

## **Beliefs Formed Arbitrarily: A Guide for the Perplexed**

Ranchers: No need to read the appendix. Thanks for reading my paper!

*Abstract:* This paper is about whether we should abandon beliefs formed arbitrarily: for example, religious, political and moral beliefs that we realize we possess because of the social environments we grew up in. The paper motivates a set of criteria for when to abandon such beliefs. The argument is based on an approach that I call “seriously dialectical.” It involves providing guidance directly to a deliberator who is aiming to arrive at an accurate portrayal of the world, rather than thinking third personally about what deliberators should believe.

### **1. Introduction**

What best explains why we have the political, religious and moral beliefs that we do? It would be nice to think that the explanation of our most deeply held convictions is that we thought long and hard, evaluated the evidence and arguments, and drew the conclusion best supported by all the relevant considerations. But what we see is that people adopt remarkably similar beliefs to their parents and peer groups, which suggests that social influences are largely responsible for the fact that we hold the beliefs that we do. We see the impact of such influences in our everyday experience, but their effects have also been verified by a number of studies. For example, Glass et al. (1986) show that generational differences in beliefs about religion, politics and gender issues are consistently less than 1 on a 0-5 scale. (See also Argyle and Beit Hallahmi 2014, p.98). The question is: what to do about this?

You might think: it’s obvious. If you worry that you have liberal politics because you grew up in a liberal family, or are surrounded by liberal friends and colleagues, then simply take some time to re-evaluate those beliefs. Sit by a fire alone in your dressing gown, and pick through your beliefs one at a time. The worry is: it’s too late. For you might think that the way you will evaluate the relevant evidence and arguments will *itself* be impacted by the social influences you’ve been subject to. In other words: you might worry that once the influences have had their effect, you can’t turn back the clock. And we indeed have good to reason to think that this is so. As mentioned above, there is a very high correlation between one’s own beliefs on controversial matters and those in one’s social environment. Surely, many of the billions of people who share the same religion or politics with their family and friends, have spent time thoughtfully evaluating their belief-systems.

Still, somehow or other, most of these people end up where they started off. So the worry is quite a serious one: it's that even if we've done the best we can at thinking through our own beliefs, and even if the reasons to hold these beliefs seem blatantly obvious to us, we know that had we grown up somewhere else, a reflective process would yield different beliefs, and those other beliefs would seem blatantly obvious.

We feel disturbed by the way these beliefs came about because we regard them, in some sense, as formed arbitrarily and we see no way of escaping the relevant arbitrary influences. What is it to regard a belief in  $p$  as formed arbitrarily? Roughly, it's to regard *which belief state one ended up in with respect to  $p$*  as independent of *whether  $p$* . More precisely,

#### *Regarding a Future State as Formed Arbitrarily*

You regard a future state of yours as formed arbitrarily relative to whether  $p$ , if there is a set of states  $S$  such that:

(\*) You're uncertain which of the states in  $S$  you'll be in and you think you might end up in any one of them:

(For some set of states  $S$ , for all  $S_i \in S$ ,  $0 < \text{Cr}(\text{you enter } S_i) < 1$ ).

(\*\*) You're uncertain about whether  $p$

( $0 < \text{Cr}(p) < 1$ )

(\*\*\*) You regard which state you'll be in as independent of whether  $p$

(For all  $S_i \in S$ ,  $\text{Cr}(\text{You enter } S_i|p) = \text{Cr}(\text{You enter } S_i|\sim p)$ )

I'm also going to assume that in cases in which we're worried about beliefs formed arbitrarily, we've thought and rethought, checked and rechecked, but that we keep arriving at the same conclusion and we don't expect any further thinking to yield a different conclusion. I make this assumption because these are the cases that are more interesting: if we expected that thinking through the issue again would involve engaging in a process that wasn't tainted by the influences in question, it would be clear how we should proceed: we should just think through the issue again.

Unfortunately, the definition above doesn't carry neatly over to cases in which we already occupy the state in question. This is because we might become certain that we are in the state that we are in (and hence (\*) isn't satisfied and (\*\*\*) is satisfied trivially), or we might come to be certain that  $p$  is true as a result of entering the state in question (in which case (\*\*) won't be satisfied and (\*\*\*) might be undefined). So we need to think slightly differently about what's involved in regarding a current or past state as formed arbitrarily relative to whether  $p$ :

*Regarding a Current or Past State as Formed Arbitrarily*

You regard a current or past state of yours  $S_i$  as formed arbitrarily relative to whether  $p$  if there is a set of states  $S$  such that *setting aside your opinion about  $p$ , and the fact that you're in  $S_i$* , (\*), (\*\*), and (\*\*\*) hold.

I want to illustrate how these definitions work with two toy cases inspired by cases in White (2010). Although these cases are quite different from the real world cases we're ultimately concerned with, their simplicity will help to isolate the core phenomenon. I'll start with a version of these cases in which you're regarding a future state of yours as formed arbitrarily:

Perceptual Coin Flip: One fair coin will determine whether the wall will be painted red or blue. Another fair coin will determine whether the wall will appear to you to be red or appear to you to be blue.

If you learn that you're going to be in a Perceptual Coin Flip case, you should regard your future perceptual state as a state formed arbitrarily relative to whether the wall will be red. This is because the three conditions in the definition are satisfied: you're unsure about which perceptual state you'll be in (that is, you're unsure about which color the wall will seem to you to be), you're unsure what color the wall will be, and you'll regard what color the wall will seem to you to be as independent of the wall's actual color (because your perceptual state and the actual color will be determined by two independent coin flips). If you expect that you'll go on to form beliefs on the basis of perception, then you should expect your future beliefs to be formed arbitrarily relative to whether the wall will be red for the very same reason.

Logic Coin Flip: One fair coin will determine whether you'll be given a logic problem whose premises entail  $p$  or a logic problem whose premises entail  $\sim p$ . The flip of a second fair coin will determine whether you come up with a proof that seems to you to show that  $p$  is entailed by the premises you were given, or you come up with a proof that seems to you to show that  $\sim p$  is entailed by the premises. (Whichever answer you come up with, checking, double checking, or triple checking will yield the same answer).

A similar line of reasoning applies to Logic Coin Flip. If you learn you're going to be in such a situation, you should regard how things will seem to you concerning what the premises entail as a state formed arbitrarily relative to what your premises actually entail. If you expect, in Logic Coin Flip, that you'll form a belief about what

the premises entail on the basis of logical reasoning, then you should regard your future belief state as formed arbitrarily relative to whether the premises will entail p.

Now, suppose you find yourself believing that some wall is red, or that some set of premises entail p. You *then* find out that your belief was caused by a coin flip in the way described above. Even if learning about the setup doesn't move you, and you remain certain about the color of the wall (or the answer to the logic problem), you should still regard this belief state of yours as formed arbitrarily. This involves applying the second part of the definition I gave above: you should regard your belief state as formed arbitrarily because, *setting aside your belief about the color of the wall, and your belief about what you believe the color of the wall to be*, you'll be occupying a perspective that is uncertain about each of these (by stipulation), and, given what you know about the setup, *from that perspective*, you'll regard the color of the wall, and the color you believe the wall to be as independent of one another.

The more complex cases like religious, political and moral beliefs are treated in a similar fashion. Suppose I know that which political beliefs I ended up with is the result of the geographical region that my family lived in. To figure out whether I should regard my beliefs as formed arbitrarily, I set aside the beliefs in question, and my belief that I formed the beliefs that I have. Then I ask, from this unopinionated perspective: do I regard the answers to political questions as independent of which political beliefs I ended up with? If I think that which beliefs I end up with is determined by which area of the country I grew up in, then the question amounts to: Do I regard the answers to political questions as independent of which area of the country I grew up in? Plausibly, the answer to that question is yes, and so, if I think that my political beliefs were caused by the area of the country I grew up in, I should regard those beliefs as formed arbitrarily.

With these definitions in hand, I can now formulate the question that will be the focus of this paper: how should we respond to learning that some belief of ours was formed arbitrarily? In particular, does realizing that a belief was formed arbitrarily provide a reason to abandon the belief? The aim of this paper is to motivate a set of criteria for determining when to abandon beliefs formed arbitrarily. When I talk about "beliefs formed arbitrarily" I don't mean to just be talking about on/off beliefs. I want to inquire about credences (degrees of belief) and states of relative confidence formed arbitrarily as well. So when I use the term "belief formed arbitrarily" it will be used in this broad sense. (Sometimes, to emphasize this more general category I will talk about "opinions" rather than "beliefs"). I will argue that the answer to the question "should I abandon a belief formed arbitrarily?" is (roughly) the following: You should abandon your belief

formed arbitrarily in  $p$  if and only if, setting aside the belief in question, you have a prior opinion about  $p$  which (in a sense that will be made precise later) expects that the belief you formed is less accurate than itself. The argument will be based on an approach that I'll call "a seriously dialectical approach." This approach involves providing guidance to a deliberator directly, rather than thinking third personally about what a deliberator should believe.

## 2. A Brief Literature Review

Before offering my own approach to the question of how we should respond to beliefs formed arbitrarily, I'd like to provide a brief overview of some of the recent literature on the subject.

The most hardcore line I know of is a view that I think can be inferred from the conjunction of two papers by Maria Lasonen Aarnio (2010, 2014). On this view, even in perceptual coin flip, if your perception was in fact formed by reliable visual faculties, you can rationally maintain your belief. Similarly, in the logic case, if your belief was formed by correct logical reasoning, there is nothing irrational about maintaining your belief even if you know about the coin-flip setup. Roger White (2010) disagrees with Lasonen Aarnio about the perceptual case: White's view is that in Perceptual Coin Flip you should adopt a 0.5 credence, but in Logic Coin Flip, if you reasoned correctly, then you are rational in maintaining your belief.

Next on the spectrum of views come people like David Christensen (2010, 2011), Schoenfield (2013), Katia Vavova (forthcoming) and Adam Elga (ms.). According to these views, in both of the simple cases I described you should adopt a 0.5 credence. However, how we should respond to learning that our religious, political and moral beliefs were formed arbitrarily will depend on a number of factors. For example: Christensen and Vavova think that if what's being questioned is a large chunk of your belief state, then you don't have to abandon your arbitrarily formed belief, but if it's a smallish chunk, then you do. Schoenfield (2013) argues that whether or not you should abandon your belief depends on whether or not the case is permissive. Elga thinks that if the influence in question impacted which standards of reasoning you adopted, you don't need to abandon the belief, but if it impacted whether or not you conformed to those standards, then you do.

I am sympathetic to the idea that how we should respond to beliefs formed arbitrarily depends on a number of factors, roughly along these lines. However, I am not satisfied with the motivations for these accounts. Some of these accounts don't offer what I take to be a satisfying motivation for ever abandoning beliefs formed arbitrarily. And others don't offer what I take to be a satisfying motivation for distinguishing cases in which you should and cases in which you shouldn't abandon

your belief. My aim is to see what sorts of results emerge if we take a different kind of approach. As we'll see, the approach I'll offer vindicates a set of criteria for determining how to respond to beliefs formed arbitrarily that yields somewhat similar results to the approaches described above, but with what I find to be a more satisfying motivation.

### 3. A Seriously Dialectical Approach

The approach I'll be taking in this paper involves taking very seriously the perspective of the "perplexed" – and by that I mean the perspective of the person wondering how to respond to a belief formed arbitrarily. This paper is meant to be a *guide* for the perplexed in the sense that what I'll be sharing in this paper are some insights which I hope will help people who are perplexed about beliefs formed arbitrarily with their deliberations about what to believe. An important assumption I'll be making throughout is that the perplexed in question, in deliberating, are concerned only with *accuracy*.

Assumption 1: The perplexed that I am addressing are wondering how to respond to beliefs formed arbitrarily and their aim is an accurate portrayal of how things are.

A belief state is accurate insofar as it provides a good estimate or approximation of the way the world actually is. For example, in the case of on/off beliefs: believing  $p$  is most accurate when  $p$  is true, most inaccurate when  $p$  is false, and suspending judgment on  $p$  is of some intermediate degree of accuracy. In the case of relative degrees of confidence: if you're more confident in  $p$  than  $\sim p$  and  $p$  is true, you're more accurate than you would be if you were more confident in  $p$  than  $\sim p$  and  $p$  were false. In the case of credences, if you're 0.9 confident that  $p$  is true and  $p$  is true, then you're more accurate than you would be if you were .8 or .7 confident in  $p$ , but you're less accurate than you would be if you were .95 confident in  $p$ .

The accuracy of credences can be measured by a *scoring rule*. A scoring rule takes a credence in some proposition, and the truth value of that proposition, and gives you a number that represents how accurate that credence is, given the truth value. So, for instance, the accuracy score you'd get for a 0.9 credence when  $p$  is true is some number that's greater than the accuracy score you'd get for a .8 credence when  $p$  is true, and less than the accuracy score you'd get for a .95 credence when  $p$  is true.

Another assumption I'll be making is that the perplexed I'm addressing care about the accuracy of their credences in a way that can be represented by an

*immodest* scoring rule: one according to which credences are *self-recommending*. In other words, I'm assuming that if you have a certain credence, you will expect your credence to be more accurate than any alternative credence.<sup>1</sup> Note that I'm not claiming that the agent has precise credences in every proposition, or that she is only concerned with the accuracy of credences. I'm just assuming that, insofar as some of her belief states will be credences, her concern for the accuracy of those states can be represented by an immodest scoring rule.

Assumption 2: The concern with the accuracy of credences had by the perplexed I'm addressing can be represented by an immodest scoring rule.

There is good reason to think that our concern with the accuracy of our credences in most cases is immodest, but I will not argue for this here.<sup>2</sup>

In sum, this paper is meant to be a guide to people deliberating about how to respond to beliefs formed arbitrarily, who are concerned with the accuracy of their belief states, and, if those belief states are credences, their concern with the accuracy of those credences can be represented by an immodest scoring rule.

There is a sense, then, in which this paper is not directed at epistemologists, if we think of epistemologists as theorists who ask from a third personal perspective "Is so-and-so believing rationally? Does so-and-so know?" Rather, this paper is directed at the so-and-sos themselves. It is similar in form and purpose to an article about "How to make money," "How to manage stress," or "How to attain the love you want." Such articles are addressed to people who are trying to make money, manage stress and attain love – not to people who judge how well someone has done from a money-making/stress-management/love-attainment perspective. Similarly, I am addressing someone who is aiming, in their deliberation, to arrive at an accurate portrayal of the world and is wondering how to proceed given knowledge that some of their opinions were arbitrarily formed. For this reason, much of the paper will be written in this second person: addressed to those deliberating about how to respond to beliefs formed arbitrarily.

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<sup>1</sup> A couple technicalities: First, what is meant by saying that someone with credence  $c$  expects  $c$  to be more accurate than any alternative credence is that the agent assigns greater *expected accuracy* to  $c$ , than to any alternative. If  $A(c,p)$  represents the accuracy of credence  $c$  in  $p$  when  $p$  is true, the expected accuracy that an agent with credence  $c$  in  $p$  will assign to a credence of  $d$  in  $p$  is:  $cA(d,p) + (1-c)A(d,\sim p)$ . On an immodest scoring rule, this quantity is maximized when the value of  $d$  is set to  $c$ . Second, immodest scoring rules only require that degrees of belief represented by probability functions be self-recommending. So in what follows I'll be assuming that the agents in question who are concerned about their credence  $c$  in  $p$  being formed arbitrarily, also have a credence of  $1-c$  in  $\sim p$ .

<sup>2</sup> For a defense of the usage of immodest scoring rules in measuring accuracy see Greaves and Wallace (2006), Gibbard (2008), Joyce (2009), Moss (2011), Horowitz (2013), Pettigrew (2016) and Levinstein (ms.).

#### 4. How to Respond to Beliefs Formed Arbitrarily: Simple Cases

You're wondering how to respond to a belief formed arbitrarily. In order to help you with this question, I need to know more about what settling this question would amount to for you.

For example, are you wondering what to do if you think some future state of yours will be formed arbitrarily, or do you find yourself already occupying a state which you believe to be formed arbitrarily? I'll address both kinds of question but it will be easiest to start with the future-oriented one. In this section, I'll focus on the toy cases discussed above. In the following sections, I'll discuss more complicated cases and then provide a general answer to the question of how to respond to beliefs arbitrarily formed.

##### 4.1 What to think in the future?

What kind of mental state will you be in if you settle for yourself the question of how to respond to future beliefs formed arbitrarily? I'm going to assume, for the purpose of this paper, that your deliberation about how to respond to future beliefs formed arbitrarily is aimed at settling on a *plan* for what to believe in the future if such cases arise.<sup>3</sup> In making this assumption, I am following Gibbard (2003) and others by understanding the output of a deliberation of the form "what to do/think/believe in situation S" as a deliberation aimed at settling on a plan for what to do/think/believe in S. Thus, I am assuming that in settling for yourself the question of how to respond to future beliefs formed arbitrarily, you will have a plan that will issue a recommendation for, say, what to think if you find yourself in cases like Perceptual or Logic Coin flip.

So what should you do if you find yourself in the future in a case like Perceptual or Logic Coin Flip? Here's the answer: if you find yourself in Perceptual Coin Flip you should have a credence of 0.5 that the wall is red, even once you enter the room and observe the wall, and if you find yourself in Logic Coin Flip you should have a credence of 0.5 that the premises entail p upon thinking through the logic problem.

Why in this? In other work (Schoenfield (forthcoming<sup>a</sup>)) I've argued that, of the possible plans you might adopt for how to respond to cases like Perceptual and Logic coin flip, the one that you should expect will do best from an accuracy perspective is one according to which you maintain your initial 0.5 credence come what may.

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<sup>3</sup> The notion of making plans for what to believe doesn't presuppose doxastic voluntarism. See e.g. Schafer (2014, §5) and Schoenfield (2015, p.257).

I won't rehearse the argument in detail, but here is the general gist:

(P1) If you value the accuracy of credences in an immodest way you'd rather stick to your current credences than take a "belief gamble." (I will explain in a moment what these are).

(P2) Any plan other than the plan to maintain your 0.5 credence in cases like Logic and Perceptual Coin Flip is a plan that you should expect will result in taking a belief-gamble.

So,

(C) If you value accuracy in an immodest way, the best plan will be one in which you maintain your 0.5 credence.

I'll elaborate a bit on each premise:

*(P1) If you value accuracy in an immodest way, you'd rather stick to your current credences than take a belief gamble.*

It will be easiest to illustrate the idea of a belief-gamble with some examples.

Example #1: You have a credence of 0.5 in some proposition. If you move your credence from 0.5 to 1 without gaining any new evidence you're taking a belief-gamble: you're doing something which you'll think gives you a 50% chance of becoming more accurate (having credence 1 in a truth – marvelous!) and a 50% chance of becoming less accurate (having credence 1 in a falsehood – awful!).

Here's a second example (which should sound familiar):

Example#2: You have a 0.5 credence in  $p$  and you have the opportunity to go through a procedure which gives you a 50% chance of ending up with credence 1 in  $p$  and a 50% chance of ending up with credence of 0 in  $p$ . Which of these credences you'll end up with is independent of the truth of  $p$ . If you choose to go through this procedure you're taking a belief gamble:

you're making a choice which gives you a 50% shot at a higher accuracy score and a 50% shot at a lower one.<sup>4</sup>

Our general preference to avoid belief-gambling is an interesting feature that is unique to our epistemic lives: in our practical lives we're gambling constantly. I think that there are good reasons for this disanalogy between our epistemic and practical lives, but I won't go into them here (see note 2). The important point for now is that if you value the accuracy of credences in an immodest way, this preference for gambling-avoidance is what you'd expect if you were trying to maximize expected accuracy. It will be helpful to have a sense of why this is so, so here's the rough idea:

First, note that both gambles give you a 50% shot at the highest accuracy score (the score for certainty in a truth) and a 50% shot at the lowest accuracy score (the score for certainty in a falsehood). That is, they both have the same expected accuracy. The alternative choice to taking a gamble in both examples is maintaining a 0.5 credence, which will get you some middling accuracy score no matter what.

Next, recall that on an immodest scoring rule, credences are *self-recommending*: they expect themselves to be more accurate than any alternative credence. This means that if our scoring rule is immodest, it had better rule out the first gamble: the one that involves a move from 0.5 to 1. After all, what it is for 0.5 to be self-recommending, is for someone with 0.5 to prefer sticking to 0.5 than moving to any other credence, including 1. But since the expected value of the first gamble is the same as the expected value of the second gamble, if our scoring rule rules out the first gamble, it will also rule out the second. In general, any scoring rule that has the feature that credences are self-recommending, will also encode a preference for avoiding belief-gambles on credences.

### *Forming a Belief Arbitrarily Amounts to a Belief Gamble*

If you start out with a 0.5 credence that the premises entail  $p$ , and you plan to form a belief in Logic Coin Flip, you will think that you have a 50% shot at believing truly and a 50% shot at believing falsely. Given the setup of the case, there is simply no way you can expect to do any better than that. But forming a belief under such

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<sup>4</sup> This is because in the case described you'll think that there are four possibilities to which you'll assign equal probability: you end up with credence 1 in  $p$  and  $p$  is true, you end up with credence 1 in  $p$  and  $p$  is false, you end up with credence 0 in  $p$  and  $p$  is true, you end up with credence 0 in  $p$  and  $p$  is false. In half of these cases you get the accuracy score for certainty in a truth and in half of these cases you get the accuracy score for certainty in a falsehood. (The accuracy score for credence 0 in a falsehood is the same as the accuracy score for credence 1 in a truth and vice versa).

circumstances amounts to a belief-gamble. So if you don't like belief-gambles, you're not going to want to do that. You'll prefer to maintain your 0.5 credence.

So, in brief, the argument is this: if you have a credence, and you think that, if you revise your credence, your new credal state will be formed arbitrarily, this means that you regard which credal state you'll occupy as independent of the proposition in question. In such a case, revising your credences will amount to gambling. Since we're assuming that the way in which you value the accuracy of your credences is immodest, you don't like to gamble, and thus, you won't want to revise your credences arbitrarily. So here's the first recommendation:

*Recommendation #1:* If you start out with a credence in  $p$ , and you think that any revision to that credence will be arbitrarily formed, maintain your initial credence in  $p$  come what may.

#### 4.2 What to Think Now?

I've just argued that the best plan to make for cases in which your beliefs will be formed arbitrarily is one in which you maintain your initial credence come what may. But suppose that you are not interested in settling on a plan for what to do in the future. Perhaps you already have a belief that you regard as formed arbitrarily and you're wondering: "what should I think *now*?"

For example, say you believe that the premises of a logic problem you've been given entail  $p$ . You only then learn that you're in a Logic Coin Flip case: that which premises you were given was determined by a coin flip, and that whether it would seem to you that the premises entail  $p$  was determined by a coin flip. You're now wondering, having learned the setup of the case: *should I abandon my belief that the premises entail  $p$ ?*

If we accept a certain principle of rationality there is an easy answer. The principle is:

*The Planning Principle:* Ceteris paribus, one can't rationally be in a situation in which one  $\phi$ s, but also believes that it would have been rational to plan to not  $\phi$  in this very situation.

I think that there's something attractive about the planning principle. Principles along these lines are thought by some (Gauthier (1994), Bratman (1999, p.55) Hinchman (2003)) to underlie the very idea of agency, and they are also at the foundation of the up and coming Logical Decision Theory (Levinstein and Soares (ms.), Yudowsky et al. (ms.)). If some principle in this vicinity is correct, then the fact that the right *plan* to make for Logic Coin Flip cases is the plan to adopt a 0.5 credence, then what you should do if you actually find yourself in the Logic Coin Flip

case is adopt a 0.5 credence, regardless of what premises you're given. More generally, if there is a close connection between what it's rational to do in a situation and what it's rational to plan to do in a situation, then the arguments I've given concerning what plans to make will answer the question of what you should do.

I am intrigued by this connection between rational plans and rational actions/beliefs. However, it's not obvious to me exactly what the proper motivation for it is. So I won't pursue this line further. Instead, I will take a different approach: one that takes seriously the perspective of the questioner.

Let's call the proposition that the premises entail p "Ep." If you find yourself believing Ep in Logic Coin Flip, but you are wondering whether to abandon the belief, then you are engaged in the activity of *doubting* Ep. For suppose you weren't doubting Ep. Then you wouldn't be wondering: "Should I abandon my belief that Ep?" Since you're aiming to be accurate, if you took Ep to be true, it would be clear to you that the best way to achieve accuracy would be to maintain the belief. Since you *are* deliberating about whether to maintain your belief (this section of the paper is addressed precisely to those of you who are engaged in this kind of deliberation!), you must be seeking to engage in a deliberation about whether to maintain your belief that Ep, *that doesn't take it for granted that Ep*.

Frequently, when we're having doubts, we can resolve those doubts by going through the reasoning a second, third or fourth time. So one thing I could recommend is: "Go through the reasoning again and abandon your belief if you reach a different conclusion." But suppose you tell me: "That's not helpful! I've gone through the reasoning over and over again and I know that the conclusion I reached is the conclusion I'll keep reaching. There's absolutely no purpose in thinking through the problem again." Fair enough. It was, after all, stipulated that if you regard a belief as formed arbitrarily, you'll expect reasoning through the matter again to yield the very same conclusion.

What if, instead of recommending that you reason through the problem again, I recommended the following: "Believe Ep if and only if the premises, *in fact*, entail p." You'd likely find this response equally frustrating. You might say: "If you tell me to believe Ep if and only if the premises entail p, the most you can expect me to do in response to that advice is attempt to determine whether the premises entail p. But this requires reasoning through the problem again which I've already told you is useless. Thus, this advice is also useless."<sup>5</sup>

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<sup>5</sup> Why don't I respond by saying: "there are other things you can do – for example, you can ask a friend to look through the answer for you"? Because what I'm offering is advice that's meant to aid in *deliberation* – not in the process of evidence gathering.

If you're inclined to offer this series of responses, I know that then when you ask: "should I abandon my belief that Ep?" you want to deliberate about whether to abandon your belief from a perspective that (a) doesn't rely on logical reasoning (if you were willing to rely on logical reasoning you'd just double-check your answer), and (b) doesn't take it for granted that Ep is true (if you took Ep for granted, you wouldn't wonder whether to give it up).

Now that I have a sense of the kind of deliberative process you want to engage in, I can offer some assistance. The perspective that you want to deliberate from is one that doesn't take the truth of Ep or your ability to reason properly for granted. From this perspective, how confident are you that Ep is true? Answer: 0.5. After all, what you know from this perspective is that a coin flip determined whether Ep would be true. You may also know that you arrived at the conclusion that Ep after doing some reasoning, but since you know that which conclusion you reached was determined by a coin flip you don't take this to be evidence one way or another for the truth of Ep. So what does this perspective recommend? It recommends that you abandon your belief and adopt a 0.5 credence. Why? Because from the perspective in which you're asking this question – the one in which you're doubting your belief – you'll regard maintaining your belief that Ep as amounting to taking a belief gamble, and we've already established that, given the way in which you care about accuracy, you'd rather have a 0.5 credence than take such a gamble.

Let me sum up: this subsection was addressed to somebody who formed a belief and is now wondering whether to abandon it upon realizing that it was formed arbitrarily. The person I addressed is engaged in a particular kind of *doubt*: they want to engage in a deliberative process aimed at determining whether to maintain or abandon their belief that doesn't take their current belief for granted (if they were taking it for granted, they wouldn't be doubting it), or their ability to reason about the subject matter for granted (they regard reasoning as useless because they believe that reasoning will yield the same conclusion they started out with). If this is your situation, and the perspective you occupy once you set aside your belief is one in which you have a particular credence  $c$  in the proposition in question, the recommendation is to abandon your belief and adopt credence  $c$ . This is because, from the doubting perspective in which your credence is  $c$ , you'll assign greater expected accuracy to having credence  $c$  than to taking a belief-gamble. Since, from this perspective, you'll regard maintaining the belief you formed earlier as taking a belief gamble you'll prefer to adopt  $c$ . Thus,

*Recommendation #2:* If you're wondering whether to abandon a belief in  $p$  that you now regard as formed arbitrarily and, setting aside your belief in  $p$ , you have credence  $c$  in  $p$ , you should abandon your belief and adopt credence  $c$ .

In these toy cases you have a precise prior credence in the proposition in question. But what if you're wondering how to respond to a belief formed arbitrarily and you don't have a precise credence starting out? I'll focus on a specific example of such a case inspired by Cohen (2000).

## 5. How to Respond to Beliefs Formed Arbitrarily: More Complex Cases

Graduate School: You're about to start a PhD program in neuroscience. You've been accepted to two graduate schools. You know that, for some proposition  $n$ , which you currently have no opinion about, if you go to school A,  $n$  will seem more likely than  $\sim n$ , and if you go to school B,  $\sim n$  will seem more likely than  $n$ . You don't think that which of the two graduate schools you choose to go to is, in any way, correlated with the truth of  $n$ . Thus, you regard whether it will seem to you that  $n$  is more likely than  $\sim n$  as independent of the truth of  $n$ .

In such a case, you'll think that if you go to graduate school and form an opinion about which of  $n$  or  $\sim n$  is more likely, that opinion will be arbitrarily formed.

Let me be more precise about what I mean when I say: "you currently have no opinion about  $n$ ". For the purposes of this example, I'm going to use this phrase to mean: it's not the case you are more confident in  $n$  than  $\sim n$ , it's not the case that you are more confident  $\sim n$  than  $n$ , and it's not the case that you have a 0.5 credence in  $n$ . (This entails that your attitude towards  $n$  can't be represented by a precise credence).

The key difference between Graduate School, on the one hand, and Perceptual and Logic Coin Flip, on the other, is that, in the latter cases, you start out with a prior credence of 0.5 in the proposition in question, whereas, in Graduate School, you start out without a prior credence in the proposition.

Suppose you're wondering what to think once you arrive at graduate school and, as before, your concern is accuracy. Also, as before, I'm assuming that in wondering what to think in the future you're engaging in a deliberative process aimed at settling on a plan for what to think once you find yourself in graduate school. While in Perceptual and Logic Coin Flip, there is an accuracy-based motivation for planning to maintain your current position regardless of how things

seem in the future, this is not so in Graduate School. There's no reason for you to plan on maintaining your lack of opinion once you arrive in graduate school.

Here's why: In the simple cases, the reason to plan to stick with your current credence is that credences are self-recommending. A 0.5 credence regards itself as more expectedly accurate than any other credence, and, for this reason, an agent with a 0.5 credence will prefer to stick to 0.5 than to take a belief gamble. The state of lacking an opinion, however, is not self-recommending in this way. Results in Seidenfeld et al. (2012), Schoenfield (forthcoming<sup>b</sup>) and Mayo-Wilson and Wheeler (forthcoming) show that the state of lacking an opinion can't recommend itself over every alternative state. But even if we just focus on states like being more confident in one proposition than its negation, there's no reason, from your current perspective, that you'll want to avoid occupying those states. The state of lacking an opinion about  $n$  doesn't recommend against states like being more confident in  $n$  than  $\sim n$  or being more confident in  $\sim n$  than  $n$ . The argument for this is in the appendix.

Since the state of lacking an opinion doesn't recommend against the state of having an opinion, you have no reason to make a plan that rules out having an opinion about which of  $n$  or  $\sim n$  is more likely even if which state you'll be in is the result of a gamble.

Now let me address someone in a Graduate School type case who isn't seeking to make a plan for the future: rather they're already in graduate school, more confident in  $n$  than  $\sim n$ , and wondering what to do upon realizing that their opinion was arbitrarily formed. The answer will be similar to the one I gave in the previous section: If you're wondering about whether you should give up your opinion about  $n$ , and you regard this opinion as formed arbitrarily, then you're engaged in a particular kind of doubt: you want to deliberate from a perspective that doesn't take your opinion about  $n$  or your reasoning about  $n$  for granted. What does this standpoint look like? Crucially it is one that isn't more confident in  $n$  than  $\sim n$ . But setting aside your current opinion about  $n$ , what is your attitude towards  $n$ ? Given that, before going to graduate school, your state was not one in which you had a credence of 0.5 in  $n$ , but rather was one in which you lacked an opinion about  $n$ , it is plausible that setting aside your newly formed opinion about  $n$ , the perspective you're wanting to deliberate from is one in which you lack an opinion about  $n$ . What does this state recommend that you do? Nothing. The state of lacking an opinion about  $n$  isn't self-recommending. In particular it doesn't regard itself as better than a state in which you're more confident in  $n$  than  $\sim n$ . So, even setting aside your opinion about  $n$ , you're occupying a perspective that doesn't recommend giving up your current opinion.

We can sum up the recommendations about graduate school type cases as follows:

*Recommendation #3:* If you currently lack an opinion about  $p$ , think that you're going to enter a situation in which one of  $p$  or  $\sim p$  will seem more likely to you, and regard this future state as one that will be formed with arbitrariness, there is no reason for you to plan to maintain your lack of opinion about  $p$ .

*Recommendation 4:* If, currently, you're more confident in  $p$  than  $\sim p$ , you regard this opinion as arbitrarily formed, and, setting your opinion aside, you lack an opinion about  $p$ , there is no reason for you to abandon your opinion favoring  $p$ .

## **6. How to Respond to Beliefs Formed Arbitrarily: The General Picture**

We don't like it when our are beliefs are formed arbitrarily because we don't like taking belief gambles. We don't like belief gambles because we're concerned with accuracy in a particular way: an immodest way. Immodest ways of caring about accuracy have the feature that credences are self-recommending, and this has the consequence that an agent with a credence will prefer to stick to her credence than to take a belief gamble.

If the gamble already happened, and you've formed a new credence, you're now in a new self-recommending state. And that perspective will, of course, recommend that you stick with your post-gamble attitude. However, if you wonder "should I give up that attitude?" you are *doubting* that attitude. Doubters are people who want to engage in a deliberation that doesn't take what's being doubted for granted. So if you're doubting your existing attitude that was formed arbitrarily and, setting aside what is in doubt, you find yourself with a different self-recommending attitude towards  $p$ , the doubting perspective will tell you to abandon any revisions that resulted from arbitrary influences and instead adopt the self-recommending opinion you hold in the doubting perspective. (This will sometimes be the opinion you had before undergoing the influence, but it need not be).

However, if, setting aside your current opinion about  $p$ , you find yourself in a state that isn't self-recommending, then there is no reason, *even from the doubting perspective*, to abandon your opinion. The state of lacking an opinion about  $p$ , I argued, isn't self-recommending. In particular, lacking an opinion about  $p$  doesn't recommend against a state of being more confident in  $p$  than  $\sim p$  and it doesn't recommend against a state of being more confident in  $\sim p$  than  $p$ . Thus, in cases in which, setting aside your opinion about  $p$ , you are in the state of lacking an opinion about  $p$ , there is no reason to give up your new opinion, even if you regard it as

arbitrarily formed. (This has the consequence that, insofar as what's being influenced are *our priors themselves*, we have no reason to abandon those priors upon learning that they were arbitrarily formed).

In sum:

*The General Recommendation:* If you're wondering whether to give up your opinion about *p* that you regard as formed arbitrarily and, setting aside your opinion about *p*, you find yourself in a state that recommends against your current opinion, then you should abandon your opinion. If you're wondering whether to give up your opinion about *p* that you regard as formed arbitrarily and, setting aside your opinion about *p*, you are not in a state that recommends against your current opinion, then there is no reason for you to give it up.

## **7. For the Rest of the Perplexed (and the Unperplexed)**

So far I've offered advice to two sorts of people: those who are thinking about how to go about belief formation in the future, and those who are in the process of doubting their current beliefs. But there are two other sorts of people who I haven't offered advice to. First, there is the person who acknowledges that she has a belief formed arbitrarily, but, rather than doubting her belief, is wondering *whether* to doubt her belief. Second, there is the person who acknowledges that she has a belief formed arbitrarily but is nonetheless not engaged in the process of doubting it, nor is she interested in engaging in that process. Is there anything I can say to such people?

### *7.1. Being Perplexed about Whether to Doubt*

In this subsection I will address someone who already has a belief formed arbitrarily and *in some sense* is wondering what to do in response to it. However, this person claims to not already be doubting her belief. What she is wondering about, she says, is *whether* to doubt her belief: whether to engage in deliberation about the proposition in question that doesn't take her current belief and reasoning for granted.

One thing I might say to someone who is seeking advice about whether to doubt her belief in *p* is this:

"If your aim is accuracy, and you're wondering whether to doubt your belief that *p*, then you *are*, in a sense, doubting *p*. For if you are deliberating about whether to doubt *p*, and you were taking it for granted that *p*, then the answer would be clearly: don't doubt *p*! After all, if you take it for granted

that p is true, then you'll think that doubting p might lead you to abandon a true belief. Thus, you wouldn't want to engage in doubt. So, you see, any deliberation about *whether* to doubt p is a deliberative process that doesn't take it for granted that p."

If the deliberation about whether to doubt p is ultimately aimed at arriving at an accurate opinion about p, and that deliberation doesn't itself take p for granted, then all the arguments than I ran in the previous section with respect to the question "should I abandon my belief that p if it was formed arbitrarily" will apply in just the same way to the question "should I doubt my belief that p?" The answer will be: if, setting aside your current opinion about p, you're occupying a perspective that has a self-recommending attitude towards p, then yes, you should doubt your belief that p, and in fact, you should, upon doubting it, abandon that belief and adopt the self-recommending attitude. Otherwise, there is no reason for you to doubt, or abandon your belief." Although I think there's something right about such a response, there's also something irritating about. It seems like there should be some way to ask "should I doubt?" that doesn't imply that one is already doubting.

So here's an alternative answer: if you're wondering whether to doubt that p, when you know that your opinion about p was formed arbitrarily, the deliberation you want to engage in is about what to take for granted. Unfortunately, as an accuracy-driven epistemologist, I can't help you with this. Why would this be?

Let's consider this paper as an example. In this paper, I'm trying to help someone settle the question of whether to abandon a belief formed arbitrarily, assuming their goal is accuracy. Of course, I could have written a very short paper that said: "maintain your belief that p if and only if it is true," but that would be unhelpful. In giving such advice I'd be failing to recognize that the deliberative process the person wants to engage in is from a perspective that doesn't take it for granted that p is true and doesn't take it for granted that p is false. What this illustrates is that the kind of advice I'm offering is advice that's meant to respect the agent's perspective: it is advice that respects the fact that the deliberating agent takes a stand on some things but not on others. Since my business involves giving advice based on your perspective, there just isn't any advice I can offer in this capacity about what perspective to adopt.

This sort of thought might be given further support from contextualist views about evidence (see Neta (2003, 2004), Ichikawa (2013) and Greco (forthcoming)). According to these views, there aren't absolute facts about what evidence an agent possesses. Conversational context determines whether sentences about what evidence an agent has are true. If these views are correct then, if we're having a conversation about what to take for granted, or, in other words, what to treat as

evidence, we might be in a context that simply doesn't have the resources to deliver an answer.

So how do we deliberate about what to take for granted? About what perspective to adopt? Descriptively, I think we frequently try on different perspectives and they either stick or they don't stick. We tell our students about brains in vats, but, generally, when they walk out of the classroom, they're taking it for granted that their perception is reliable. In class, they tried on the skeptical perspective, they enjoyed playing around with it, but it didn't stick. Whether or not a perspective will stick likely depends to some degree on how distant that perspective is from our current one. The perspective from which I take for granted my reasoning about a logic problem and the perspective from which I don't aren't that different and so it's easy to slide into doubt in such cases. But not everyone will. We can imagine people who feel so blinded by the light of reason that they simply are unable to give up the belief that, say,  $\sim(pvq)$  entails  $\sim p$  &  $\sim q$  no matter what they're told about how that belief came about. There may be sensible advice to be given about what perspective to take up but, if what I've suggested above is correct, this advice won't be of the accuracy-driven kind. Accuracy-based deliberation advice involves engaging with an existing perspective: not creating one.

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## 7.2 The Non-Perplexed

In the previous subsection I addressed someone who is seeking advice about whether to doubt a belief formed arbitrarily. Earlier, I addressed those people who, in response to a belief formed arbitrarily, were doubting that belief. In some sense, then, my mission is accomplished. My aim was to offer guidance to those wondering how to respond to beliefs formed arbitrarily and I did just that. But you might wonder whether any (unsolicited) advice can be given to those who aren't seeking advice at all. These people aren't wondering whether to doubt their beliefs formed arbitrarily. They simply *aren't* doubting those beliefs.

For example, suppose a fellow named Roger is sitting in the park, forming beliefs about logic problems while taking all sorts of drugs that he is told make him no more reliable than chance at doing logic problems. Or suppose that a pilot, Maria,

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<sup>6</sup> There is a sense in which I could offer accuracy-driven advice about what to take for granted. I could simply tell you what I take for granted and, since I expect my perspective to be accurate, I'll expect that if you do what I do you'll be accurate as well. I don't think there's anything wrong with offering such advice. However, if you follow it, it will simply be because you trust me, or I've exerted social pressure, or something along those lines. The guidance I mean to be offering in this paper isn't based on trust. Instead, I'm aiming to highlight *deliberative routes* that you may have not been aware of that can take you from your current opinions to other ones. There is no deliberative route from your perspective that I can offer which will get you to take for granted what I take for granted.

is flying at an altitude that puts her at risk for hypoxia. She is told that she only has a 50% shot at arriving at a correct conclusion concerning whether she has enough fuel to make it to a particular destination. Nonetheless, Maria does some calculating and is confident that she does have enough fuel on the basis of her calculations. None of what I've written so far has been addressed to Roger and Maria, since Roger and Maria are confidently forming and maintaining their beliefs: they're not doubting and wondering how to resolve their doubt. They're also not wondering about whether to doubt. Is there anything I can say to Roger and Maria to convince them to abandon their beliefs?

It seems like there ought to be. After all, it seems like it would be completely *crazy* for Roger and Maria to maintain their beliefs under the circumstances. One thing I could do is point out to Roger and Maria that the best plan to make for cases in which one's beliefs are formed arbitrarily, is a plan according to which one maintains one's prior opinion. If I could convince Roger and Maria of the Planning Principle, then I might be able to convince them to abandon their beliefs.

However, in this paper at least, I don't want to rely on the planning principle. And without reliance on such a principle, it will be very difficult to convince Roger and Maria *via accuracy-based argumentation* to abandon their beliefs. I might say all sorts of words that could have the *effect* of bringing about doubt: "Don't you realize that your reasoning capacities are unreliable?" "You're insane if you trust your reasoning given the circumstances – you only have a 50% shot of getting things right!" But if these words don't incline Roger and Maria to doubt their belief, they will simply respond by saying things like: "What's unreliable about deductive logic or basic algebra, which is the method I used to solve the problem?" "I don't see why you think I have a 50% shot of being right. After all, these are the premises of the problem and they *entail* p. What more could you want?!"

What makes beliefs formed arbitrarily special is that they're extremely fragile: frequently, if we start to doubt such beliefs, we find ourselves occupying a perspective which recommends abandoning them. Normally, if I'm doing a logic problem, and for some reason I doubt my answer, I occupy a perspective from which I can recover the belief. For example, I might think to myself "Given that I reached a certain conclusion, it's probably true – after all, I'm pretty good at logic" or I might go through the reasoning again. In the case of beliefs formed arbitrarily, once doubt has been raised, it's very difficult to recover the belief: the fact that we expect reasoning to be useless in these cases (we think we'll keep arriving at the same conclusion) means that once we're doubting, we won't resolve our doubt by reasoning again. We also don't take the fact that we arrived at a certain conclusion as evidence for its truth since, from this perspective, we regard which conclusion we

arrived at as independent of the truth of *p*. Thus, when we realize a belief was arbitrarily formed, subjecting that belief to doubt is a risky business. What makes Roger and Maria seem crazy is the fact that they're not doubting. We might pound our fists and shake our heads, but what I'm suggesting is that there is no *argument* we can give which will convince them to doubt if, knowing what they do about the situation, they weren't inclined to do so in the first place.

## 8. Conclusion

The current convention in normative epistemology is for epistemologists to give arguments about what it's rational to believe *given an agent's body of evidence*. The approach I've been taking in this paper involves giving arguments about what to believe, *given an agent's deliberative perspective*, where a deliberative perspective includes some set of propositions that the agent takes for granted. It is commonly thought that these two notions can come apart: an agent may take for granted propositions that aren't part of her evidence.

One reason the kind of project I'm pursuing here is valuable is that epistemologists have insights that are relevant to deliberation – we have things to say that can be illuminating in the process of figuring out what to believe. However, epistemological advice will only have uptake if we take seriously the perspective from which the agent is deliberating. Thus, insofar as we want to be saying things that can aid an agent in her deliberation, we should be giving advice relative to a deliberative perspective rather than relative to a body of evidence (if those can come apart).

Since I, and many I know, have found the question of how to respond to beliefs formed arbitrarily troubling, my aim has been to offer some insights that I hope will be helpful to an agent who is deliberating about what to think upon realizing that her beliefs were arbitrarily formed. I have argued that if your aim is accuracy, and you're doubting a belief formed arbitrarily, whether you should give up your belief depends on the attitude you have towards the proposition once you've set aside whatever is in doubt. In particular, you should give up your belief, if and only if, setting aside what is in doubt, you have a doxastic attitude towards the proposition in question that differs from your current one and that recommends against your current one.

How do we apply this framework to the cases we started out with: religious, political, and moral beliefs? The answer may differ from person to person. However, I think that in many of these cases, when we subject our beliefs formed arbitrarily to doubt, we aren't left with some particular credence in the propositions in question. Rather, setting aside, say, our particular political opinions, we are

simply in a state of lacking an opinion about these matters. If that's right, then, since lacking an opinion isn't self-recommending, we have no reason, even once we subject these beliefs to doubt, to abandon them.

### **Appendix: Why Lacking an Opinion Doesn't Recommend Against Having One**

Let's call some state in which you're more confident in  $n$  than  $\sim n$ ,  $N$ . I'll show that, for any such  $N$ , lacking an opinion doesn't recommend against being in  $N$ :

Either the state of lacking an opinion is evaluable for accuracy or it isn't. If it isn't evaluable for accuracy, then it can't be self-recommending from an accuracy standpoint. So suppose it is evaluable for accuracy, and consider some opinionated state  $N$ . If, in every world,  $N$  is at least as accurate as lacking an opinion, then lacking an opinion wouldn't be self-recommending from an accuracy perspective:  $N$  would always look as good or better. So if lacking an opinion is to be self-recommending there must be at least one world in which lacking an opinion is more accurate than  $N$ . This could happen in one of two ways:

- (a) In some world lacking an opinion is more accurate than  $N$  and in every world, lacking an opinion is no less accurate than  $N$ .
- (b) In some world lacking an opinion is more accurate than  $N$  and in some world lacking an opinion is less accurate than  $N$  but the *expected* accuracy of lacking an opinion is greater than the expected accuracy of  $N$ .

Let's consider (a) first. The accuracy of lacking an opinion and the accuracy of  $N$  are going to depend only on the truth value of  $n$ . So if (a) holds then either lacking an opinion is more accurate than  $N$  both when  $n$  is true and when  $n$  is false, or, given one truth value of  $n$ , lacking an opinion is more accurate than  $N$  and given the other truth value of  $n$ , lacking an opinion is neither more nor less accurate. If lacking an opinion is more accurate than  $N$ , regardless of the truth value of  $n$ , then it would *never* make sense to adopt  $N$ . After all, lacking an opinion is guaranteed to always do better! But this is implausible. Presumably there are some bodies of evidence you could get which would warrant being in a state in which you're more confident in  $n$  than  $\sim n$ . If, on the other hand, for one truth value of  $n$ , lacking an opinion is more accurate, and for the other truth value of  $n$ , lacking an opinion is no less accurate, then the only circumstances in which it would make sense to adopt  $N$  are circumstances in which you were *certain* about the truth value of  $n$ . After all, if you had *any* uncertainty about the truth value of  $n$ , you'd be better off lacking an opinion since it's guaranteed to be no worse, and it might be better. But it's also implausible that you should only have an opinion about  $n$  if you're certain about the truth value of  $n$ . Thus, (a) leads to implausible conclusions and should be rejected.

What about (b)? According to (b), given one truth value, lacking an opinion is more accurate than  $N$  and given the other true value lacking an opinion is less accurate than  $N$ . But still, the expected accuracy of lacking an opinion is greater than the expected accuracy of having one. The problem is, it's hard to make sense of the claim that lacking an opinion has greater *expected* accuracy than  $N$  in such circumstances when *you have no opinion about whether n*. If you thought: "Well, if  $n$  is true, I'm better off with  $N$  and if  $n$  is false I'm better off lacking an opinion, but I think  $n$  is more likely to be true than false" then we could make sense of the idea that you expect lacking an opinion to do better than  $N$  from an accuracy standpoint. But since, by stipulation you have no opinion about  $n$ , you don't think  $n$  is more likely to be true than to be false, and so it is unclear what could be meant by saying that you *expect* lacking an opinion to be more accurate than  $N$ .<sup>7</sup>

In sum, in order for lacking an opinion to recommend against having one, (a) or (b) must be true. (a) leads to implausible results and should be rejected. (b) is hard to make sense of given that you lack an opinion about  $n$ . Thus, lacking an opinion doesn't recommend against having one.

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<sup>7</sup> One thing you might say is that although you don't have an opinion about  $n$ , you regard the difference in accuracy between  $N$  and lacking an opinion when  $n$  is true to be much much less than the difference in accuracy between  $N$  and lacking an opinion when  $n$  is false.

For example, things might look this way:

When  $n$  is true:  $A(N) = x + \epsilon$ ,  $A(\text{lacking-an-opinion}) = x$

When  $n$  is false:  $A(N) = x - \omega$ ,  $A(\text{lacking-an-opinion}) = x$

where  $\epsilon$  is much less than  $\omega$

There are a number of problems with this proposal: First, it's ad hoc. Second, it has the consequence that even in cases in which you know that the chance of  $n$  is significantly higher than the chance of  $\sim n$ , you shouldn't be more confident in  $n$  than  $\sim n$ . This is because given the kind of accuracy weightings described above, even a very small risk of being more confident in the false proposition is not worth taking. Third, even if we do assign accuracy in this way, in order for lacking an opinion to come out as more expectedly accurate than  $N$  you still have to regard the probability of  $n$  as less than  $\omega / (\epsilon + \omega)$ . On some ways of modeling the state of lacking an opinion (such as those that represent your state by wide-interval credences) this won't always hold. This isn't to say that nobody might have a set of commitments that would warrant assigning lacking an opinion greater expected accuracy than  $N$ . Rather, it's to say that this would be a pretty odd someone who probably isn't anything like you (for example, it would be someone who refused to be more confident in a proposition than it's negation even in circumstances in which it was known that the chance of the proposition was higher than the chance of its negation).

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