

Philos Stud
<https://doi.org/10.1007/s11098-019-01337-6>



Epistemology and the law: why there is no epistemic mileage in legal cases

Marvin Backes¹ 

© The Author(s) 2019

Abstract The primary aim of this paper is to defend the Lockean View—the view that a belief is epistemically justified iff it is highly probable—against a new family of objections. According to these objections, broadly speaking, the Lockean View ought to be abandoned because it is incompatible with, or difficult to square with, our judgments surrounding certain legal cases. I distinguish and explore three different versions of these objections—*The Conviction Argument*, the *Argument from Assertion and Practical Reasoning*, and the *Comparative Probabilities Argument*—but argue that none of them are successful. I also present some very general reasons for being pessimistic about the overall strategy of using legal considerations to evaluate epistemic theories; as we will see, there are good reasons to think that many of the considerations relevant to legal theorizing are ultimately irrelevant to epistemic theorizing.

Keywords Statistical evidence · Standard of proof · Lockean View · Justification · Proof paradox

1 Introduction

Consider the following case recently presented by Littlejohn (forthcoming).¹

¹ Earlier versions of this case can be found in Nesson (1979) and Redmayne (2008).

✉ Marvin Backes
mb302@st-andrews.ac.uk

¹ Arché Philosophical Research Centre, University of St Andrews, 17-19 College Street, St Andrews KY16 9AL, Scotland, UK

Prisoners 100 prisoners are exercising in a prison yard. Suddenly 99 of them attack the guard, putting into action a plan that the 100th prisoner knew nothing about. The 100th prisoner played no role in the assault and could have done nothing to stop it. There is no further information that we can use to settle the question of any particular prisoner's involvement.

Suppose that after the event one of the 100 prisoners, chosen at random, was prosecuted for their involvement in the attack. Should this prisoner be convicted? Many of us feel inclined to say no, as the evidence against the prisoner is purely statistical. And, in our legal practice, such a judgment seems to be taken seriously—the purely statistical evidence in Prisoners would ordinarily be treated as insufficient to convict the prisoner. While this seems rather uncontroversial, cases like the one above (other notable examples include Gatecrasher² and Blue-Bus³ Company cases) have received considerable attention from both legal theorists and epistemologists. Specifically, they have given rise to two distinct kinds of projects.

First, cases like Prisoners have led some legal theorists and philosophers to rethink what's required of a body of evidence in order to be sufficient for legal convictions. For instance, in the UK and the US the legal standard of proof in civil proceedings is the *Preponderance of Evidence*. In legal theory, this turn of phrase is typically given a probabilistic interpretation—a proposition is taken to meet this standard if it is *more likely to be true than false*; or, put differently, if its degree of probability is above 0.5.^{4,5} But statistical evidence is of course perfectly capable of establishing that a proposition's degree of probability is greater than 0.5. So, purely statistical evidence—so long as it's strong enough—should be sufficient for legal convictions. Since this strikes many as the wrong result, cases like Prisoners seem to present straightforward counterexamples to some of the prevailing doctrines surrounding the legal standard of proof.

To address this issue, legal theorists and philosophers have proposed various revisions to the legal standard of proof that are intended to rule out convictions based on purely statistical evidence. In formulating these revisions, theorists have often appealed to insights from epistemology: Thomson (1986) has argued that there needs to be a *causal connection* between the body of evidence and the proposition that the defendant is guilty; Enoch et al. (2012) and Enoch and Fisher (2015) have proposed that the evidence needs to be *sensitive* to the proposition that the defendant

² For the original presentation see Cohen (1977). See also, Blome-Tillmann (2015).

³ The famous Blue-Bus Company case is loosely based on an actual lawsuit between Smith v Rapid Transit (Smith v. Rapid Transit, Inc., 317 Mass. 469, 58 N.E.2d 754, 1945). See also Redmayne (2008) and Enoch et al. (2012).

⁴ See, for example, Keane (1996: Chap. 3) or Dennis (2002: Ch. 11).

⁵ Criminal proceedings are governed by a more stringent standard of proof. Here the defendant's guilt needs to be established *beyond a reasonable doubt*. But just as the *preponderance of evidence* is given an interpretation in probabilistic terms, so *beyond a reasonable doubt* can presumably be interpreted probabilistically—the threshold to meet this standard would just be significantly higher (see, for example, Smith 2018: 1194). If this is correct, then the issue discussed below can be expected to generalize to other standards of proof.

is guilty⁶; and Smith (2018) has argued that the evidence needs to *normically support* the proposition that the defendant is guilty. Importantly then, these projects have used insights from epistemology to shed light on, and help answer, legal questions—let’s call this the *epistemic-to-legal direction of exchange*. Over the years these projects have led to interesting interdisciplinary work and, in general, I think we should be sympathetic towards them.

This paper is concerned with a second kind of project that legal cases like Prisoners have given rise to—one that I think is ultimately less promising. In recent years, a number of philosophers (e.g. Buchak 2014; Smith 2016; Littlejohn forthcoming) have turned the above connection between epistemology and the law around and appealed to reflections on legal cases to inform, and help answer, epistemic questions—we may call this the *legal-to-epistemic direction of exchange*. Specifically, these philosophers have used cases like Prisoners to try and cause trouble for probabilistic, or *Lockean*, accounts of epistemic justification—i.e. accounts that explain justification in terms of high probability. For our current purposes we may characterize the Lockean View as follows.⁷

Lockean View (i) A belief that P is justified for S iff P is highly probable for S and (ii) for any two beliefs P and Q, if P is epistemically more probable for S than Q, then P is epistemically more justified for S than Q.

The primary aim of this paper is to defend the Lockean View against these new arguments from legal cases. I distinguish three different versions of these arguments—*The Conviction Argument*, *The Argument from Assertion and Practical Reasoning*, and *The Comparative Probabilities Argument*—but argue that none of them make a decisive case against the Lockean View. I also provide some very general reasons for being skeptical about arguments that follow the *legal-to-epistemic direction of exchange*. As we will see, epistemology and the law are not as closely connected as they would need to be in order for these arguments to be successful. In a slogan: there is no epistemic mileage in legal cases.

The plan is as follows. Section 2 considers what I call the *Conviction Argument* against the Lockean View and elaborates a Lockean response. In Sect. 3 I argue that the Lockean response to the Conviction Argument also points towards another conclusion, namely that epistemology and the law have diverging aims. In light of this, I argue, attempts to undermine any epistemic theory by appeal to the law are unlikely to succeed. Finally, in Sects. 4 and 5 I consider but ultimately reject two further objections to the Lockean View motivated by reflecting on the law: *The Argument From Practical Reasoning and Assertion* and *The Comparative Probabilities Argument*. In the end, it appears that Lockeanism has a lot more room for manoeuvring than their opponents seem to think.

⁶ See Blome-Tillmann (2015) for a critical discussion of this proposal.

⁷ More specific versions of the Lockean View have been endorsed by, for instance, Goldman (1979), Bonjour (1985: 6), Moser (1989: 42), Foley (1992), Plantinga (1993: 18), Swinburne (2001), Conee and Feldman (2004: 100), Pryor (2004: 352), Bergmann (2006: Ch. 6), and Sturgeon (2008).

2 The conviction argument

The perhaps most direct challenge to the Lockean View via appeals to legal considerations was recently proposed by Littlejohn (forthcoming).⁸ Consider again the case of Prisoners. As mentioned previously, many people (including legal scholars and practitioners) would be reluctant to convict the defendant. As such, many of us would deny what Littlejohn (p. 2) calls Punish.

Punish It is permissible to punish the defendant in Prisoners (and similar cases where the only evidence of guilt is statistical evidence).

Next, consider the following epistemic analogue of Punish, which Littlejohn (p. 2) calls Believe.

Believe It is permissible to believe that the defendant is guilty in Prisoners (and similar cases where the only evidence of guilt is statistical evidence).

What should we make of Believe? While the intuitive pull to reject Punish is undeniably very strong, it is less clear that there is anything objectionable about Believe.

Now, Lockeans will likely be committed to accept Believe; after all, the belief that the defendant in Prisoners is guilty is highly probable. And since Lockeans think that high probability is what makes a belief justified, they will likely endorse the claim that it is permissible to believe that the defendant is guilty.⁹ Hence, the position that Lockeans will likely want to take towards Prisoners is to (a) accept Believe but (b) reject Punish.¹⁰

At this stage however, opponents of the Lockean View may raise the following objection: if we can justifiably (or permissibly) believe that the defendant in Prisoners is guilty, then why shouldn't we punish the defendant? Here is how Littlejohn states the challenge, "If we can reasonably believe that the defendant in Prisoner is guilty, there is no principled objection to conviction" (forthcoming: 17). The core of this challenge against the Lockean View then is that it is not clear on what grounds Lockeans may reject Punish if they think that we are justified in believing that the defendant is guilty. In other words, we might worry that proponents of the Lockean View will struggle to square an acceptance of Believe with a rejection of Punish. Here is a more explicit formulation of what I will call *The Conviction Argument*.

⁸ Less explicit precursors of this argument may be found in Buchak (2014) and Smith (2016).

⁹ Underlying this claim is a principle along the following lines: if a belief is justified, then it is permissible to believe it. For our current purposes I will follow Littlejohn and not question this principle. Anyone who finds this claim problematic is free to simply substitute 'permissible' in Believe with a more overtly epistemic notion like 'justifiable' or 'reasonable'. For our present purposes nothing hangs on this.

¹⁰ Alternatively, Lockens may try to argue that we should accept *both* Believe and Punish. However, as I will argue below, a strategy that requires that we accept Punish is unlikely to succeed.

The Conviction Argument

- A1. If one accepts the Lockean View, then one is committed to accept Believe.
- A2. If one accepts Believe, then there is no principled objection to Punish.
- A3. If there is no principled objection to Punish, then one should accept Punish.
- A4. Hence, if one accepts the Lockean View, then one should accept Punish.
- A5. We should not accept Punish.
- A6. Therefore, we should not accept the Lockean View.

How may Lockeans respond to this argument?

One option would be to deny (A5). This strategy would commit Lockeans to accept Punish. How might they try to defend this counterintuitive proposal? One way to motivate an acceptance of Punish is to point out that it would maximize expected value.¹¹ If all 100 prisoners were convicted, then we know that 99 of the 100 convictions were appropriate and entirely unproblematic. If on the other hand we let all 100 prisoners go free, then we know that 99 guilty prisoners go unpunished. So, accepting Punish would commit us to 1 error, while rejecting Punish will lead to 99 errors. Depending on what values we assign to *falsely convicting the innocent* and *failing to convict the guilty*, we can, as long as we are free to change the number of prisoners, always set up a case in which Punish will maximize expected value.¹² However, ultimately, I don't think that rejecting (A5) is a promising strategy for Lockeans—our inclinations to reject Punish are simply too strong.

Alternatively, Lockeans could reject either (A1) or (A3). However, both claims seem very compelling. If we take seriously the idea that statistical evidence can justify belief, then we should accept Believe. Likewise, it seems plausible that if there is no principled objection to Punish in Prisoners, then we should accept Punish. While others are invited to explore these avenues further, it strikes me as unlikely that a successful response to the Conviction Argument will turn on a rejection of either (A1) or (A3).

If this is correct, then rejecting (A2) of the Conviction Argument seems to be the most promising strategy for Lockeans. For this strategy to succeed, they will need to offer a *principled* reason to reject Punish that is independent from Believe. I turn to such a reason now.

2.1 Against Punish

2.1.1 The Epistemic Argument against Punish

On what grounds might we reject Punish? Opponents of the Lockean View can reject Punish on epistemic grounds. For instance, Littlejohn (forthcoming: 2) proposes that, “the best argument against Punish is built on an argument against Believe.” In fact, he takes the following to be the strongest argument against Punish (p. 16)—let's call it *The Epistemic Argument against Punish*.

¹¹ Littlejohn also considers but ultimately rejects this kind of utility-based argument.

¹² This strategy would not work if we thought that the cost of *falsely convicting the innocent* was infinite. But since I ultimately reject this utility-based argument in favour of Punish anyways, I will not consider this issue further here.

The Epistemic Argument against Punish

- B1. It would be wrong to punish the defendant in Prisoners if we could not rationally believe the defendant to be guilty.
- B2. Given the grounds in Prisoners, we could not rationally believe the defendant to be guilty.
- B3. Thus, it would be wrong to punish the defendant in Prisoners.

While proponents of the Lockean View can accept (B1) they will reject (B2) of the Epistemic Argument against Punish. Hence, they will need to offer a different, *non-epistemic*, argument against Punish.

2.1.2 The Moral Argument against Punish

Now, Littlejohn claims that the strongest argument against Punish is the Epistemic Argument.¹³ Importantly, however, in order for the objection against the Lockean View to stick, it needs to be the case that the epistemic argument is the *only* convincing argument against Punish—i.e. that there is no other plausible reason for which Lockeans may reject Punish. But do Lockeans need to accept this claim? I do not think so. In what follows I argue that Punish can reasonably be rejected on moral grounds. The key idea is the following: convicting a defendant based on purely statistical evidence is incompatible with our ideals of *justice and fairness*; and it is for this reason that we should reject Punish. If this argument is successful, then proponents of the Lockean View can object to Punish on grounds that are entirely non-epistemic and independent from Believe. As such, they will have a principled reason to reject (A2) of *The Conviction Argument*.

To initially motivate the thought that, contra Littlejohn, Punish *can* convincingly be rejected on purely moral grounds, it may be helpful to reflect on *why* we so vehemently object to Punish. Here is a natural thought: deciding the fate of a randomly chosen prisoner solely based on the fact that they were in the same prison yard as a group of individuals who committed a crime appears to be grossly *unfair* or *unjust*.¹⁴ Importantly, we can hold that convicting the defendant would be unjust or unfair even if we accept that it is overwhelmingly probable that they were involved in the attack and we think, with Lockeans, that this makes it rational to believe that they were involved. There doesn't seem to be anything puzzling or inconsistent about this position.

¹³ This is not to say that Littlejohn doesn't think that Punish is morally problematic—he does acknowledge that Punish is morally troublesome (forthcoming: 11). What Littlejohn seems to think is that the epistemic argument is the best way to argue against the morally objectionable claim expressed in Punish.

¹⁴ It may be important to highlight that in Prisoners the one innocent prisoner presumably did not have the option of removing themselves from the situation or to intervene. In other cases of group crimes where these are live options but an individual does not pursue them, both our intuitions and legal opinions may differ.

In fact, this combination of attitudes is very common in our legal practice. Consider, for instance, cases of illegally obtained evidence. A court may obtain a piece of evidence that clearly ties a defendant to a crime; and based on this evidence a judge (or a jury) may come to justifiably believe that the defendant is guilty. But, if the evidence was obtained illegally (and the admissible evidence alone is insufficient for a conviction), then it would be impermissible to convict the defendant—even if it is reasonable to believe that the defendant is guilty. The reason it would be impermissible is of course *not* because the judge (or the jury) is not in a position to justifiably believe that the defendant is guilty, they may well be in such a position, but because doing so would violate certain principles that aim to promote a just and fair legal system. Now, Lockeans may of course point out that in cases like Prisoners their situation is relevantly similar—while the fact that it is overwhelmingly probable that the defendant is guilty makes it reasonable for us to believe that they are guilty, the statistical nature of the evidence makes it ultimately impermissible to convict the defendant because doing so would be unjust or unfair.

The idea that legal convictions based on statistical evidence would be unjust or unfair is also echoed in various places in the literature. For instance, Blome-Tillmann (2015: 103) recently offered the following assessment of the Gatecrasher Case (an analogue of Prisoners in which a person is randomly chosen from a crowd at a rodeo at which 70% of attendees are known to be gatecrashers and is sued for gatecrashing).

... courts will find for the defendant. And again, I take it that this accords rather well with our intuitions about *fairness* and *justice*.¹⁵ It doesn't seem right to find John, who was randomly picked out in the arena, liable to pay damages just because 70% of attendees gatecrashed. After all, if such a case was allowed to succeed in court, the organizers of the rodeo could, in principle, win similar cases for every person in attendance at the rodeo, including the 300 people that paid the entrance fee.

Similar remarks can be found in Smith (2018: 1195), who provides the following observation in response to the Blue-Bus Company case (another analogue of Prisoners, in which the Blue-Bus Company is sued for their involvement in an accident based purely on the fact that the Blue-Bus company operates a high number (e.g. 90%) of the buses in the area).

To hold the Blue-Bus company liable, purely on the basis of its large market share, would seem palpably *unjust*.¹⁶

At this point the following question arises: if the primary concern about Punish is that it is unjust or unfair, then why should we follow Littlejohn and think that the best argument against Punish is an epistemic argument? If Punish is *morally problematic*, then why not object to Punish directly on moral grounds? Unless opponents of the Lockean View can show that objecting to Punish on moral grounds

¹⁵ My emphasis.

¹⁶ My emphasis.

is not a live option, it seems reasonable to think that Lockeans can run the following argument against Punish—let’s call it the *Moral Argument against Punish*.

The Moral Argument against Punish

- C1. It would be wrong to punish the defendant in Prisoners if this would violate a plausible norm of justice/fairness.
- C2. Convicting the defendant in Prisoners would violate a plausible norm of justice/fairness.
- C3. Thus, it would be wrong to punish the defendant in Prisoners.

This argument provides a principled objection to Punish that is entirely compatible with Believe. And, as such, it provides Lockeans with the resources to reject (A2) of the *Conviction Argument*.

At this point one might wonder what this principle of justice or fairness may be that convicting the defendant would violate? Whilst it is likely that there is going to be more than one reasonable explanation as to why Punish may be unfair or unjust, and whilst the success of the Moral Argument against Punish does not require a commitment to any particular principle of justice or fairness—all that’s required for the argument to succeed is to think that some such principle plausibly exists¹⁷—below I will briefly consider what strikes me as a compelling candidate.

I take the following to be rather uncontroversial: legal convictions have a considerable impact on the lives of individuals. In addition to the *direct effects* resulting from monetary fines or time spent in prison, legal convictions also have far-reaching *indirect effects*. For instance, they affect personal relationships, they impact how we are perceived by others, how others interact with us, the opportunities that we are given and have access to, etc. So, in light of the considerable impact that legal convictions can have on a subject, it seems reasonable to think that we owe it to individuals (and organizations) that we do not treat legal convictions lightly.¹⁸ Now, while there may be different ways of spelling out what this means, here is what strikes me as a reasonable thought: we owe it to defendants that we do not find them guilty if the verdict could *easily* be false. Stated in modal terms, we might say that we owe it to defendants that we do not convict them if there exists a nearby possible world in which we falsely convict them. These

¹⁷ In his discussion Littlejohn does briefly consider the option of rejecting Punish on justice or fairness grounds. However, he quickly abandons this strategy after briefly considering two options. But this of course is not enough. What Littlejohn, or anyone sympathetic to something like the Conviction Argument, needs to show is that either (a) all of the available justice or fairness-based arguments against Punish fail or (b) that there is a general reason to think that any moral—or *non-epistemic*—argument against Punish will be unsatisfactory. However, Littlejohn does not pursue either of these options.

¹⁸ This ‘owing’ can be spelled out in different ways. For instance, we might think that people have a *right* not be convicted if they could easily be innocent, as doing so would indicate a lack of *respect for the person*. Alternatively, if one does not like ‘rights’ talk, we might say that we have a *duty* (or obligation) not to expose individuals to the serious consequences associated with legal convictions if, for all we know, they could easily be innocent. Finally, on a virtue theoretic approach, we might say that convicting someone of a crime when we know that they could easily be innocent is, in some sense, reckless and therefore instantiates a vice.

considerations plausibly support the following norm about just (and fair) convictions.

Just/Fair Convictions In order for a legal conviction to be just/fair it is necessary that the verdict could not easily be wrong—i.e. it is necessary that there exist no nearby world in which we falsely convict the defendant.¹⁹

Now, in cases where a proposition is supported by purely statistical evidence—e.g. in Prisoners—it seems reasonable to assume that there does exist a nearby world in which we falsely convict the defendant. In Prisoners for instance, this would be the world in which the randomly chosen prisoner just so happens to be the one prisoner not involved in the attack. Hence, seeing that convicting the prisoner would violate Just/Fair Conviction, it would be unjust and unfair to find the defendant in Prisoners guilty.²⁰

Importantly however, as mentioned before, while I take the above principle to provide a compelling explanation for why Punish strikes us as unjust or unfair, I am open to the idea that there are perhaps other principles that could plausibly explain the apparent injustice (or unfairness) of convicting individuals based on purely

¹⁹ One consequence of the principle thus stated is that convicting the innocent will always turn out to be unjust/unfair—even in cases where the evidence against the innocent defendant is very strong. This follows trivially as long as we assume that whenever someone is innocent, there will always exist a nearby world in which they are innocent (for instance, both *Strong* and *Weak Centering* yield this result). Fortunately, if one wants to avoid this consequence, then this can easily be done. All we need to do is follow Smith's (2010, 2016, 2018) Normic Support framework and formulate the modal constraint on just/fair convictions in terms of *normal* rather than *nearby* possible worlds. According to Smith, a proposition is normically supported by the evidence if there exists no normal world in which the proposition is false.

Just/Fair Convictions* In order for a legal conviction to be just/fair it is necessary that the proposition that the defendant is guilty is normically supported by the evidence—i.e. it is necessary that there exist no normal world in which the defendant is not guilty.

Since, as Smith compellingly argues, propositions supported by purely statistical evidence are never normically supported by the evidence (there always exists a normal world in which they are false), Just/Fair Convictions*, like Just/Fair Convictions, would deliver the result that convictions based on statistical evidence are unjust/unfair. But, since the actual world must not always be amongst the most normal worlds—abnormal things can happen in the actual world—we avoid the consequence that convicting the innocent will always turn out to be unjust/unfair (the normic support framework rejects both strong and weak centering); a body of evidence can normically support the proposition that some defendant is guilty, even if the defendant is in fact innocent. For the purposes of this paper, I will remain neutral between the two principles.

²⁰ I thank a referee for raising the following issue: let's imagine a society in which everyone agreed that purely statistical evidence is sufficient for legal convictions; in such a society, so the thought goes, there wouldn't be anything unfair about convicting the defendant in Punish. I think there are two ways of responding to this objection. First, we might concede that in such a society the practice of convicting based on statistical evidence would no longer be unfair. In this case we may grant that concerns about justice and fairness can come apart, drop fairness out of the picture, and run the argument exclusively in terms of justice. A second option would be to take a more objectivist stance and hold that the practice of convicting people based on purely statistical evidence remains unfair (and unjust), even if people agree to adopt this practice. Following this view, mere agreement would not be sufficient to settle moral questions about fairness, for people may agree to adopt unfair practices. While I personally find the second option more compelling, I will remain neutral on this issue here.

statistical evidence.²¹ This is good news for Lockeans. As long as we think that there exists *some* principle of justice or fairness that legal convictions based on purely statistical evidence violate, the Conviction Argument will not have any purchase on the Lockean View. In other words, as long as we think that some such principle exists, Lockeans can appeal to the Moral Argument against Punish to motivate a rejection of (A2) of the Conviction Argument.²²

In the next section I turn to some more general reasons for being skeptical about the overall strategy of using legal cases to evaluate epistemic theories.

3 The legal, the epistemic, and their diverging aims

Aside from providing Lockeans with a response to the Conviction Argument, the previous considerations also point towards a more general conclusion about the connection between epistemology and the law: the connection between the legal and

²¹ See, for instance, Wasserman's (1991) argument that convictions based on statistical evidence are inconsistent with, "the law's commitment to treat the defendant as an autonomous individual, free to determine and alter his conduct at each moment" (943).

²² An anonymous referee helpfully pointed out that opponents of the Lockean View may run analogue versions of the Conviction Argument without appealing to the issue of legal convictions. For instance, we may follow Adler (2002) and focus on reactive attitudes (e.g. anger, resentment, gratitude) or related notions like blame or praise. After all, just as it seems inappropriate to find a defendant guilty if the only evidence against them is purely statistical, so it seems inappropriate to *blame* (or *praise*) someone for having committed some wrong (or good) if the only evidence for that claim is purely statistical. Hence, as with Punish, many will likely want to reject Blame and Praise

Blame It is permissible to *blame* someone for having committed some wrong if the only evidence against them is purely statistical

Praise It is permissible to *praise* someone for having committed some good if the only evidence against them is purely statistical

At this point, opponents of the Lockean View may raise the following challenge akin to the Conviction Argument: how can Lockeans square an acceptance of Believe with a rejection of Blame and Praise, for if we can justifiably believe that someone committed a wrong or good, then there should be no principled objection to blame or praise them. How should Lockeans respond to this challenge? I'm inclined to think that Lockeans will be able to follow the same general strategy proposed in response to the Conviction Argument—i.e. they should reject the claim that if we have justification for believing that someone has committed a wrong (or a good), then there is no principled objection to blame (or praise) them. On what grounds may Lockeans reject this? It seems plausible that, as in the case of legal convictions, blame and praise have distinctly *non-epistemic*—e.g. moral or practical—dimensions that can be used to explain why it is inappropriate to blame or praise someone even when one is in a position to justifiably believe that they committed the wrong (or good) in question. Blame, some people think, involves negative attitudes towards the subject, e.g. hate, anger, or resentment (e.g. Strawson 1962; Wallace 1994). Others think that blaming someone involves an impairment of the relationship with that person (e.g. Scanlon 2008; Bennett 2013). Now, it seems reasonable to think that there is something morally objectionable (e.g. unfair, unjust, or disrespectful) about hating or resenting someone for committing some act if we could easily be wrong. Similarly, it seems that there are good practical (and perhaps moral) reasons not to impair our relationship with others if our blame could easily be unwarranted. Things are similar when it comes to praise; it seems reasonable to think that we should not praise people for actions if our praise could easily be misplaced, as praising someone for an action they haven't committed would be unfair to those individuals who did in fact commit the praiseworthy act. As a result, Lockeans can use the same strategy used to argue against Punish to argue against principles like Blame and Praise—i.e. they can reject Blame and Praise for non-epistemic reasons.

the epistemic seems to be much less intimate than proponents of the Conviction Argument seem to think. Here is why.

According to Lockeans—and many other philosophers—our epistemic aim is to believe truly or to believe accurately.²³ This is why they endorse views on which, generally speaking, a belief is justified iff it is highly probable. But, as the above considerations suggest, the law has a distinctly *non-epistemic* dimension—i.e. the law is concerned with more than just reaching true verdicts.²⁴ Amongst other things the law is also concerned with reaching verdicts that are *just* and *fair*. Hence, our *epistemic aim* and the *aim of the law* can reasonably be seen to come apart.

Now, seeing that epistemology and the law have different aims, it shouldn't surprise us that judgments about whether it is reasonable to believe that a defendant is guilty can diverge from our judgments about whether it is permissible to convict a defendant. As a result, we should not expect epistemic theories about what we can justifiably believe to track when we can permissibly convict a defendant.

It seems then, that once we recognise that the aim of the law comes apart from what many—including Lockeans—take to be our epistemic aim, we have a very general reason to be pessimistic about the overall strategy of using legal considerations to evaluate epistemic theories or to draw epistemic conclusions. To use the terminology introduced earlier, we have good reasons to be skeptical about arguments that follow the *legal-to-epistemic direction of exchange*. In the next two sections I consider two further arguments against the Lockean View that appeal to legal considerations. However, I argue that like the Conviction Argument, they too are ultimately unsuccessful.

4 The Argument from Practical Reasoning and Assertion

A second, closely related, argument against the Lockean View can be anticipated from a recent suggestion by Smith (2016: 37), who provides the following observation in response to the Blue-Bus case.

Should I go around announcing that the bus involved was a Blue-Bus bus? Should I take steps against the company – boycott their buses, picket their offices, etc.? If my only evidence is that 95% of the buses in the area on the day in question were Blue-Bus buses, then to take such steps would surely be unjust.

At a sufficient level of abstraction, what Smith seems to be suggesting is that in cases where the only evidence against a defendant is purely statistical (this would of course include Prisoners) our epistemic standing is not good enough to *assert* that the defendant is guilty or to *act as if* the defendant was guilty. And this, Smith continues to argue, should give us good reasons to think that the Lockean View or any view on which we can justifiably believe that the defendant in Prisoners is

²³ For an explicit defence of this claim, see Velleman (2000), Wedgwood (2002), Shah (2003), Gibbard (2005), Engel (2013), and Horwich (2013).

²⁴ This feature of the law is widely acknowledged by legal theorists; see, for instance, Tribe (1971: 1376) and Saks and Kidd (1980–1981: 125).

guilty, or that a Blue-Bus bus was responsible for the accident, are somehow on the wrong track.

What's underwriting this objection to the Lockean View appears to be a thought along the following lines: if one is epistemically justified in believing P, then it should be epistemically permissible to assert that P and to rely on P in one's practical reasoning. The two principles at work here may be stated as follows.²⁵

Practical Reasoning S is justified in believing P only if S's epistemic standing with regards to P is good enough for S to act as if P.

Assertion S is justified in believing P only if S's epistemic standing with regards to P is good enough for S to assert that P.

The details of Practical Reasoning and Assertion can of course be developed in different ways, but for our current purposes these general formulations will suffice. With the two principles in place, we can now reconstruct the argument against Lockeanism as follows:

The Argument from Practical Reasoning and Assertion

- D1. Practical Reasoning and Assertion are true—i.e. S is justified in believing P only if S's epistemic standing with regards to P is good enough for S to act as if P and to assert that P.
- D2. In Prisoners, S's epistemic standing with regards to P is not good enough for S to act as if P and to assert that P.
- D3. Therefore, the belief that the defendant in Prisoners is guilty is not epistemically justified for S.
- D4. This is in conflict with the Lockean View.
- D5. Therefore, we should reject the Lockean View.

How may Lockeanism respond to this challenge? There are at least two possible options.²⁶

Option 1. Proponents of the Lockean View can accept the two principles—Practical Reasoning and Assertion—and moreover concede that it would be somehow impermissible to *assert* that, or to *act as if*, the defendant in Prisoners is guilty; but, they may deny that this is because our epistemic standing with regards to P is not good enough. Instead, they may argue that what makes asserting that, or acting as if, the defendant was guilty impermissible is that doing so would violate some other *non-epistemic* norms—e.g. *moral norms*. This strategy then accepts (D1) but denies (D2). What might these non-epistemic norms be that we violate when we assert that, or act as if, a defendant is guilty when the only evidence against them is statistical?

²⁵ Versions of these principles have been defended by, for instance, Fantl and McGrath (2002, 2009).

²⁶ The details of *The Argument from Practical Reasoning and Assertion* will of course vary according to how one spells out the content of Practical Reasoning and Assertion. But, given the general structure of the strategies that I pursue below, similar moves will be available for other versions of the two principles.

Recall what we said in the previous section; we argued that legal convictions have a considerable impact on the lives of individuals. We distinguished between *direct effects*—e.g. monetary fines or prison time—and *indirect effects*—e.g. how one is perceived by others including one’s friends and family, how others interact with one, and the opportunities that one is given or perhaps denied. Now, while asserting that someone is guilty of a crime (e.g. via a public announcement) or acting as if someone was guilty (e.g. via boycotting or picketing someone’s office) is unlikely to have direct affects like fines or prison time, it is nevertheless easy to imagine how such actions can produce the more indirect effects. Asserting that someone was involved in a violent prison attack may have a considerable impact on how others will interact with them, their relationships with friends and family, their job and career prospects, etc. Similarly, picketing a company’s office may have a considerable impact on the company’s reputation and thereby can have serious economic consequences. It is precisely in recognition of the severe harm that may result from others asserting and acting as if someone was guilty of a crime, that we have slander and defamation laws in place. As such, it seems reasonable to think that just as we owe it to people that we do not convict them if we could *easily* be wrong about their guilt, there is an analogous *moral norm* according to which we owe it to people that we don’t assert their guilt or act as if they were guilty in cases where this proposition could easily be false. Recall, that ‘easy’ here is to be understood in modal terms such that a belief that P could easily be false if there exists a close possible world in which one falsely believes P. And, since for beliefs based on purely statistical evidence there does exist a nearby world in which one falsely believes P, asserting that, or acting as if, the defendant in Prisoners is guilty would violate this norm.²⁷

This then provides Lockeans with a plausible response to the *Argument from Practical Reasoning and Assertion*: the reason it is inappropriate to assert that, or act as if, the defendant in Prisoners is guilty, Lockeans may argue, is not that our epistemic position fails to be good enough, but rather that doing so would conflict with certain *moral norms* governing when we can permissibly assert that, or act as if, someone was guilty of a crime.²⁸

²⁷ As previously suggested, this could also be spelled out in terms of Smith’s *Normic Support* framework.

²⁸ It may be important to point out that this strategy generalizes to other cases involving statistical evidence in which this moral dimension is absent—e.g. lotteries. For instance, in an effort to undermine the Lockean View Staffel (2016: 1725–1726) recently noted that it seems somehow inappropriate to act as if one has lost the lottery. Similarly, it is often noted that the purely statistical evidence in lotteries makes it somehow inappropriate for one to assert (without further qualifications) that one’s ticket is a loser, despite the fact that this is highly probable. But, in these cases Lockeans can run a similar argument. The impermissibility of asserting or acting as if one’s lottery ticket is a loser can plausibly be explained as resulting from violations of certain *prudential norms* and *norms of conversational pragmatics*. For instance, it seems compelling to think that the reason it strikes many of us as inappropriate to throw one’s lottery ticket away before the results are announced, is that one already owns the ticket and with it a non-zero chance of winning the lottery. Forfeiting this opportunity by throwing the ticket away seems *imprudent*—after all, one forgoes a potentially substantial pay-off for nothing. What about the case of assertions? Previously a number of people (e.g. Weiner 2005; Lackey 2007) have argued that the impropriety of asserting beliefs based on purely statistical evidence—e.g. lottery beliefs—can reasonably be explained as resulting from a violation of certain *norms of conversational pragmatics*. If

Option 2. Alternatively, Lockeans could reject Practical Reasoning and Assertion and deny that actionability and assertability are necessary conditions for a belief to be justified.

In contrast to Option 1, this strategy accepts (D2) but rejects (D1). Proponents of this strategy may concede that in Prisoners we are not in a good enough epistemic position to assert that, or act as if, the defendant is guilty but deny that this tells us anything interesting about the nature of epistemic justification.

Here's how this response may be motivated. Note that on the face of it, Smith's observation that it seems somehow inappropriate to assert that, or act as if, a defendant is guilty if the only evidence against them is purely statistical only tells us something about the *norms* governing practical reasoning and assertion. In other words, on the face of it, Smith's observation only shows that sometimes it is inappropriate to assert, or act on, beliefs that are supported by purely statistical evidence. But, Lockeans may of course question why we should accept that constraints on assertion and practical reasoning are also constraints on what we can justifiably believe. Put differently, they may question why we should think that, as Practical Reasoning and Assertion suggest, a belief can only be justified if it also satisfies the constraints on proper assertion and actionability. One reason to resist the idea that the notions of assertion and practical reasoning should feature in our analyses of justification is that the former can reasonably be expected to be governed by more demanding norms than the latter. After all, unlike belief, actions and assertions are *social acts*—i.e. they are acts that can have a considerable effect on the lives of others. As such, it should not surprise us that the norms governing assertion and practical reasoning may be more stringent than the conditions required to justifiably believe a proposition. Put differently, there are reasons to think that justification and the two notions—practical reasoning and assertion—are not as closely connected as Smith seems to suggest. A similar position was recently defended by Whiting (2013: 187–188).

Precisely because asserting is 'external', rather than 'internal', it is, if not necessarily a social act, then necessarily a potential social act. As a result, in evaluating an assertion, one might have to take into account the effects it might have on others, the expectations and needs of one's interlocutors, the part that speech act might play in unfolding conversation, and so on. Evidently, all these considerations are foreign to the assessment of belief.... In light of these observations it should not come as a surprise that a situation in which one may believe that *p* might not be a situation in which one may assert that *p*.

The thought that practical reasoning and assertion are (and should be) governed by more stringent norms than mere belief provides Lockeans with another reason to reject Practical Reasoning and Assertion. Following this proposal, the apparent impropriety of acting on or asserting that the defendant in Prisoners is guilty should simply be taken as data about the norms governing assertion and practical

Footnote 28 continued

this is correct, then by asserting that the defendant in Prisoners is guilty we would actually violate two different kinds of norms (i) a *moral norm* and (ii) a *norm of conversational pragmatics*.

reasoning.²⁹ But, so the Lockean argument may continue, there is no obvious reason to think that it is data about the correct accounts of epistemic justification.

So, Lockeans have at least two ways of responding to the Argument from Practical Reasoning and Assertion—the first strategy rejects (D2), the second strategy rejects (D1). There may of course be more options. For simplicity I have assumed that we treat Practical Reasoning and Assertion symmetrically, i.e. that if we accept one, then we will also accept the other and vice versa. This however is not mandatory. Perhaps some proponents of the Lockean View would like to accept Practical Reasoning but reject Assertion (or the other way around). In these cases, they could combine Option 1 and Option 2 to yield a more bespoke solution to the Argument from Practical Reasoning and Assertion.

The next section considers a final argument against the Lockean View which appeals to legal considerations. But, as we will see, like the previous two arguments it ultimately fails to make a persuasive case against the Lockean View.

5 The Comparative Probabilities Argument

Consider the following variant of Prisoners.

Prisoners* 100 prisoners are exercising in the prison yard. Suddenly a prisoner attacks one of the guards. After the attack, one of the guards recognizes the responsible prisoner—let's call him Bill—and offers to testify as an eyewitness in court. The environmental conditions on the day of the attack were normal.

Should Bill be convicted? I suppose many of us would judge that in this case it would be permissible to punish Bill. And, as in the previous case, our ordinary judgment is mirrored in our legal practice—the eyewitness testimony in Prisoners* would generally be sufficient to convict Bill. Similarly, I assume that most people would accept without much hesitation that in Prisoners* it is permissible to believe that Bill was responsible for the attack. So far, so good.

²⁹ For instance, many endorse some version of the Knowledge Norm of Assertion (e.g. Williamson 2000; Adler 2002; DeRose 2002; Hawthorne 2004).

Knowledge Norm of Assertion (KNA) It is appropriate to assert that P iff one knows that P. Since statistical evidence does not put us in a position to know, asserting beliefs based on purely statistical evidence would violate (KNA). Hence, (KNA), if one accepts it, provides a straightforward explanation of why it is inappropriate to assert that the defendant in Prisoner is guilty. Likewise, some have defended an analogue knowledge norm for practical reasoning (e.g. Hawthorne and Stanley 2008; Fantl and McGrath 2009).

Knowledge Norm of Practical Reasoning (KNPR) It is appropriate to rely on P in practical reasoning iff one knows that P.

Again, (KNPR), if one accepts it, would explain why in Prisoners it would be inappropriate to act as if the defendant is guilty. As such, (KNPR) would answer Smith's challenge. But even if one does not endorse knowledge norms of assertion and/or practical reasoning and instead prefers a *truth norm* (see Weiner 2005) or a *reasonable belief norm* (see Douven 2006; Lackey 2007; Kvanvig 2009), one could always modify one's favourite norm in ways that would rule out beliefs based on statistical evidence. One straightforward way of doing so would be to build some anti-luck condition (e.g. sensitivity, safety, or normic support) into the norm of assertion and practical reasoning.

However, at this point opponents of the Lockean View may point out the following: of course eyewitness testimony is not perfectly reliable—perhaps the guard made a mistake—he may have been tired and mistaken Bill for someone else, perhaps there was another prisoner who looked just like Bill from the angle at which the guard was overlooking the prison yard, or maybe another prisoner decided to disguise himself to look like Bill so as to avoid being found guilty for attacking the guard. So, despite the fact that there is an eyewitness, we should assign the proposition that Bill attacked the guard a degree of probability less than 1. Let's say that a reasonable degree of probability to assign the proposition P^* , that Bill was responsible for the attack, is 0.98.

But now opponents of the Lockean View may object as follows. In Prisoner the probability that should be assigned to the proposition P , that the randomly chosen prisoner was involved in the attack, is 0.99. And in Prisoners* the probability we should assign to P^* is 0.98. And, since $\Pr(P) = .99 > \Pr(P^*) = .98$, the Lockean View predicts that in Prisoners we are more justified in believing that the defendant is guilty than we are in Prisoners*—but this seems counterintuitive.^{30,31} Surely, one might argue, the belief that Bill in Prisoners* is guilty should be more justified than the belief that the randomly chosen prisoner in Prisoners is guilty. To further support this claim, opponents of the Lockean View may also point out that in Prisoners* it seems entirely appropriate to convict Bill, while in Prisoners a conviction seems impermissible.³² In short then, it seems that many feel inclined to accept the following comparative claim.

The Comparative Claim The belief that the defendant in Prisoners* is guilty is epistemically more justified than the belief that the defendant in Prisoners is guilty—i.e. P^* is epistemically more justified than P .

Since, this comparative claim seems to be in direct tension with the prediction of the Lockean View, its opponents can run the following straightforward argument against it.

The Comparative Probabilities Argument

- F1. If we accept the Lockean View, then P will be epistemically more justified than P^* .
- F2. But, we should accept The Comparative Claim—i.e. the claim that P^* is epistemically more justified than P .
- F3. Therefore, we should not accept the Lockean View.

³⁰ Notable versions of this argument can be found in Smith (2016) and Buchak (2014). Staffel (2016) also seems to endorse this kind of argument. An analogous version of the argument that does not use legal case for illustration can be found in Nelkin (2000).

³¹ The precise degree of probability that one thinks we should assign to the proposition that Bill was responsible for the attack does not matter here. For any degree of probability (as long as $\Pr(P^*) < 1$) we could simply alter the numbers of prisoners in Prisoners such that the reasonable degree of probability for P will exceed that of P^* .

³² For instance, Smith (2016: 36–37) seems to think that this kind of reasoning speaks in favour of the idea that P^* should be more justified than P .

How might Lockeans respond to this argument?

Since (F1) is a natural consequence of the Lockean View, it appears that Lockeans, in order to defend their view, will need to reject (F2). However, since many find The Comparative Claim compelling, making this move convincing will require some work. So, on what grounds may Lockeans argue that we should resist our initial inclination to accept The Comparative Claim?

First, Lockeans are likely to remind us that P's degree of probability exceeds that of P*. This, of course, means that P is more likely to be true than P*. When this is combined with the idea that our epistemic aim is to believe truly, then the thought that P should be more justified than P* begins to look more plausible. More importantly, however, The Comparative Claim commits us to the idea that we are more justified in believing a proposition that we know is less likely to be true. Clearly, from an epistemic perspective, this is an unpalatable result. Hence, once we recognize that The Comparative Claim is in direct conflict with the aim of being an accurate epistemic agent, it seems that there is a compelling reason to reject it.

What about the second argument in support of The Comparative Claim, namely that it would be appropriate to legally convict Bill in Prisoner*, while it would be inappropriate to convict the defendant in Prisoners? Surely, so opponents of the Lockean View may argue, this indicates that P* is more justified than P? However, as we have already seen, Lockeans have a plausible response to this line of reasoning.

Earlier we argued that epistemology and the law have diverging aims. Specifically, we argued that the law does not only care about reaching true verdicts but that it is also concerned with reaching verdicts that uphold our ideals of justice and fairness. The reason we are reluctant to convict the defendant in Prisoners, we argued, is that doing so would violate a plausible moral norm about the just and fair treatment of defendants (Just/Fair Convictions). In contrast, by convicting Bill in Prisoners*, where we have eyewitness testimony that ties Bill to the crime, we would not violate any such norm. Hence, convicting the randomly chosen prisoner in Prisoners strikes us as impermissible, while convicting Bill in Prisoners* seems permissible. Importantly, however, there is no obvious reason to think that these considerations provide any support for the *epistemic* thesis advanced in The Comparative Claim—viz. that P* is *epistemically* more justified than P.

5.1 Explaining why the Comparative Claim seemed initially attractive

For proponents of the Lockean View the work is not quite done here. To make their response to *The Comparative Probabilities Argument* more persuasive, Lockeans should also be able to offer some explanation for why The Comparative Claim—a claim that they argue we should reject—is initially so attractive. Fortunately, there is a plausible story that Lockeans can tell.

One plausible explanation for why many of us intuitively judge P* to be more justified than P is that we ordinarily don't think about beliefs based on perception (and presumably other types of evidence) in probabilistic terms. In the absence of any evidence to the contrary, it seems plausible that we often assign beliefs based on

perception probability 1; put differently, we simply take these beliefs to be certain.³³ Why do we do this? Consider the circumstances under which our beliefs based on perception would be false; such circumstances will include unfortunate lighting, deception, the inference of hallucinatory drugs, etc. It seems plausible that in ordinary circumstances we simply *ignore* these kinds of error-possibilities; or, more formally, that we assign them probability 0. If this is correct, then, given that the guard recognized Bill, it is likely that many of us will have initially assigned P^* probability 1. This is because we assigned the interfering circumstances under which our belief that P^* would be false—e.g. that the prison guard was tired and made a mistake in identifying Bill, that the guard looked at the yard from a bad angle such that another prisoner looked just like Bill, or that another prisoner decided to disguise himself to look like Bill—probability 0.

Now, when it comes to statistical evidence things are importantly different. Here the possibility of error is very salient and therefore difficult to ignore, no one would be tempted to assign the proposition that the defendant in *Prisoners* was involved in the attack probability 1. Hence, Lockeans can offer what seems to be a plausible story to explain why many feel initially inclined to think that P^* is more justified than P .

However, at this point it is important to point out that the above consideration only aim to *explain* why we initially judge P^* to be more justified than P —they do not aim to *justify* this judgment. The guard in *Prisoners** is, of course, fallible and the error-risk associated with P^* is not 0. It would simply be a mistake to assign P^* probability 1. Once we recognise this and we recognise that the error-risk associated with P^* is in fact higher than the error-risk associated with P , we may start to appreciate the Lockean position that, contra The Comparative Claim, P is more justified than P^* . We might also come to appreciate why the reasons to reject The Comparative Claim—viz. that it judges a proposition that is less probable (P^*) to be more justified than its more probable competitor (P)—are weightier than the initial intuitions that supported it.

Hence, Lockeans do not just have a good reason for rejecting The Comparative Claim and subsequently (F2) of the *Comparative Probabilities Argument*, they also have a plausible diagnosis as to why many of us may have initially felt attracted to it.

6 Concluding remarks

In this paper I considered but rejected three important arguments against the Lockean View of justification: *The Conviction Argument*, *The Argument From Practical Reasoning and Assertion*, and *The Comparative Probabilities Argument*. A shared feature of these arguments is that they use reflections on legal cases to support their epistemic conclusions. However, as we have seen, none of the arguments are ultimately successful. An important reason for why the arguments fail

³³ A similar point has been made by Ross and Schroeder (2014).

is that the connection between epistemology and the law is not nearly as close as it would need to be in order for these arguments to be convincing. In addition to defending the Lockean View against these three arguments from legal cases, we have also seen that there are very general reasons to be skeptical about the overall strategy of using legal consideration to evaluate epistemic theories—we called this general strategy of appealing to reflections on legal cases, to shed light on, and help answer, epistemic questions the *legal-to-epistemic direction of exchange*. The reason we should be pessimistic about arguments that follow the legal-to-epistemic direction of exchange is that, as we have seen, our epistemic aim is different from the aim of the law: in addition to reaching verdicts that are likely to be true, the law is also concerned with reaching verdicts that are fair and just—something that is ultimately irrelevant to epistemic theorizing. Hence, contra to recent arguments in the justification literature, we should not expect epistemic theories to track legal verdicts; and similarly, we should abandon the idea that legal considerations are helpful in evaluating epistemic theories.

Acknowledgements I want to thank Martin Smith, the audience at the ‘Evidence in Law and Ethics’ workshop at *Jagiellonian University*, and an anonymous referee for their helpful comments on earlier versions of this paper.

Open Access This article is distributed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made.

References

- Adler, J. (2002). *Belief's own ethics*. Cambridge: MIT University Press.
- Bennett, C. (2013). The expressive function of blame. In D. J. Coates & N. A. Tognazzini (Eds.), *Blame: Its nature and norms*. New York: OUP.
- Bergmann, M. (2006). *Justification without awareness: A defense of epistemic externalism*. Oxford: OUP.
- Blome-Tillmann, M. (2015). Sensitivity, causality, and statistical evidence in courts of law. *Thought: A Journal of Philosophy*, 4(2), 102–112.
- BonJour, L. (1985). *The structure of empirical knowledge*. Cambridge, MA: Harvard University Press.
- Buchak, L. (2014). Belief, credence, and norms. *Philosophical Studies*, 169(2), 285–311.
- Cohen, L. J. (1977). *The probable and the provable*. Oxford: OUP.
- Conee, E., & Feldman, R. (2004). *Evidentialism*. Oxford: OUP.
- Dennis, I. (2002). *The law of evidence* (2nd ed.). London: Sweet and Maxwell.
- DeRose, K. (2002). Assertion, knowledge, and context. *Philosophical Review*, 111(2), 167–203.
- Douven, I. (2006). Assertion, knowledge, and rational credibility. *Philosophical Review*, 115(4), 449–485.
- Engel, P. (2013). In defence of normativism about the aim of belief. In T. Chan (Ed.), *The aim of belief*. Oxford: OUP.
- Enoch, D., & Fisher, T. (2015). Sense and sensitivity: Epistemic and instrumental approaches to statistical evidence. *Stanford Law Review*, 67, 557–611.
- Enoch, D., Fisher, T., & Spectre, L. (2012). Statistical evidence, sensitivity, and the legal value of knowledge. *Philosophy & Public Affairs*, 40(3), 197–224.
- Fantl, J., & McGrath, M. (2002). Evidence, pragmatics, and justification. *Philosophical Review*, 111(1), 67–94.

- Fantl, J., & McGrath, M. (2009). *Knowledge in an uncertain world*. Oxford: Oxford University Press.
- Foley, R. (1992). The epistemology of belief and the epistemology of degrees of belief. *American Philosophical Quarterly*, 29(2), 111–124.
- Gibbard, A. (2005). Truth and correct belief. *Philosophical Issues*, 15(1), 338–350.
- Goldman, A. (1979). What is justified belief. In G. Pappas (Ed.), *Justification and knowledge* (pp. 1–25). Reidel: Boston, MA.
- Hawthorne, J. (2004). *Knowledge and lotteries*. Oxford: OUP.
- Hawthorne, J., & Stanley, J. (2008). Knowledge and action. *Journal of Philosophy*, 105(10), 571–590.
- Horwich, P. (2013). Belief-truth norms. In T. Chan (Ed.), *The aim of belief*. Oxford: OUP.
- Keane, A. (1996). *The modern law of evidence* (4th ed.). London: Butterworths.
- Kvanvig, J. (2009). Assertion, knowledge, and lotteries. In D. Pritchard & P. Greenough (Eds.), *Williamson on knowledge*. Oxford: OUP.
- Lackey, J. (2007). Norms of assertion. *Noûs*, 41(4), 594–626.
- Littlejohn, C. (forthcoming). Truth, knowledge, and the standard of proof in criminal law. *Synthese*. <https://doi.org/10.1007/s11229-017-1608-4>.
- Moser, P. K. (1989). *Knowledge and evidence*. New York, NY: Cambridge University Press.
- Nelkin, D. (2000). The lottery paradox, knowledge, and rationality. *Philosophical Review*, 109(3), 373–409.
- Nesson, C. (1979). Reasonable doubt and permissive inferences. *The Value of Complexity: Harvard Law Review*, 92(6), 1187–1225.
- Plantinga, A. (1993). *Warrant and proper function*. Oxford: OUP.
- Pryor, J. (2004). What's wrong with Moore's argument? *Philosophical Issues*, 14(1), 349–378.
- Redmayne, M. (2008). Exploring the proof paradoxes. *Legal Theory*, 14, 281–309.
- Ross, J., & Schroeder, M. (2014). Belief, credence, and pragmatic encroachment. *Philosophy and Phenomenological Research*, 88(2), 259–288.
- Saks, M., & Kidd, R. (1980–1981). Human information processing and adjudication: Trial by heuristics. *Law and Society Review*, 15(1):123–160.
- Scanlon, T. M. (2008). *Moral dimensions: Permissibility, meaning, blame*. Cambridge, MA: Harvard University Press.
- Shah, N. (2003). How truth governs belief. *Philosophical Review*, 112(4), 447–482.
- Smith, M. (2010). What else justification could be. *Noûs*, 44(1), 10–31.
- Smith, M. (2016). *Between probability and certainty: What justifies belief*. Oxford: OUP.
- Smith, M. (2018). When does evidence suffice for conviction? *Mind*, 127(508), 1193–1218.
- Staffel, J. (2016). Beliefs, buses and lotteries: Why rational belief can't be stably high credence. *Philosophical Studies*, 173(7), 1721–1734.
- Strawson, P. F. (1962). Freedom and resentment. *Proceedings of the British Academy*, 48, 1–25.
- Sturgeon, S. (2008). Reason and the grain of belief. *Noûs*, 42(1), 139–165.
- Swinburne, R. (2001). *Epistemic justification*. Oxford: OUP.
- Thomson, J. (1986). Liability and individualized evidence. *Law and Contemporary Problems*, 49, 199–219.
- Tribe, L. (1971). Trial by mathematics: Precision and ritual in the legal process. *Harvard Law Review*, 84(6), 1329–1393.
- Velleman, D. (2000). *The possibility of practical reason*. Oxford: OUP.
- Wallace, R. J. (1994). *Responsibility and the moral sentiments*. Cambridge, MA: Harvard University Press.
- Wasserman, D. T. (1991). The morality of statistical proof and the risk of mistaken liability. *Cardozo Law Review*, 13, 935–976.
- Wedgwood, R. (2002). The aim of belief. *Philosophical Perspectives*, 36(16), 267–297.
- Weiner, M. (2005). Must we know what we say? *Philosophical Review*, 114(2), 227–251.
- Whiting, D. (2013). Nothing but the truth: On the norms and aims of belief. In T. Chan (Ed.), *The aim of belief*. Oxford: Oxford University Press.
- Williamson, T. (2000). *Knowledge and its Limits*. Oxford: OUP.