclination to eat sugar, may be evolutionarily based in processes that reliably led to survival, reproductive success and good things quite generally. If so, then there is *prima facie* reason to expect that one's doxastic instincts are worth attending to, and there is no denying that inclinations to believe are often the starting point of productive lines of inquiry. That's not all that intuitions bring to the table: Intuitions have great rhetorical value. If one's audience shares one's inclinations to believe P, Q, R, and so forth, arguments from P, Q, and R are bound to be more persuasive. However, one should not confuse these functions– of giving rise to beliefs, and of being persuasive – with the playing of an evidential-role. Intuitions just don't work that way.

Acknowledgements

We thank fellow members of our department at the University of California at Davis for helpful discussion of this material, and we especially thank Magdalena Balcerak and Adam Sennet for their rigorous scrutiny of earlier drafts. Also, we thank the 2008 Meeting for the Society for Exact Philosophy (SEP) for allowing us to present our work at their meeting, and attendees of the conference for discussion, with special thanks to John Bengson, Dustin Locke, and Marc Moffett. And finally, we thank the participants of the 2008 Bellingham Summer Philosophy Conference for a lively and constructive discussion session – with special thanks to Elizabeth Barnes and Brian Weatherson for written comments on this work.

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