Dogmatism & Inquiry

Sam Carter
John Hawthorne

Abstract

Inquiry aims at knowledge. Your inquiry into a question succeeds just in case you come to know the answer. However, combined with a common picture on which misleading evidence can lead knowledge to be lost, this view threatens to recommend a novel form of dogmatism. At least in some cases, individuals who know the answer to a question appear required to avoid evidence bearing on it.

In this paper, we'll aim to do two things. First, we'll present an argument for this novel form of dogmatism and show that it presents a substantive challenge. Second, we'll consider a way those who take knowledge to be the aim of inquiry can mount a response. In the course of doing so, we'll try to get clearer on the normative connections between inquiry, knowledge and evidence gathering.

1 Introduction

Dogmatists value evidence differently depending on when it is received. Dogmatism comes in different forms (see, in particular, Harman (1973); Kripke (2011); for recent discussion, see, e.g., Lasonen-Aarnio (2014a); Beddor (2019); Fraser (2022)). Here, we distinguish two. **Ex Post Dogmatism** recommends that an agent should, upon acquiring evidence against what she has previously come to know, disregard that evidence (at least insofar as it bears on what she knows). That is, it says that if an agent knows p, then irrespective of what evidence she goes on to acquire against p, she should never come to believe $\neg p$. **Ex Ante Dogmatism**, in contrast, recommends that an agent should avoid gathering evidence which bears on what she currently knows (at least insofar as it bears on nothing else she is inquiring into). That is, it says that if an agent knows p, then she should not gather evidence which bears on p (and none of her other inquiries). Whereas the former is a principle about how agents should regulate their beliefs, the latter is a principle about how agents should structure their inquiry.

Dogmatism—in either form—is puzzling. And yet a variety of arguments purport to show that, given relatively innocuous assumptions, dogmatism (of some form or another) is recommended.

In this paper, we start (§2) by presenting an old argument for **Ex Post Dogmatism**, framed in a new way. This argument comes with a well-known response:

its conclusion can be avoided by entertaining the possibility of losing knowledge over time. What has been largely overlooked is that this response leaves its proponent exposed to a different kind of argument, in this case for **Ex Ante Dogmatism**. We present this argument (§3) and provide some reasons to think that **Ex Ante Dogmatism** is odd. We go on to consider how the non-dogmatic could respond to this challenge (§4) and assess how this response interacts with some proposed norms on inquiry (§5). §6 concludes.

2 Ex Post Dogmatism

Imagine a bag containing three balls. You know that there are exactly three balls in the bag and that each ball is either red or black. You also know that there is at least one red ball in the bag and at least one black ball.[1] However, prior to drawing any balls from the bag, you do not know how many balls of each color there are.

Suppose that, in fact, the bag contains two red balls. Anti-skeptical considerations suggest that, in at least some cases, you can come to know this by drawing balls sequentially (with replacement). Amongst other things, vindicating anti-skeptical considerations would seem to require accepting the following:

Anti-Skepticism	There is some $n \geq 1$ such that, for any sequence of draws: if at least $\frac{2}{3}$ of the first n draws in the sequence are red, you can know after n draws that there are two red balls.

Anti-Skepticism is motivated by the more general idea that your evidence can put you in a position to know a hypothesis without necessitating its truth. Denying **Anti-Skepticism** would impose seemingly unacceptable constraints on our ability to acquire knowledge via induction. While our framing scenario is—by design—artificially simple, we can find everyday examples of inductive knowledge which are structurally analogous. For example, consider a random sampling of an electorate prior to an election. There is some proportion of the electorate (presumably, significantly below 50%) such that, if you polled that proportion of voters and the vast majority (say, 90%) reported intending to vote for a particular candidate, you would be in a position to know that that candidate would win (assuming that, in fact, the polls —approximately— matched the outcome).

Anti-Skepticism tells us what you can know on the basis of drawing balls. What about what you should believe? Evidentialist considerations suggest that what you believe about the contents of the bag should be sensitive to what balls you draw. Vindicating evidentialist considerations would seem to require accepting the following:[2]

[1] We'll also assume that you know that you know each of these propositions, that you know that you know that you know them, and so on.

[2] Here and throughout, what an agent 'must' do is are intended to understood as reporting

Evidentialism	There is some $i < j$ such that for any sequence and any n, you may: believe after n draws that there are not two red balls, if at least $\frac{i}{j}$ of the first n draws in the sequence are black.

Evidentialism is motivated by the more general idea that you are permitted to believe what is sufficiently well supported by your evidence. Denying **Evidentialism** would involve positing an unacceptable disconnect between our evidence and what we may believe.

Anti-Skepticism and **Evidentialism** are in apparent tension given a plausible assumption about how what you know constrains what you are permitted to believe. Specifically, it seems hard to resist accepting that you must not: believe p if you know that p is false.[3]

Idealizing, assume that you know everything that you can know and that what you know is closed under entailment. Suppose, then, that you know after n draws in a sequence that there are two red balls.[4] Then (the argument goes), for any k, you will also know after $n+k$ draws in the sequence that there are two red balls. So, since your knowledge is closed under entailment and you know that there are exactly three balls in the bag, it follows that:

Ex Post Dogmatism	For any n and k, you must not: believe after $n+k$ draws that there are two black balls, if you know after n draws that there are two red balls.

Obviously, for any n, i and j (such that $i < j$), it will be possible to find a sequence in which at least $\frac{2}{3}$ of the first n draws in that sequence are red and, for some k, at least $\frac{i}{j}$ of the first $n+k$ draws are black. By **Anti-Skepticism** (and our idealizing assumptions), you know after n draws in such a sequence that there are two red balls. Yet **Ex Post Dogmatism** and **Evidentialism** offer conflicting advice about what to believe in such a sequence. **Evidentialism** states that you may believe after $n+k$ draws in the sequence that there are two black balls. **Ex Post Dogmatism** states that you must not.[5]

epistemic requirements, unless explicitly stated otherwise.

[3] Kripke (2011) formulates a slightly different argument for (the generalization of) **Ex Post Dogmatism** which involves (knowledge of) misleading evidence. Although they differ in a number of respects, these differences are not important for our purposes. Both arguments can be successfully resisted by denying **No Defeat**.

[4] Note that, here and throughout, $\ulcorner$ after n draws$\urcorner$ is to be read as taking wide-scope over 'knows'.

[5] In what sense the ex post dogmatist denies that the order of evidence is irrelevant will depend, in part, on how they conceive of evidence. An E = K adherent who accepts **Anti-Skepticism** and **No Defeat** will deny that an agent who draws n red balls followed by k black balls is guaranteed to have the same evidence after $n+k$ draws as the agent who draws k black balls followed by n red balls (Williamson (2000)). For sufficiently large values of n, the former agent's evidence after $n+k$ draws can include the proposition that there are two red balls in the bag, while the latter agent's cannot. However, the E = K adherent will deny the nearby principle that the order in which balls are drawn does not make a difference to what an agent knows or should believe. That is, they deny that for any two sequences such that exactly k of the first n draws in both sequences are red, an agent should believe after n

As has been widely noted, this argument depends on the assumption that agents do not lose knowledge upon the acquisition of new evidence. Within our setup, we can state this as:

No Defeat For any n and any sequence of draws: if you know p after n draws in the sequence, then you know p after $n+1$ draws.

No Defeat is an instance of the more general principle that acquiring evidence against what you already knew cannot prevent you from continuing to know it. **No Defeat** is generally taken to be false—an agent who knows that there are two red balls in the bag may fail to retain this knowledge after observing a sufficiently long sequence of black draws (Harman (1973); Ginet (1980); Sorensen (1988); Conee (2001); Hawthorne (2003); Beddor (2019); though cf. Lasonen-Aarnio (2010, 2014a,b)).

By denying **No Defeat**, the anti-skeptic can insist that while you may know that there are two red balls after observing a sufficiently fortuitous sequence of initial draws, upon being confronted with enough black draws, this knowledge can be lost. Accordingly, you will be epistemically permitted to switch to believing that there are not two red balls. We'll say that a proponent of defeat is someone who, more generally, appeals to the possibility of knowledge loss to avoid the conclusion that you must disregard misleading evidence against known propositions.

In the next section, we argue that even if the proponent of defeat can avoid dogmatism regarding what an agent ought to believe, they are vulnerable to an argument for a different form of dogmatism regarding what evidence the agent is permitted to gather.

3 Ex Ante Dogmatism

You're currently inquiring into many different things. Whatever their object, these inquiries are goal directed—there are conditions under which they would succeed and conditions under which they would fail. According to a popular story about inquiry, this goal is knowledge (Kappel (2010); Whitcomb (2010, 2017); Kelp (2011, 2014, 2021); Rysiew (2012); Friedman (2013, 2019b)). That is, where Q is a question, your inquiry into Q succeeds iff you come to know a complete answer to Q. That inquiry has knowledge as its goal has been argued to explain the conditions under which agents are released from commitments incurred by inquiring (Kelp (2014)); why inquiry entails a desire to know (Sapir & van Elswyk (2021)); and what the function of knowledge is (Kappel (2010); Rysiew (2012)). In what follows, we will frame **Ex Ante Dogmatism** as a problem specifically for someone who takes knowledge to be the constitutive

draws in one sequence that there are two black balls iff she should believe it after n draws in the other.

aim of inquiry.[6]

Inquiring has both a mental and a non-mental component (Friedman (2019b)). If you read a book in order to check your eyesight without any interest in what it says, you do not count as inquiring into its contents. Equally, you do not count as inquiring into the book's contents if you are interested in what it says, but fail to take any steps to read it.

We will say that someone cares about Q iff they satisfy all the mental requirements for inquiring into Q. Different accounts of this state are possible. Friedman, for instance, holds that you satisfy the mental requirements on inquiring into Q iff you bear the right kinds of attitude towards Q (Friedman (2017, 2019b)). These include, but are not limited to: being curious about Q, wondering Q, deliberating over Q,… . In what follows, however, we will stay neutral on exactly what mental state you need to be in to count as inquiring into a given question.

Among the non-mental components of inquiring is, importantly, the act of gathering evidence. How an agent gathers evidence is subject to various norms (Friedman (2020); Flores & Woodard (forthcoming)). For example, it is tempting to think that you (epistemically) may not: decline evidence which bears on a question you are inquiring into. Perhaps surprisingly, the proponent of defeat is under pressure to deny this principle. Worse, a simple line of reasoning appears to commit them to saying that you sometimes must decline evidence that bears on questions you are inquiring into.

It is difficult to say under what conditions exactly an agent counts as inquiring into a question. However, we can remain neutral on this issue within our current, simple setting. Just as we made the idealizing assumption that you know after n draws everything you can know after n draws, we will also assume that you make n draws if (and only if) after $n-1$ draws you are inquiring into how many red balls there are. We will also make the simplifying assumption that, in the course of drawing balls, you do not start to care about any additional questions. That is, if you do not care about Q after $n-1$ draws, you do not care about Q

[6] How is the aim of inquiry connected to the aims of inquirers? In general, the aim(s) of an activity need not be shared by a person performing it. For instance, the aim of playing chess is to win. Yet someone can play chess without aiming to win.

Not all activities are like this, however. For instance, the aim of trying to X is, presumably, to X. This aim must be shared by anyone who (genuinely) tries to X. It is very hard to make sense of the claim that someone was trying to win but did not aim to win. (The same goes, plausibly, for a range of other activities. E.g., searching (which aims at finding), showing off (which aims at impressing), deceiving (which aims at misleading), etc.)

Inquiry, we want to suggest, is much more like trying than it is like playing chess, in this respect. Someone cannot (genuinely) inquire into a question if they do not aim to know the answer (or, *mutatis mutandis*, your preferred aim of inquiry). This raises the question of how closely inquiry is connected to trying. In particular, is inquiring into Q anything more than trying to know the answer to Q? We will refrain from speculating on this here.

We are grateful to a referee at *MIND* for encouraging us to address this point.

after n draws.[7]

It strikes us as unsatisfying to insist that you may, in fact, continue to make draws, but only insofar as you cease to care about the number of red balls in the bag. Intuitively, we would like a response which does justice to the sense that someone who remains curious about how many red balls there are will have more reason to make further draw, not less (cf. Woodard (forthcoming, §2.1)).

Say that you are draw indifferent iff for all n, you do not care about whether the nth draw is red or black.[8] An agent who is draw indifferent is, *a fortiori*, not inquiring into the outcome of any particular draw. She may still, from an epistemic perspective, have reasons to draw balls from the bag. By doing so, she may come to know the answer to a question she is inquiring into (such as, e.g., how many red balls are in the bag). However, the possibility of coming to know the outcome of the nth draw would not, we take it, give such an agent a reason to draw n times.

With this notion in hand, we can frame the recommendation of **Ex Ante Dogmatism** within our framework more carefully:

Ex Ante Dogmatism	For any n and k, if initially you are inquiring into the number of red balls but are draw indifferent, then you must not: make $n + k$ draws if you know after n draws that there are two red balls.

Ex Ante Dogmatism says that agents who start inquiring into the number of red balls but do not care about the outcome of any particular draw are required to stop drawing upon coming to know the former. It is an instance of the more general principle that agents are required to cease gathering evidence which bears on questions they know the answer to (and on nothing else which they are inquiring into). It is important to distinguish **Ex Ante Dogmatism** from the claim that agents are not required to continue drawing upon coming to know the number of red balls (see, especially, Beddor (manuscript)). Even if it remains controversial, this latter claim appears to have much more going for it than the former, strictly stronger, claim.

By denying **No Defeat**, the opponent of **Ex Post Dogmatism** is vulnerable to an argument for **Ex Ante Dogmatism** instead. Say that you come to know p after n draws in a sequence iff you do not know p after $n-1$ draws and you do know p after n draws. Consider the following claim about what you can come to know by drawing balls from the bag.

[7] Note that, given these idealizations, the argument below will establish, at most, that an agent who knows how many red balls there are may not make further draws *as part of an inquiry into the number of red balls.* Yet even with this qualification the conclusion remains troubling.

[8] Throughout, we will assume that if you care about Q and some complete answer to Q′ conjoined with one or more propositions you currently know is a partial answer to Q, then you care about Q′. This ensures that if you care about, e.g., the number of red balls drawn between the 100th and 200th draw, then you will not be draw indifferent.

Minimality For any sequence of draws, the most you are in a position to know after the nth draw in the sequence is:

(i) the outcome of the nth draw in that sequence;

(ii) the number of red balls;

(iii) propositions entailed by what you are in a position to know about (i)-(ii) along with what you were in a position to know after $n-1$ draws in that sequence.

When combined with the possibility of losing knowledge on the basis of misleading evidence, **Minimality** suggests a limit on how long it is permissible for an agent to continue drawing balls.

Imagine that you are inquiring into the number of red balls but are draw indifferent. Imagine, further, that you know after n draws that there are two red balls in the bag. Trivially, by drawing additional balls, you cannot come to know anything about the number of red balls that you do not know after n draws. Furthermore, given **Minimality** and the assumption that you are draw indifferent, by drawing additional balls you cannot come to know anything about any other question you are inquiring into. However, given the possibility of defeat, by drawing additional balls you may cease to know something about how many red balls there are which you know after n draws.

Assuming, as suggested above, that the aim of inquiry is knowledge, we would expect a prohibition on gathering evidence which carries a risk of undermining that aim without any benefit to other inquiries.

More specifically, it seems reasonable to adopt a principle with following form (at least insofar as it articulates the epistemic requirements on evidence gathering). An agent must decline to gather some evidence if, by gathering that evidence, she (i) could not come to satisfy the aim of any inquiry she is engaged in, but (ii) could cease to satisfy the aim of an inquiry she is engaged in.

But, by hypothesis, for any $k \geq 1$, if you make $n+k$ draws then you are inquiring after n draws into the number of red balls. And, by making draws, you are gathering evidence. So, in combination with our previous observations, it follows that if you are initially inquiring into how many red balls there are but are draw indifferent, you do something you must not do if you make $n+k$ draws despite knowing after n draws that there are two red balls. This, however, is simply a restatement of **Ex Ante Dogmatism**.

Ex Ante Dogmatism imposes strict constraints on evidence gathering. Agents who know that there are two red balls violate this constraint if they continue to draw balls from the bag. If we generalize away from the specific case, the principle generates some pretty counterintuitive consequences. Here is one example (cf. Friedman (2019a); Goldstein (2022); Beddor (manuscript) for similar cases).

Stella is going away for the weekend. Before she leaves the house, she looks at a timetable and sees that her train leaves from platform 2. However, on arriving at the train station, she can either glance at the departures board to check or go straight to the platform. Assuming that the only relevant question she cares about is what platform the train departs from, the generalized ex ante principle will say that Stella must not look at the departure board. After all, by looking at the departure board she might receive misleading evidence which leads her to lose her knowledge that her train leaves from platform 2. But this result is surprising. Even if checking that the train leaves from platform 2 is not epistemically obligatory, it is somewhat odd to think it is epistemically impermissible.

A natural response to the ex ante dogmatist is to appeal to some epistemic benefit(s) of further inquiry besides knowledge (cf. Archer (2021); Woodard (forthcoming)). For example, by making additional draws an agent might hope to gain confidence about the number of red balls, to increase the accuracy of her credences[9] or to become sure of what she knows[10]. Someone who adopts this form of response will need to resist the argument above in one of two places. They must hold either (i) that knowledge is not the (sole) aim of inquiry or (ii) that it is permissible to gather evidence even if doing so cannot help to achieve the aim(s) of inquiry, but could help to undermine it (them).

In the remainder of the paper, we intend to show that resisting **Ex Ante Dogmatism** does not force either of these moves. We will offer a response which retains both the principle that inquiry aims (solely) at knowledge and that what evidence you ought to gather depends (solely) on the aim(s) of inquiry. This is important, since giving up either of these principles would involve a retreat from the idea that the goal of attaining knowledge, distinctively, is what structures inquiry.

The interest of this puzzle is not limited to views which take knowledge to be the aim of inquiry. Millar (2011), for instance, has argued that inquiry (also) aims at second-order knowledge (i.e., knowing that you know the answer to a question). Views of this form will face a variant of **Ex Ante Dogmatism**, proscribing gathering evidence upon coming to know that you know the number of red balls. The response we develop below can be easily adapted to address the related challenge to views like Millar's.

Our response depends on the idea that an agent may fail to know what she knows, and that such failures will be relevant to how she is epistemically evaluated overall. As we'll see, different versions of this response will reject different steps in the reasoning which lead to **Ex Ante Dogmatism**.

[9] Falbo (forthcomingb,f); cf. Joyce (1998, 2009); Pettigrew (2016); Easwaran (2016); Dorst (2019).

[10] Beddor (manuscript); **?**.

4 Resisting Ex Ante Dogmatism

Our preferred response has two components. The first involves adopting a particular view of how norms governing belief and inquiry are structured (§4.1). The second involves adopting a particular view of how agents can come to know about their own epistemic position (§4.2).

In presenting this response, we'll proceed stepwise. We'll start by arguing that **Ex Ante Dogmatism** fails for a particular kind of agent: someone who aims to do everything they are epistemically required to do. We'll then seek to show that the same reasoning also applies (in a restricted form) to agents with more modest aims.

4.1 Primary and Derivative Norms

Ex Ante Dogmatism poses a particular problem, we claimed, for those who take knowledge to have a central role to play in our epistemic life. Specifically, our argument appealed to the idea that knowledge is the constitutive aim of inquiry. In this section, we will consider more broadly ways in which knowledge could be central to our epistemic life and show how they can act as a first step in a response to the ex ante dogmatist challenge.

Here are two kinds of epistemic norm. Both, we take it, would be natural normative commitments to adopt for those sympathetic to the idea that inquiry aims at knowledge.

Belief K-Norm	You must: believe p only if you know p.
Inquiry K-Norm	You must: cease inquiring into a question only if you know the answer.

Belief K-Norm says that belief in the absence of knowledge is impermissible. This has been defended by many authors (Williamson (2000); Adler (2002); Sutton (2005, 2007); Sosa (2010)). Within a picture on which inquiry aims at knowledge, it implies it is impermissible to believe a complete answer to a question if you are not in a position to successfully end inquiry into it.[11]

Inquiry K-Norm says that it is impermissible for an agent who is currently inquiring to end inquiry in the absence of knowledge. This has been defended by fewer authors (though see, in particular, Whitcomb (2010) and Sapir & van Elswyk (2021)). However, it is also a natural norm for those who take knowledge to be the aim of inquiry to adopt. In this setting, it implies that you must not close inquiry which has not achieved its aim.[12]

[11]**Belief K-Norm** will not be plausible on all conceptions of belief. Views which take belief to be weak typically adopt a less demanding requirement (cf. Holguín (2021); **?**); **?**). Our response to **Ex Ante Dogmatism** is compatible with such views by design, insofar as it can be run in terms of **Inquiry K-Norm** alone (though cf. §5).

[12]**Inquiry K-Norm** is a wide scope norm. It does not imply that any agent who is

Note that the norms governing an activity are generally distinct from the aims of that activity (cf. Maitra (2011); Marsili (2018, forthcoming)). It is a norm of chess you must not move a pawn backwards. But refraining from moving pawns backwards is not an aim of chess. It is an interesting question, given this, what relationship, if any, does hold between norms and aims. Our response is intended to be neutral on this issue. For all we say, it could be that the aims of inquiry are explanatorily prior to the norms which govern it; that the norms governing inquiry are explanatorily prior to is aims; or that there is no explanatory dependence between the two. For instance, our account is compatible with holding that knowledge is the aim of inquiry in virtue of the fact that you are required not to cease inquiry in the absence of knowledge. Equally, it is also compatible with holding that you are required not to cease inquiry in the absence of knowledge in virtue of the fact that knowledge is the aim of inquiry.

In evaluating how an agent does with respect to a particular norm, we don't only care about whether they satisfy the requirements of that norm. We also care about how they satisfy those requirements.

If you promise to arrive on time and do, then you satisfy the requirements of the primary norms of promising. However, you may not be particularly positively evaluated if you had no intention of arriving on time. How you are evaluated with respect to the norm of promising depends, in part, on whether you intend to satisfy its requirements. Similarly, even if you promise to arrive on time and do, you may not be particularly positively evaluated if you could easily have arrived late. How you are evaluated with respect to the norm of promising also depends, in part, on whether you were at risk of not satisfying its requirements.

Requirements on how agents satisfy normative requirements are imposed by derivative norms (Williamson (2000, forthcoming); DeRose (2002); Hawthorne & Stanley (2008); Littlejohn (forthcomingb,f); Lasonen-Aarnio (2010)). Where X is an activity, and N_X is a norm governing X-ing, we can entertain a number of different kinds of derivative norm. The derivative intention norm applied to N_X says that you must: X only if you intend to satisfy N_X. The derivative risk norm applied to N_X says that you must: X only if you could not easily have failed to satisfy N_X.

A third common form of derivative norm says that you should engage in an activity only if you know that you satisfy the requirements of the norm(s) governing that activity.

Derivative K-Norm You must: X only if you know that you satisfy N_X.

If you promise to arrive on time and do, but don't know that you did, then you may not be as positively evaluated as someone who arrived on time and knows that they did. The derivative K-norm explains why. While both people satisfy the primary norm of promising, only the latter satisfies the requirements of the

inquiring into Q and does not know Q must continue to inquire into Q. It may be that the only permitted way to satisfy **Inquiry K-Norm**, when it comes to certain questions, is to avoid opening inquiry into those questions in the first place.

derivative K-norm.

Derivative K-Norm imposes a requirement of self-knowledge. Applied to **Belief K-Norm**, it says you must: believe p only if you know that you know p. Applied to **Inquiry K-Norm**, it says you must: cease inquiry into a question only if you know whether you know the answer. We can also consider the result of applying **Derivative K-Norm** to these norms. This will generate a requirement to believe p only if you know that you know that you know p and to cease inquiry into a question only if you know that you know that you know the answer. Clearly, this procedure can be iterated at will. For any n, if there is a (primary or derivative) requirement to X only if you know^n that p, **Derivative K-Norm** implies there is a derivative requirement to X only if you know^{n+1} that p (where an agent (i) knows^1 p iff she knows p and (ii) knows^{n+1} p iff she knows that she knows^n that p).

Let us say that someone is epistemically ideal iff they satisfy all their epistemic requirements (both primary and derivative). If you believe p in the absence of knowledge^n that p, you fail to be epistemically ideal (since you violate either the primary norm of belief or some derivative norm generated by it). Equally, and for corresponding reasons, if you cease inquiry into a question without knowing^n the answer, you similarly fail to be epistemically ideal.

Our idea is simple: anyone who aims to be epistemically ideal will need to align their inquires in a particular way. Specifically, you are rationally required to ensure that, insofar as you aim to be epistemically ideal, you do not inquire into a question without also inquiring into whether you know the answer to that question.[13]

Why is that? Since knowledge entails belief, anyone who knows p but does not know whether they know p is epistemically non-ideal (by **Belief K-Norm**). And anyone who inquires into a question aims to know the answer to it. Accordingly, there is a rational requirement that you do not: aim to be epistemically ideal and inquire into a question without also aiming to know whether you know the answer. Equally, someone who ceases inquiry into a question without knowing whether they know the answer is similarly epistemically non-ideal (by **Inquiry K-Norm**). So, the same rational requirement can also be derived from the primary norm of inquiry. Furthermore, these rational requirements will generalize to higher-order knowledge. For any $n \geq 1$, there is a rational requirement that you do not: aim to be epistemically ideal and inquire into a question without aiming to know whether you know^n the answer.

[13]It is worth distinguishing between (i) the state of aiming to satisfy all of your epistemic requirements and (ii) the state of aiming, for each of your epistemic requirements, to satisfy that requirement. Both could reasonably be identified with the state of aiming to be epistemically ideal. However, the two may come apart. Suppose that it is not possible to know$^\omega$ that p, but that for any $n \geq 1$, it is possible to know^n that p. Suppose, also, that it is not possible to aim to X if it is not possible to X. Then it may be possible for an agent to be in the latter state, without being possible for her to be in the former. Everything we say below will hold of both states (i) and (ii). Accordingly, our argument is independent of whether, for any p, it is possible to know$^\omega$ p.

We take it that it is plausible that you are rationally required to inquire into questions you aim to know the answer to.[14] But, if that is right, then any rationally coherent agent[15] who aims to be epistemically ideal will not inquire into a question without also inquiring into whether she knows the answer to that question.

In this way, aiming to be epistemically ideal imposes global requirements on your inquiries. For any $n \geq 1$, if you aim to be epistemically ideal and are inquiring into how many red balls there are, then, assuming you are rationally coherent, you will also be inquiring into whether you know^n how many red balls there are.

These global requirements on inquiry put us in a position to resist the argument for **Ex Ante Dogmatism**, at least for rationally coherent agents who aim to be epistemically ideal. Here's the idea. Suppose that, whenever you know that there are two red balls but do not know^n that you know that there are, you could come to know^n that you know the number of red balls by making some number of additional draws (we will consider this assumption in more detail in §4.2). Suppose, further, that you are rationally coherent and aim to be epistemically ideal. Then, even if after k draws you know the number of red balls, you could always come to know the answer to a question you are inquiring into after k draws by making $k + i$ draws (for some $i \geq 1$). That's because, given that you are rationally coherent and aim to be epistemically ideal, you will also be inquiring into whether you know^n the number of red balls (for each $n \geq 1$).[16]

So, crucially, the ex ante dogmatist goes wrong in assuming that, once you know how many red balls there are, making additional draws cannot help to satisfy the aims of any inquiry you are engaged in. For agents who aim to be epistemically ideal, gathering additional evidence can always serve as a means to resolve other inquiries, namely, inquiries into what they know.[17]

In fact, our response generalizes. If for some n, you fail to know^n after k draws that there are two red balls, then, as long as you aim to be epistemically ideal and are rationally coherent, it will be permissible to make $k + 1$ draws. There will be no n such that agents aiming to be epistemically ideal are required to cease inquiry into a question once they come to know^n the answer.

To be epistemically ideal is a fine aim. Epistemically ideal agents do everything

[14] This is, importantly, only plausible as a wide scope norm.

[15] i.e., an agent who satisfies all of her rational requirements.

[16] Our response depends on the assumption that an agent who first comes to know after k draws that there are two red balls will fail to be in a position to know^n after k draws that there two red balls, for some $n \geq 1$. In this respect, it is unavailable those sympathetic to KK (Greco (2014); Das & Salow (2018); Goodman & Salow (2018)).

[17] What about agents who cease inquiring into how many red balls there are upon coming to know? Observe that, unless such agents know$^\omega$ the number of red balls, to be epistemically ideal they must continue to inquire into whether they know^n how many red balls (for some n). Otherwise, they will violate **Inquiry K-Norm** (and, equally, some norm generated by applying **Derivative K-Norm** to **Belief K-Norm** one or more times).

required of them, epistemically speaking. Nevertheless, there are a variety of reasons someone might aim for something less than being ideal. For our response to be satisfactory, it ought to tell us something about agents like this.

Before moving on, we'll argue that our response generalizes (albeit in restricted form) to a broad range of agents who aim to do less than is required of them. We'll consider two reasons agents might restrict their aims in this way. First, because being ideal is overly demanding; second, because aiming to be ideal would be overly risk-seeking.

4.1.1 Demandingness

Epistemic requirements are demanding (or so we have claimed). On the picture articulated in this section, not only must you refrain from believing (or ceasing inquiry into) what you do not know, you must also, for all $n \geq 1$, refrain from believing (or ceasing inquiry into) what you do not know^n. For agents with limited resources, the goal of being epistemically ideal may be unreasonable. For instance, there is a natural picture of inductive knowledge on which, if you aim to be epistemically ideal and are inquiring into how many red balls there are, your aims will require you to continue to draw balls from the bag indefinitely.

Failing to do perfectly, however, does not preclude doing well. Someone who does not aim to satisfy all of their epistemic requirements will still, typically, aim to satisfy some. And, insofar as they do, they will be under rational pressure to ensure that they align their inquiries. That is, even if you do not aim to be epistemically ideal, you may still aim to, e.g., believe only what you know^n (for some $n > 1$). And, assuming you aim to believe only what you know^n and are inquiring into how many red balls there are, you will be rationally coherent only if you also inquire into whether you know^{n-1} how many red balls there are. (The same goes, *mutatis mutandis*, for requirements derived from the knowledge norm on inquiry.) Accordingly, by the same reasoning laid out above, agents will avoid pressure to be (ex ante) dogmatic as long as they aim to satisfy some of their derivative epistemic requirements. Note that, unlike an agent who aims to be ideal, there may be some n such that, if after k draws you know^n how many red balls there are, you are required to cease drawing. We are, in fact, quite sympathetic to this result. It is, we think, not surprising that agents who aim at something less than perfection may be required to settle for a state which is less than ideal.

4.1.2 Risk

Sometimes, agents who aim to satisfy all their requirements can expect to satisfy fewer overall than those who aim only to satisfy some of them. This kind of situation is familiar, for resource limited agents like us. Often, the more things we aim to achieve, the more we increase the risk of any particular one of our endeavours failing. In such cases, it may be reasonable not to aim to be epistemically ideal, in order to avoid the risk of failing to be epistemically adequate.

This type of situation is particularly relevant, since it holds of the ball drawing scenario on which we have focused. As we observed of the scenario, by aiming to satisfy the requirement to believe only what you know^n, you can increase the risk of failing to satisfy the requirement to believe only what you know^k, for $k < n$.

Someone who, for this reason, does not aim to be epistemically ideal will need to make a decision about which requirements (primary and derivative) they do still aim to satisfy. This will be a complicated issue. It can be expected to depend both on how much value they assign to satisfying various norms and on the relative risks associated with aiming to satisfy each of those norms (cf. Williamson (2005a,b); Schulz (2017)). However, as above, our response will generalize to any agent who aims refrain from believing (or ceasing inquiry into) what they do not know^n, for some $n > 1$.

4.2 Transparency

Our response depended, crucially, on the assumption that you could acquire higher-order knowledge of the number of red balls by making additional draws. This might seem mysterious. How can drawing balls put an agent in a position to know something about their own epistemic state? We take up this question in this subsection.

You have first-order knowledge that p iff you know that p. You have higher-order knowledge that p iff you know^n that p, for $n \geq 2$. Assuming that we do not have infallible access to what we know, the requirement that you have higher-order knowledge is more demanding than the requirement that you have first-order knowledge. This raises the question: how do agents meet this more demanding requirement?

An appealing hypothesis is that higher-order knowledge does not require evidence of a different kind to first-order knowledge. For any n, agents can come to know^n that they know p by gathering the sort of evidence by which they can come to know p (Evans (1982); Dretske (1994), cf. Paul (2014)). This hypothesis fits well with a picture on which the level of higher-order knowledge that p an agent possesses depends on the strength of her evidence for p. Where $n > k$, someone who can know^n that p and someone who can (merely) know^k that p may only differ in the strength of evidence each possesses for p.

Within our setup, we can state the hypothesis as follows:

Transparency For any $n \geq 1$ there is some $k \geq 1$ such that for any sequence: if at least $\frac{2}{3}$ of the first k draws in the sequence are red, you can know^n after k draws that there are two red balls.

Transparency is motivated by the more general idea that agents can learn about their own epistemic position by gathering first-order evidence about the world. It implies that there are sequences in which an agent who (merely) knows^n that there are two red balls may come to know that she knows^n that there are two red balls by making some number of additional draws.

Transparency is strictly weaker than the thesis that any evidence for p is equally strong evidence for the self-ascription of knowledge that p (cf. Das & Salow (2018)). **Transparency** says that higher-order knowledge that there are two red balls does not require evidence of a different kind to first-order knowledge—though of course, it may be that strictly more evidence of that kind is required.

The argument for **Ex Ante Dogmatism** asks us to imagine that you are inquiring into the number of red balls but are draw indifferent. Via **Minimality**, it draws the preliminary conclusion that if after some number of draws you know that there are two red balls, then you cannot come to know the answer to any question you are inquiring into by making additional draws. When combined with the picture of primary and derivative norms in the previous section, **Transparency** puts pressure on this reasoning. Assuming you aim to be epistemically ideal, you are rationally required not to inquire into the number of red balls without also inquiring into whether you know^n the number of red balls (for $n \geq 1$). By **Transparency**, there is some number of additional draws such that if after that number of draws $\frac{2}{3}$ of the balls were red, you could know^n that there are two red balls.

Assuming that you are not omniscient about what you know, there will be some sequence and number of draws in that sequence after which you can know that there are two red balls but cannot know^n that there are two red balls.[18]

Accordingly, after that number of draws in that sequence, there will be some question you are inquiring into which you could come to know the answer to by making additional draws.

Where (and how) the argument for **Ex Ante Dogmatism** goes wrong, however, depends on how agents come to acquire higher-order knowledge via making draws.

There are two main options. Say that, after k draws in a sequence, you come to know^n the number of red balls via prior knowledge iff (i) you do not know^n after $k-1$ draws that there are two red balls; (ii) you do know after $k-1$

[18] Why think that you are not omniscient about what you know in this case? The simplest argument is that it is a matter of vagueness which draw in a sequence is first after which an agent in a position to know how many red balls there are. We take it that this vagueness motivates the following kind of claim. For any sequence, there is no n such that: after $n-1$ draws in that sequence you cannot know the number of red balls but it is determinate that after n draws you can know the number of red balls.

According to orthodoxy, indeterminacy implies ignorance (though cf. Barnett (2000, 2011); Dorr (2003)); if it is indeterminate whether p, it cannot be known whether p. But, if that is right, then if the nth draw is the first draw in a sequence after which you can know that there are two red balls, then after n draws, you cannot know that you can know that there are two red balls. Accordingly, there will be some draw after which you can know the number of red balls but cannot know^2 it. The same reasoning, we take it, will extend, *mutatis mutandis*, to ignorance of what is known^n, for any n.

draws that: if at least $\frac{2}{3}$ of the first k draws are red, then you know^{n-1} after k draws that there are two red balls;and (iii) at least $\frac{2}{3}$ of the first k draws are red. Say that, after k draws in a sequence, you come to know^{n} the number of red balls via bonus knowledge iff (i) you come to know^{n} after k draws in the sequence that there are two red balls and (ii) you do not come to know^{n} it via prior knowledge.

What we'll call 'the prior knowledge picture' says that in any sequence, any higher-order knowledge you acquire of the number of red balls is acquired via prior knowledge. What we'll call 'the bonus knowledge picture' says that no higher-order knowledge you acquire of the number of red balls is acquired via prior knowledge in any sequence.

According to the former, whenever you acquire nth order knowledge of the number of red balls from a draw, you know immediately prior to the draw that if it has a particular outcome, then you will know^{n-1} after the draw that there are two red balls. Upon that outcome occurring, you know the antecedent of this conditional. So, by the assumption that your knowledge is closed, you know^{n} after the draw that there are two red balls. According to the latter, in advance of acquiring nth order knowledge you do not have any conditional knowledge of this kind. Rather, there are certain patterns of draws, which, if they occur, put you in a position to acquire nth-order knowledge of the number of red balls non-inferentially.

This distinction mirrors the distinction identified in Bacon (2014) between prior knowledge and bonus knowledge based pictures of inductive knowledge (cf. Dorr *et al.* (2014); Goodman & Salow (2021); Bacon (2020)). Indeed, as is easy to see, **Transparency** is just the generalization of **Anti-Skepticism** to knowledge^{n}, for $n > 1$.

On the bonus knowledge picture, **Minimality** fails. In some sequences, there is some k such that you can know^{n} after k draws that there are two red balls, despite the fact that this does not follow from the content of what you know after $k-1$ draws along with what you know after k draws about the number of red balls and the outcomes of the first k draws.

On the prior knowledge picture, **Minimality** holds. Any higher order knowledge you acquire upon the kth draw follows from what you know after $k-1$ draws along with the outcomes of the first k draws. Instead the argument goes wrong in assuming that anyone who aims to be epistemically ideal can coherently inquire into the number of red balls while being draw indifferent. Insofar as they are rationally coherent, such a person will also be inquiring into whether they know^{n} how many red balls there are (for all $n \geq 1$). But there is some k such that for all you know, the conjunction of the outcome of the first k draws along with what you know prior to drawing any balls will entail a complete answer to the question of whether you know^{n} how many red balls there are. So, by our closure constraints on what you care about (footnote 8), you care about the outcomes of those draws. So, if you are inquiring into the number of red balls and aim to be epistemically ideal, then either you are failing to do what is rationally required or you are not draw indifferent.

On the bonus knowledge version of **Transparency**, the argument of the previous section fails to establish **Ex Ante Dogmatism**, since it has a false premise. On the prior knowledge version of **Transparency**, although **Ex Ante Dogmatism** holds, it loses much of its bite. Its antecedent will never hold of you unless there is something you ought to be inquiring into about but aren't.

How does this response extend examples of non-inductive knowledge, like checking a train timetable? Williamson (2000) has argued that, if knowledge is subject to margin-for-error constraint, then an agent may know something via perception which they fail to know$^{\omega}$. Yet, if that is right, then our response can also explain why further evidence gathering is permitted in these cases, on the assumption that noninductive knowledge is also transparent. Glancing again at the train timetable can help to settle what you know, what you know you know, and so on.

5 Inquiry and Knowledge

Some authors have proposed that there is a requirement to refrain from believing answers to questions you are inquiring into (Friedman (2019b,a), Fraser (2022)). Call this **Openmindedness**.

Openmindedness	You must not: believe that p and inquire into a question to which p is a complete answer.

Openmindedness is often accompanied by a picture on which (one of) the function(s) of belief is to close inquiry (Hieronymi (2009); Kelp (2014, 2018, 2021)). Combined with the thesis that you believe p if you know p, **Openmindedness** implies **Ignorance:**

Ignorance	You must not: know Q and inquire into Q.

Ignorance also has a number of advocates, some but not all of whom endorse **Openmindedness** (Whitcomb (2010, 2017); Friedman (2017); Sapir & van Elswyk (2021); Fraser (2022) cf. Archer (2018, 2021)).

As Friedman (2017, 2019b,a) emphasizes, **Ignorance** does not, by itself, commit its advocates to **Ex Ante Dogmatism**. Inquiry has both mental and nonmental components. An agent who lacks the appropriate mental state may continue to gather evidence which bears on a question without thereby inquiring into that question. Friedman stresses that even if you know how many red balls there are, you do not violate the requirements of **Ignorance** by continuing to make draws as long you do not care how many red balls there are.[19]

[19] For this reason, proponents of **Ignorance** may wish to resist our idealizing assumption that you are inquiring after n draws into the number of red balls if and only if you make $n+1$

Ignorance is compatible with the denial of **Ex Ante Dogmatism**. It is also compatible with our official response to the argument for **Ex Ante Dogmatism** (i.e., the package of primary and derivative norms along with **Transparency**). However, it is not compatible with all ways of developing that response into a picture of inquiry and higher-order knowledge.

Here is a way of presenting our response: an agent who makes additional draws because she is inquiring into whether she knows the number of red balls thereby also inquires into the number of red balls. Doing so remains permissible, even if the agent already knows the number of red balls, because inquiring into the number of red balls is a way of inquiring into whether you know^n the number of red balls. However, this presentation of our response is in tension with **Ignorance**. That's because anyone accepting **Ignorance** must deny the principle that an agent who knows^n Q can come to know^{n+k} Q by permissibly inquiring into Q.

What attitude you should take to **Ignorance** depends, at least in part, on what account of belief you adopt. On accounts which take belief to be strong, being in a position to rationally believe p entails being in a demanding doxastic state, such as being certain, being sure or being confident that p. Accounts which take belief to be strong will thereby take **Openmindness** to be correspondingly weak. At the same time, however, they also undermine the connection between **Openmindedness** and **Ignorance**. That's because, once we insist that belief entails a strong doxastic attitude, the claim that belief is necessary for knowledge ceases to look as plausible (Holguín (2021); Goodman & Holguín (forthcoming)). Consider the unconfident examinee (Radford (1966)). The unconfident examinee remembers (and, therefore, knows) that Queen Elizabeth I died in 1601. However, since he is not certain (or sure, or even confident) when Queen Elizabeth died, he does not believe that she died in 1601. If that is right, then those who take belief to be strong can accept **Openmindedness** while denying **Ignorance**, since they should deny that knowledge entails belief. And, if they deny **Ignorance**, then they can maintain that someone who knows^n Q can come to know^{n+k} Q by permissibly inquiring into Q.

On accounts which take belief to be weak, in contrast, believing p is likely is taken to entail being in a position to rationally believe p (Hawthorne *et al.* (2016); Dorst (2019); Rothschild (2020)). Recently, some of authors have gone further, arguing that it is suffices for it to be rational to believe p that p would be a reasonable guess about a contextually supplied question (Dorst (2019); Holguín (forthcoming); Dorst & Mandelkern (forthcoming)). Accounts which take belief to be weak appear to make **Openmindedness** correspondingly strong. And, since proponents of weak belief lack grounds of the same kind for denying

draws. It is important, on Friedman's picture, that an agent may gather evidence bearing on questions which she is no longer inquiring into (in virtue of knowing the answer).

However, as observed above, giving up this idealization does not appear, by itself, to offer an adequate response to the threat of **Ex Ante Dogmatism**. It is unsatisfying to hold that you may continue to draw balls only insofar as you no longer care about how many red balls there are.

that knowledge entails belief, they are under pressure to accept **Ignorance**.

One response to this would be to deny **Openmindedness**. After all, if you can rationally believe p without being certain that p, it may seem reasonable to think that you can permissibly inquire into whether p while rationally believing p. Yet at least some proponents of the view that belief is weak appear to have good reason to endorse **Openmindness**. If belief is treated as akin to guessing, we need some account of the functional role belief is intended to play. At any time, there will be one or more answers which would be reasonable guesses about a given question, based on your evidence. What factors bear on whether an agent decides to believe that p?

Openmindedness provides a natural answer to this question. The functional role of belief is to conclude inquiry. Accordingly, an agent will decide to believe an answer to a question only if they are prepared to cease inquiring into it. As our response to **Ex Ante Dogmatism** establishes, however, concluding inquiry into a question does not imply ceasing to gather evidence which bears on it. That's because there may well be other questions (such as whether you know an answer to that question) which you continue to inquire into and on which that same evidence also bears.

6 Conclusion

If inquiry aims at knowledge, we face a puzzle: why risk loss of knowledge by accepting evidence which bears on what you already know? The response we developed here combines two ideas: first, we do not need any distinctive form of evidence in order to obtain self-knowledge. We can come to know what we know by gathering the same kind of evidence by which we come to know. Second, self-knowledge makes us epistemically better. All things being equal, we do better with respect to the norms governing our epistemic lives when we know we satisfy those norms.

References

Adler, J. 2002. *Belief's Own Ethics*. Boston, MA: MIT Press.

Archer, Avery. 2018. Wondering about What You Know. *Analysis*, **78**(4), anx162.

Archer, Avery. 2021. The Aim of Inquiry. *Disputatio*, **13**(61), 95–119.

Bacon, Andrew. 2014. Giving Your Knowledge Half a Chance. *Philosophical Studies*, 1–25.

Bacon, Andrew. 2020. Inductive Knowledge. *Noûs*, **54**(2), 354–388.

Barnett, David. 2000. Vagueness-Related Attitudes. *Noûs*, **34**(s1), 302–320.

Barnett, David. 2011. Does Vagueness Exclude Knowledge? *Philosophy and Phenomenological Research*, **82**(1), 22–45.

Beddor, Bob. 2019. The Toxin and the Dogmatist. *Australasian Journal of Philosophy*, **97**(4), 727–740.

Beddor, Bob. manuscript. Fallibilism and the Aim of Inquiry. 20.

Conee, Earl. 2001. Heeding Misleading Evidence. *Philosophical Studies*, **103**(2), 99–120.

Das, Nilanjan, & Salow, Bernhard. 2018. Transparency and the KK Principle. *Noûs*, **52**(1), 3–23.

DeRose, Keith. 2002. Assertion, Knowledge, and Context. *Philosophical Review*, **111**(2), 167–203.

Dorr, Cian. 2003. Vagueness without Ignorance. *Philosophical Perspectives*, **17**(1), 83–113.

Dorr, Cian, Goodman, Jeremy, & Hawthorne, John. 2014. Knowing against the Odds. *Philosophical Studies*, **170**(2), 277–287.

Dorst, Kevin. 2019. Lockeans Maximize Expected Accuracy. *Mind*, **128**(509), 175–211.

Dorst, Kevin, & Mandelkern, Matthew. forthcoming. Good Guesses. *Philosophy and Phenomenological Research*.

Dretske, Fred. 1994. Introspection. *Proceedings of the Aristotelian Society*, **94**(1), 263–278.

Easwaran, Kenny. 2016. Dr. Truthlove or: How I Learned to Stop Worrying and Love Bayesian Probabilities. *Noûs*, **50**(4), 816–853.

Evans, Gareth. 1982. *The Varieties of Reference*. Vol. 137. Oxford University Press.

Falbo, Arianna. forthcominga. Inquiring Minds Want to Improve. *Australasian Journal of Philosophy*, 19.

Falbo, Arianna. forthcomingb. Inquiry and Confirmation. *Analysis*.

Flores, Carolina, & Woodard, Elise. forthcoming. Epistemic Norms on Evidence-Gathering. *Philosophical Studies*, 30.

Fraser, Rachel. 2022. The Will in Belief. *Oxford Studies in Epistemology*.

Friedman, Jane. 2013. Suspended Judgment. *Philosophical Studies*, **162**(2), 165–181.

Friedman, Jane. 2017. Why Suspend Judging? *Noûs*, **51**(2), 302–326.

Friedman, Jane. 2019a. Checking Again. *Philosophical Issues*, **29**(1), 84–96.

Friedman, Jane. 2019b. Inquiry and Belief. *Noûs*, **53**(2), 296–315.
Friedman, Jane. 2020. The Epistemic and the Zetetic. *Philosophical Review*, **129**(4), 501–536.
Ginet, Carl. 1980. Knowing Less by Knowing More. *Midwest Studies in Philosophy*, **5**(1), 151–162.
Goldstein, Simon. 2022. Omega Knowledge Matters. *Oxford Studies in Epistemology*.
Goodman, Jeremy, & Holguín, Ben. forthcoming. Thinking and Being Sure. *Philosophy and Phenomenological Research*, 1–27.
Goodman, Jeremy, & Salow, Bernhard. 2018. Taking a Chance on KK. *Philosophical Studies*, **175**(1), 183–196.
Goodman, Jeremy, & Salow, Bernhard. 2021. Knowledge from Probability. *Electronic Proceedings in Theoretical Computer Science*, **335**(June), 171–186.
Greco, Daniel. 2014. Could KK Be OK? *Journal of Philosophy*, **111**(4), 169–197.
Harman, Gilbert H. 1973. *Thought*. Princeton University Press.
Hawthorne, John. 2003. *Knowledge and Lotteries*. Oxford University Press.
Hawthorne, John, & Stanley, Jason. 2008. Knowledge and Action. *Journal of Philosophy*, **105**(10), 571–590.
Hawthorne, John, Rothschild, Daniel, & Spectre, Levi. 2016. Belief Is Weak. *Philosophical Studies*, **173**(5), 1393–1404.
Hieronymi, Pamela. 2009. Two Kinds of Agency. *Pages 138–162 of:* O'Brien, Lucy, & Soteriou, Matthew (eds), *Mental Action*. Oxford University Press.
Holguín, Ben. 2021. Knowledge by Constraint. *Philosophical Perspectives*, **35**(1), 1–28.
Holguín, Ben. forthcoming. Thinking, Guessing, and Believing. *Philosophers' Imprint*, 1–34.
Joyce, James. 2009. Accuracy and Coherence: Prospects for an Alethic Epistemology of Partial Belief. *Pages 263–297 of:* Huber, Franz, & Schmidt-Petri, Christoph (eds), *Degrees of Belief*, vol. 342. Synthese.
Joyce, James M. 1998. A Nonpragmatic Vindication of Probabilism. *Philosophy of Science*, **65**(4), 575–603.
Kappel, Klemens. 2010. On Saying That Someone Knows: Themes from Craig. *In:* Haddock, Adrian, Millar, Alan, & Pritchard, Duncan (eds), *Social Epistemology*. Oxford University Press.
Kelp, Christoph. 2011. What's the Point of "Knowledge" Anyway? *Episteme*, **8**(1), 53–66.
Kelp, Christoph. 2014. Two for the Knowledge Goal of Inquiry. *American Philosophical Quarterly*, **51**(3), 227–32.
Kelp, Christoph. 2018. Inquiry, Knowledge and Understanding. *Synthese*, **198**(Suppl 7), 1583–1593.
Kelp, Christoph. 2021. Theory of Inquiry. *Philosophy and Phenomenological Research*, **103**(2), 359–384.
Kripke, Saul. 2011. On Two Paradoxes of Knowledge. *In:* Kripke, Saul A. (ed), *Philosophical Troubles. Collected Papers Vol I*. Oxford University Press.
Lasonen-Aarnio, Maria. 2010. Unreasonable Knowledge. *Philosophical Perspectives*, **24**(1), 1–21.

Lasonen-Aarnio, Maria. 2014a. The Dogmatism Puzzle. *Australasian Journal of Philosophy*, **92**(3), 417–432.
Lasonen-Aarnio, Maria. 2014b. Higher-Order Evidence and the Limits of Defeat. *Philosophy and Phenomenological Research*, **88**(2), 314–345.
Littlejohn, Clayton. forthcominga. A Justification for Excuses: Brown's Discussion of the Knowledge View of Justification and the Excuse Manoeuvre. *Philosophical Studies*.
Littlejohn, Clayton. forthcomingb. A Plea for Epistemic Excuses. *In:* Julien Dutant, Fabian Dorsch (ed), *The New Evil Demon Problem*. Oxford University Press.
Maitra, Ishani. 2011. Assertion, Norms, and Games. *Pages 277–296 of:* Brown, Jessica, & Cappelen, Herman (eds), *Assertion: New Philosophical Essays*. Oxford University Press.
Marsili, Neri. 2018. Truth and Assertion: Rules vs Aims. *Analysis*, **78**(4), 638–648.
Marsili, Neri. forthcoming. Truth: The Rule or the Aim of Assertion? *Episteme*.
Millar, Alan. 2011. Why Knowledge Matters. *Aristotelian Society Supplementary Volume*, **85**(1), 63–81.
Paul, Sarah K. 2014. The Transparency of Mind. *Philosophy Compass*, **9**(5), 295–303.
Pettigrew, Richard. 2016. *Accuracy and the Laws of Credence*. Oxford University Press UK.
Radford, Colin. 1966. Knowledge: By Examples. *Analysis*, **27**(1), 1.
Rothschild, Daniel. 2020. What It Takes to Believe. *Philosophical Studies*, **177**(5), 1345–1362.
Rysiew, Patrick. 2012. Epistemic Scorekeeping. *In:* Brown, Jessica, & Gerken, Mikkel (eds), *Knowledge Ascriptions*. Oxford University Press.
Sapir, Yasha, & van Elswyk, Peter. 2021. Hedging and the Ignorance Norm on Inquiry. *Synthese*, **199**(3-4), 5837–5859.
Schulz, Moritz. 2017. Decisions and Higher-Order Knowledge. *Noûs*, **51**(3), 463–483.
Sorensen, Roy A. 1988. Dogmatism, Junk Knowledge, and Conditionals. *Philosophical Quarterly*, **38**(153), 433–454.
Sosa, Ernest. 2010. *Knowing Full Well*. Princeton University Press.
Sutton, Jonathan. 2005. Stick to What You Know. *Noûs*, **39**(3), 359–396.
Sutton, Jonathan. 2007. *Without Justification*. MIT Press.
Whitcomb, Dennis. 2010. Curiosity Was Framed. *Philosophy and Phenomenological Research*, **81**(3), 664–687.
Whitcomb, Dennis. 2017. One Kind of Asking. *Philosophical Quarterly*, **67**(266).
Williamson, Timothy. 2000. *Knowledge and Its Limits*. Oxford: Oxford University Press.
Williamson, Timothy. 2005a. Contextualism, Subject-Sensitive Invariantism, and Knowledge of Knowledge. *Philosophical Quarterly*, **55**(219), 213–235.
Williamson, Timothy. 2005b. Replies to Commentators. *Philosophy and Phenomenological Research*, **70**(2), 468–491.
Williamson, Timothy. forthcoming. Justifications, Excuses, and Sceptical Sce-

narios. *In:* Dorsch, Fabian, & Dutant, Julien (eds), *The New Evil Demon*. Oxford University Press.

Woodard, Elise. forthcoming. Why Double-Check? *Episteme*, 1–24.