Legal Epistemology: Systems of Legal Procedure as Holistic Epistemic Systems

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Some social practices and institutions can be described as *epistemic* because they are aimed in significant part at the acquisition and proliferation of true belief, knowledge, justification, understanding, and other epistemic goods. If they involve sufficient levels of integration and complexity, it can make sense to refer to them as epistemic *systems*. Whether consciously designed or emerging gradually over time, when they are working well these complex human creations help us learn about and accurately track what is going on in some domain or with some part of the world. We can, for example, think of schools and universities, scientific institutions and research institutes, libraries, news bureaus and newspapers, and Wikipedia as epistemic institutions and epistemic systems.

In this chapter, I will suggest that systems of legal procedure—including the rules and institutions relating to legal investigation and fact-finding, rules and practices regarding the role and responsibilities of lawyers and judges, pre-trial discovery processes, trial processes including rules regarding relevance and admissibility of evidence, and post-trial appeals, among others—are carefully refined, integrated, holistic epistemic systems. One main aim in this chapter is draw attention to the importance of the *holistic* nature of an epistemic system such as a system of legal procedure. This holism has significant implications for those studying and engaging in epistemic assessment of specific elements of a legal system. A secondary aim is to draw attention to the complex interaction between what might be valuable epistemically and what is permissible morally when it comes to social norms, practices, institutions, and systems—including, but not limited to *legal* norms, practices, institutions, and systems. Systems of legal procedure are holistic epistemic systems, but they are also suffused with moral limitations and considerations; they are not *purely* epistemic systems. Although this is explicit in the case of systems of legal procedure, it is true of most if not all social epistemic systems and practices, since most if not all social practices and institutions run into moral considerations and potential moral limitations.

I. The Importance of Legal Procedure

Law helps smooth out and structure social life. Law helps regulate and contain our disputes. Law attempts to protect us from those who would harm or wrong us and provides what redress is possible when we are harmed or wronged. These things are accomplished through the interaction of *laws* (statutes, legal rules, norms, standards) and *people* empowered in and through *institutions* to use those laws in various ways as the basis for investigation, detention, arrest, adjudication, sentencing, mediation, negotiation, custody determination, asset transfer, alternative dispute resolution, financial sanction, involuntary commitment, deportation, property confiscation, and much else.

Laws by themselves do nothing. People must be involved in structuring their behavior in response to the laws and their beliefs about how they will apply, and a subset of people are centrally involved in applying and interpreting laws to particular factual situations. These people—like the rest of us—are neither omniscient nor omnibenevolent. Complex systems of oversight, limits on individual power, mechanisms of selection and appointment, and ethical rules and regulations are deployed to reign in bad behavior on the part of legal actors and to help do what is possible to correct for the absence of omnibenevolence.

The problem of non-omniscience requires even more of a structural, systemic response, with an ultimate objective of ensuring that the application of the law in particular cases is appropriate given the underlying factual reality. Systems of legal procedure are this response.

Systems of legal procedure have a multifunctional role, including enabling and improving:

> ACCURACY: creating knowledge (or justified true beliefs or true beliefs[1]) regarding a particular domain of empirical facts (in the legal case, those facts made legally significant by the extant laws in a jurisdiction) within a subset of relevantly empowered agents and decisionmakers
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> DEFERENCE: making trust and epistemic deference to the testimony of those legally empowered decisionmakers appropriate
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> LICENSING ACTION: enabling those legally empowered agents to appropriately take actions the moral permissibility or appropriateness of which is conditional on (i) certain facts being true and/or (ii) having satisfied certain epistemic conditions on responsibility

What is called "legal epistemology" can be understood as focusing our attention on those elements of law and legal procedure that relate to these particular functional roles of legal procedure—and particularly to improving ACCURACY. These include rules regarding investigation and discovery, what constitutes relevant and admissible evidence, the introduction and use of expert testimony, presentation and cross-examination of witnesses, presumptions and burdens of proof, standards of proof, the selection and use of juries, the selection and role of judges and legal counsel, and standards and processes of appeal.

It is plausible to see doing well by ACCURACY as a necessary condition for enabling appropriate DEFERENCE and LICENSING ACTION, and to see those as what are most morally and politically significant. DEFERENCE is important so that people will be likely to turn to legal institutions rather than engaging in vigilante justice, and so that official legal resolutions to disputes will be viewed as fairly and appropriately decided and are thus more likely to be stable and accepted as authoritative. But even more fundamentally, given what will and might be done by legally empowered agents, ACCURACY is vital to LICENSING ACTION.

Even outside of the legal context, there are many actions such that one morally ought not to perform them unless certain other facts obtain. One shouldn't give this drug to the patient unless it will (at least) do more harm than good, given their medical condition. One shouldn't build a bridge using these materials unless they are adequately weight-bearing. Some process or system must be in place to improve accuracy regarding questions in these factual domains for those who would take these actions or who are empowered and expected to do so.

Consider the epistemic system constituted by networked institutions of biomedical research and medical practice. Many of the elements of that system—education and training, sophisticated observational studies, pre-registered hypotheses, randomized controlled trials, extensive peer-reviewed journals and peer-reviewed grantmaking agencies, and so on—are aimed at improving accuracy regarding the domain of facts relating to human health and the efficacy and safety of potential medical interventions and practices. And a significant point of all of that is to license actions—performing surgeries, administering drugs and other treatments, making difficult decisions about allocation of scarce resources, and much else—that would be morally objectionable or impermissible without the knowledge obtained through that complex epistemic system.

In the legal context, the relevant actions fall into two broad categories. First, there are the actions that involve the application of law to particular individuals in the context of particular disputes. For a significant subset of legal and political actions—actions that might be described as the State acting *against* particular individuals—these actions are permissible only if certain triggering conditions obtain. Just as there is a concern about political legitimacy in how laws are created, so, too, there are moral concerns about legitimacy in how general laws are applied to particular individuals. In any decent legal

[1] There are questions about whether what matters is that the relevant agents have true beliefs, or whether other epistemic statuses—knowledge, justification, understanding—also are important. On the former view, other epistemic statuses like knowledge, justification, and understanding are either of no or only secondary importance when thinking about legal epistemology. Enoch et al. (2021) argue for this view.

or political system—a system that we might call even minimally legitimate—these conditions will be legally-codified and limit State action against individuals to those cases in which the relevant conditions obtain. In the criminal law context, these conditions are referred to as the "elements" of crimes. But there are many structurally similar contexts, such as when immigration law is applied to particular individuals to remove them or to alter their status, an individual is deemed to be mentally ill and in need of involuntary commitment to a medical facility, or the State threatens to remove a child from a parent's custody or to terminate parental rights. In these cases, the State can permissibly act only if the relevant conditions obtain. Given that legal actors are not omniscient, some system must be in place to ensure or at least improve accuracy regarding the assessment of whether the relevant triggering conditions obtain. Given what is at stake and given the incentives various people might have to deceive the relevant legal actors about the relevant facts, the epistemic system that is designed may need to be complex. I will discuss that—and the important systemic holism that emerges—in a moment.

In addition to cases in which the State acts against individuals, there is also a second large category of cases in which law helps to structure and resolve disputes among private individuals. These disputes can take many forms: a person complaining that another has harmed him physically through intentional or negligent action, or that someone has violated her property rights, or failed to abide by his contractual obligations. In these "private" law cases, legal procedure is important both to ascertain relevant facts about the matter in dispute, and to settle disputes in ways that are transparent, equitable, fair, and conducive to peaceable and productive social relations.[2]

It is worth stressing that things other than the details of legal procedure can affect ACCURACY, DEFERENCE, and LICENSING ACTION. If the substantive law includes evidentially difficult or obscure elements as relevant for permissible legal action, that is likely to impair ACCURACY. Consider the requirement of *mens rea* elements, which raise the issue of evidence regarding an individual's mental state at a particular moment in time. Or consider how facts about physical distance and population density can affect how difficult it is to gather evidence or how likely it is that there will have been eyewitnesses.

Additionally, and related to this last point, assessments of how a system of legal procedure will perform *qua* epistemic system must be made with respect to specific contextual circumstances. There might not be any particular practices, roles, or rules that must be present in every legal system for the system to function well as an epistemic system—at least not if specified at any significant level of detail. There might need to be *some* investigative or fact-finding process in place, but it needn't take the form of using police and prosecutors working together as one side of an adversarial legal system as opposed to, say, use of a judge inquisitor as in inquisitorial systems. How well these will function will depend on contextually specific facts. The aim of ACCURACY is likely to be multiply realizable, by different kinds of institutions and epistemic systems, and what will help with ACCURACY will vary depending on contextual factors.

II. Holism

That systems of legal procedure have an epistemic role is unlikely to be a controversial or surprising claim. The claim that they should be understood as epistemic *systems* is also perhaps unsurprising. In this section, I consider some implications of this claim, particularly with respect to considering the epistemic evaluation of particular elements of legal process. The main aim is to draw attention to the need for holistic assessment and to the potential danger of narrow focus on one or a few elements of legal process when considering how those elements contribute to ACCURACY or other epistemic goods. This is a plea for more work in legal epistemology focused on institutional epistemic evaluation, treating legal procedural rules as a holistic, integrated epistemic system, and engaging in evaluation of *systemic epistemic quality*. Systemic epistemic quality will be a matter of how well an epistemic system does at fulfilling the aforementioned roles of promoting or improving ACCURACY,

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[2] For more detailed discussion of these different contexts, see Guerrero (2012).

DEFERENCE, and LICENSING ACTION in some domain of social life. There is a sense in which the core epistemic dimension of evaluation is ACCURACY, although ACCURACY is important, in significant part, because of the further social importance of DEFERENCE and LICENSING ACTION in the context of law. The point of these social epistemic systems is not to improve knowledge in some general way, but to do so on the way to making certain socially important practices morally better or morally permissible.

It is unsurprising that much of the work in legal epistemology has focused on a few issues that stand out as particularly "epistemology-involving" or particularly philosophically puzzling. Law is replete with terms—"evidence," "knowledge," "testimony," "proof," "doubt," "ignorance"—that seem to invite epistemologists to join in the discussion. And there are fascinating puzzles and theoretical issues—which sometimes have only glancing connection to most law and legal practice—concerning, for example, the use of statistical evidence[3] and mathematical and probabilistic approaches to legal proof.[4] Much of that work is interesting and provocative. But I want to recommend caution on two bases. First, the terms as used in law have often come, in a social context and over long historical development, to take on a particular meaning and importance, not always identical to the concepts that have been more centrally discussed by epistemologists.[5] Second, and this will be more the focus here, much work in legal epistemology has focused on analyzing these concepts in a relatively standalone way, betraying little awareness of the broader systemic context, and spending little time considering how implementing various proposals might affect other aspects of the legal procedural system. And it's not just a matter of too much focus on one thing and not enough on others. The close focus analysis in a decontextualized, non-systemic way results in missing out on important considerations and epistemic reasons that only emerge when considering the way in which a particular element of legal process works within the broader epistemic system.

Evaluating systemic epistemic quality and assessing what might improve it requires a more expansive, institutional, non-ideal social and legal epistemology, turning our attention to the methods and rules governing the initiation of a legal case; rules regarding investigation and inquiry, including rules about identifying and interviewing witnesses and suspects; the details of and rules regarding legal representation; rules governing the roles and selection of officials such as police officers, prosecutors, and judges; the identification, qualification, and selection of experts who might testify or in other ways provide evidence; the rules and practices of plea bargaining, settlement, mediation, and other alternatives to trials; the use of jury instructions; rules regarding appeals; rules regarding parole and early release; and much else beyond just rules of evidence and standards and burdens of proof. It also suggests that there might be much to learn in considering elements and procedural systems used in other places and contexts, and to be wary of attempts to offer a "universal" view of how things ought to be with respect to some element or practice relating to the epistemic system.[6]

We should, in particular, accept the following claim:

> HOLISM: appropriate epistemic evaluation of a particular part/rule/procedure of a legal system requires consideration of not just that part in isolation, but also the broader dynamic effects of that part in the systemic context in terms of its contribution to ACCURACY, DEFERENCE, and LICENSING ACTION.

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[3] See, e.g., Thomson (1986), Redmayne (2008), Enoch et al. (2012), Gardiner (2018).

[4] See, among many others, Kaplan (1968), Finkelstein and Fairley (1969-70), Tribe (1971), Eggleston (1983), Picinali (2012).

[5] Enoch et al. (2021) discusses this concern.

[6] There is substantial work in so-called "comparative" law to draw from, including classic work such as David and Brierley (1978) and Zweigert and Kötz (1998). There has been work in legal epistemology that is comparative in this way, but much of that work is in considering—sometimes quite abstractly—the merits of adversarial versus inquisitorial systems of gathering evidence. See e.g., Goldman (1999), Posner (1999), Decaigny (2014), Rajagopalan (2017).

This claim implies that we cannot engage in direct epistemic assessment of, say, a rule that allows adversarial confrontation and cross-examination of witnesses, or a rule that disallows the use of statistical evidence, without broader consideration of the effects of such rules in the particular context.

III. The Case for Holism

I won't offer a long argument for HOLISM here. The basic argument for it relies on two claims. First, most modern legal systems are complex, integrated systems. Second, the systemic epistemic quality effects of any particular part/rule/procedure of a complex, integrated system are the result of how that part/rule/procedure interacts causally with the rest of the system; in particular, how the rule, when embedded in this particular system, (1) affects and limits individual behavior and (2) affects broader social perception and use of that system. If modern legal systems are complex, integrated systems, then one cannot evaluate the contribution an individual part, rule, or procedure makes without considering the broader effects of that part, rule, or procedure on systemic epistemic quality.

Presumably not much needs to be said to defend the claim that modern legal systems are complex, integrated systems. The support for the second claim relies on the idea that legal systems structure individual behavior through legal procedure, and that they do so in ways that have important effects on what people come to believe and know, who they defer to and trust and why, and what actions they take based on what they believe and know. Legal systems and legal procedure have significant causal effects, and some of those effects are epistemically significant. But the way in which those effects are caused is the result of the full complex interaction among the various parts of the system. Some examples might illustrate the general point.

Start with the issue of whether purely statistical evidence can permissibly or appropriately be the sole sustaining basis of a criminal conviction. A classic case in this debate involves a planned prison riot:

> 100 prisoners are exercising in the 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 (Redmayne 2008).

It is usually stipulated that no further relevant facts about the case could ever be learned. The question commonly asked: would it be permissible to convict and punish a prisoner chosen at random from the group of 100 prisoners exercising yard? The thought motivating an affirmative answer is that, for any randomly chosen person, it seems that there is a 99/100 chance that the person chosen is guilty. This would seem to license 99% confidence or .99 credence in the proposition that this randomly chosen person was involved in the attack. This is surely much higher than our confidence in many cases in which conviction even with a "beyond a reasonable doubt" standard seems appropriate, despite our confidence in those cases being supported by elaborate cases that have been built against particular individuals, involving things like eye-witness testimony, grainy video footage, strong motive, lack of a compelling alibi, and so forth. If one questions this, one could simply increase the people involved, so that it is 1000 prisoners and 999 of them are involved in the attack. Still, for many, there seems to be something misfiring if we move from statistical, "non-individualized" evidence of this kind to conviction, with nothing else.

There have a number of suggestions made by epistemologists, discussing a variety of narrow, epistemological explanations for our discomfort: that statistical evidence alone in cases like these results in beliefs that are "unsafe" (Pritchard, 2015, 2018); that statistical evidence of this kind supports very high credence but not belief, and it is belief that is tied to our practices of blame and punishment (Buchak,

2014); and/or that criminal conviction requires knowledge and that bare statistical evidence can't confer knowledge, perhaps for one or more of the foregoing reasons.[7]

I won't address all of these here. But considering one such explanation is illustrative of the importance of a holistic approach. Consider the concern that bare statistical evidence is unsafe and that unsafe beliefs can't support a criminal conviction (either because they can't constitute knowledge and knowledge is required for conviction, or for some other reason). In developing the concern about "safety," Duncan Pritchard focuses on the question of how close one was to being in error using the method in question to form a belief about the proposition in question. In this kind of case, belief that the randomly chosen person was involved in the attack is not "safe," because it could easily be wrong using this 'method' (relying solely on this statistical evidence) of forming a belief. The possible world in which one is wrong while using this method is distressingly "close." Pritchard notes that although low statistical likelihood and modal distance usually go together, that is not true in lottery cases (the world in which I win the lottery isn't much different from the millions of worlds in which I don't), nor cases like this one.

Even if focusing on safety is not a mistake, it is a mistake to think this presents a distinctive concern for statistical evidence. Perhaps we should always be worried about whether our beliefs relevant to criminal conviction are safe. Let's suppose so. Once we accept this, we should see many other forms of evidence that are central to the criminal justice system as also potentially generating or supporting belief in an unsafe way. Physical evidence gathered at the scene, eyewitness testimony, police testimony, testimony from cooperating co-defendants, even confessions[8] from criminal defendants themselves—all can go wrong in worlds that are very close to our own. Indeed, we know that they lead us to error in many cases in our actual world. What appears starkly in these statistical evidence cases is not the statistical nature of the evidence, but the bareness of it, the isolation of it. With no corroborating evidence, no further testing, cross-examination, attempts at evidence gathering, and so on—no other parts of an epistemic system to support or test the statistical evidence—relying on the evidence does seem unsafe. This shouldn't lead us to question statistical evidence in particular, however. There is no asymmetry between statistical evidence and other evidence in this regard. If anything, it highlights that we should be less confident in and unwilling to convict on the basis of the beliefs formed in all these other ways, at least if they are supported in a relatively bare way by evidence of any of these statistical or non-statistical kinds.

It might seem that there remains an asymmetry: it is easier to "fix up" the epistemic system to make use of these other kinds of evidence a route to safe belief; not so with statistical evidence.[9] But this is false. The only reason statistical evidence appears different in this regard is because the cases under discussion involve *stipulating* that no "fixing up" can be added to the statistical evidence cases. If we were to add in extra checks and methods, interviewing people who were there or who were present at the relevant planning discussions, allowing those who argue they were innocent to testify and be cross-examined, perhaps examine detailed logs or recordings of who would have been where at what times (including at the times at which the riot plot was supposedly hatched), consider past evidence regarding grudges toward correctional officers, and so on, relying on the statistical evidence as part of this larger

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[7] For discussion of whether criminal conviction requires knowledge, see Gardiner (forthcoming), Littlejohn (2017), Moss (2018, chapter 10), Ho (2008, p. 116), Lackey (2021), Moss (2020).

[8] See Lackey (2020).

[9] A particularly strong claim here would be that methods of belief formation that rely on statistical evidence are "inherently" unsafe, whereas other methods are only unsafe under particular circumstances, as it is in the nature of statistical evidence that it leaves open close possibilities of error. (Thanks to Aidan McGlynn for mentioning this possibility.) It strikes me that a method that uses statistical evidence is only 'inherently' unsafe in a distinctive way here if the method relies in a bare or isolated way on the use of statistical evidence. If the use of statistical evidence is supplemented with other sources of evidence and methods of checking and investigating further, then that method will not be inherently unsafe or inherit any "inherent" unsafety (at least no more than any other method).

account no longer seems as troubling.[10] If we continue to find it troublingly unsafe—as perhaps we might, and perhaps we should—we should see ourselves in more general trouble. On this view, these discussions of the importance of safety, sensitivity, what supports high credence versus what supports belief, whether knowledge or only justified belief is required for conviction, whether one must rule out relevant alternatives and what doing this requires—these are all useful, but most usefully considered as questions that should be applied to the epistemic system as a whole. Perhaps they should be explicitly included as part of ACCURACY or as distinct important epistemic aims of the full epistemic system. But if we were to do that, this requires thinking about how the system as a whole is working together to produce safe beliefs, or to support belief and not just high credence, or to rule out relevant alternatives as required, and so on. And this generally can't be done just by looking at a particular question or element—such as the question of whether statistical evidence should be allowed.[11] The point of the holistic picture, then, is not these other epistemological explanations are always wrong; it is that they are incomplete. More needs to be said about why forming beliefs "in this way" in cases like these is unsafe, or non-sensitive, or can't support belief, or can't support knowledge. The 'method' concerns the full legal procedural system, the full epistemic system. That's why the story about the whole epistemic system is important.

A distinct consideration might also be at play in some of these statistical evidence cases—a reluctance to offer a quantified measure of what is required in terms of confidence or justified credence in order to sustain a criminal conviction that satisfies the "beyond a reasonable doubt" threshold. This brings us to our second example of the importance of a holistic approach to considering questions in legal epistemology.

Consider, first, the fact that in almost all cases not involving bare statistical evidence, there is no easy way to offer a realistic, precise quantification of the confidence one has in the belief that the relevant triggering conditions obtain with respect to a particular individual. After encountering a complex mix of physical evidence, eyewitness testimony, evidence concerning alibi and opportunity, and evidence concerning motive, one cannot sensibly say that one has exactly 84% or 93% or whatever confidence that the defendant in question committed the crime, or that one should have credence .84 or .93 that the defendant committed the crime, etc. One might be able to say that one is completely certain, or very confident, or confident, not very confident, or not at all confident, and one might be able to attach rough percentages or credences that correspond with these levels. But ending up with a precise degree of belief or credence or numerical confidence level will be to offer something of a fake mathematical precision. And that would be true even if we only had a single piece of isolated physical evidence or one bit of eyewitness testimony. In almost all real-world cases, there is no neat translation from the evidence we have to a precise mathematical representation of either what our actual confidence level or degree of belief will be or what it epistemically ought to be (even if we sometimes pretend there is some precise degree to which a bit of evidence confirms some hypothesis).

But this is not so in the case of pure statistical evidence cases. In such cases, given the stipulations involved, we do have this kind of precision. We can say that our degree of belief that this person was involved in the riot is .99, or that we are 99% confident that they were involved, or that our credence that X was involved is .99, etc. This starts to put pressure, then, to say how high that precise number has to be in order to support conviction. Is 99% enough? What about 99.99%? Surely, we can't expect more than that?

This line of questioning puts direct pressure on us to *answer* the question: how confident must one be, what degree of belief is required, in order to be above the required "beyond a reasonable doubt"

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[10] For discussion of the importance of an evidential narrative account for justification in the context of criminal convictions, see Lackey (2021).

[11] It is plausible that a few practices—fabrication of evidence, forced and coerced confessions, etc.—will always be epistemically pernicious, or we might redescribe elements to include enough of the systemic context so that they will always be pernicious. But most practices will require broader systemic perspective in order to evaluate them.

threshold? Most judges and official legal interpreters have refused to specify a precise number.[12] A reason for concern regarding specifying a precise number is that specifying a precise minimum threshold—something in the 95-99% or above range—might have significantly bad consequences for ACCURACY, DEFERENCE, and LICENSING ACTION, by affecting how other parts of the epistemic system will function. Defining a specific numerical target for the 'beyond a reasonable doubt' standard would have significant upstream and downstream consequences for an epistemic system as a whole.

Consider a situation in which conviction is sustained for a person chosen at random from the group of 100 prisoners in the initial prison riot case, based solely on the statistical evidence, on the grounds that there is a 99% chance or a justified .99 credence that the person chosen was involved. Call that Prison Case #1. Now imagine that there is a similar case two years later, but in that case, there could be further investigation that might turn things up. It's a normal case, not a stipulated case. Maybe they've put up some more cameras somewhere or they could learn something from interviews or records of prisoner locations. In this Prison Case #2, would it be permissible to convict a person chosen at random from the second group of 100 prisoners? Pressure to say 'yes' comes from the idea that a statistical threshold has been established and this is above that threshold. Treating like cases alike and respect for precedent both seem to suggest the cases should be treated similarly. If this were accepted, police investigators and prosecutors could feel that they have done enough, could present that evidence and the relevant standard to the jury, and the jury would seem to have enough to sustain a conviction. They could put pressure on people to take plea deals or to confess, because of the evidence against them. What pressure is there to investigate more, once that threshold has been met or crossed? This 'investigation stopping point' threshold might have significant potential costs with respect to ACCURACY and also DEFERENCE and LICENSING ACTION, particularly as cases expanded to include thresholds in DNA cases, market share cases, and other contexts in which there is some source of evidence that can be quantified and shown to meet a specific threshold.

Now, it is possible that an epistemic system could both have a precise, quantified conviction threshold and allow challenges to be made regarding whether that threshold has been met, even in cases in which bare statistical evidence is all that supports conviction. There could be procedural rights allowing representatives for the randomly chosen person to push back, to argue that—perhaps because of distinctive individualized evidence—he is not properly considered a part of the 100-person group (because there is video showing him not taking part, the logs of prisoner locations are ambiguous in his case, etc.). Having those mechanisms in place would mean that, in some cases, one could still hope for relative safety, ACCURACY, and so on. But there would of course be other cases in which no helpful evidence emerges. And specifying precisely what is required for the beyond a reasonable doubt standard might dramatically shift who is brought into the law's ambit, who has a compelling initial case against them that requires representation to rebut, who has to be 'lucky' in having evidence that helps exonerate or individualize them, who will feel pressured to take plea deals, and so forth.

There would also be follow-on effects of precisely quantifying beyond a reasonable doubt in cases in which no statistical evidence was involved. If in statistical evidence cases a 97% threshold were deemed sufficient, that would affect how future investigators, prosecutors, judges, and jurors will view and present the evidence before them. There start to be concerns about psychological effects of allowing convictions in cases in which evidence suggests a .97 likelihood or in which people are 97% sure, rather than completely sure, given how human beings actually operate. This might plausibly lead to more convictions in cases in which the facts don't actually merit it, worsening ACCURACY and other epistemic aims.

None of this is decisive. It could still be that we should allow statistical evidence on its own, and perhaps we should try to quantify beyond a reasonable doubt and other similar standards. The point here is that in thinking through these issues, we should be considering the broader systemic effects of our decisions and suggestions.

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[12] For discussion of the history of this and other standards in law, see McCauliff (1982).

IV. A Systemic Approach

We need a systemic approach and broader systemic understanding of legal process. This is not easy to achieve. It might be worth thinking about many different kinds of social epistemic systems and considering what stages or elements they have in common. Here, I will briefly take up that task with respect to systems of legal procedure.

Part of this work will involve identifying what sub-aims, elements, and processes are needed in a given context for an epistemic system to do well in terms of overall epistemic quality. For legal systems that divide epistemic labor and create distinctive roles for individuals within the legal procedure, there might be questions regarding what systemic elements are in place to help those individuals:

- to produce and acquire relevant particular and general knowledge through processes of discovery and investigation;
- to be able to identify reliable, expedient sources of evidence and testimony;
- to be able to engage with and draw from diverse sources of knowledge and evidence, including extant technical, esoteric, and expert knowledge;
- to appropriately assess, weigh, and evaluate complex bodies of evidence;
- to organize and disseminate evidence and knowledge so that it is readily available and appropriately salient for decision-making purposes

There are different ways to structure institutions and systemic roles in order to achieve these ends, but many modern legal systems have a similar basic structure. In many modern contexts, there is also significant procedural segmentation between the context of government action being taken against particular individuals and the context of disputes between private individuals. I will focus on the rules, structures, and practices governing government action against individuals, which are generally oriented around accuracy concerning whether legally relevant triggering conditions obtain in particular cases.

The first component of this basic structure: targeting and case initiation. Focusing on the cases of government action against individuals, we can ask: What are the rules and processes by which a legal case becomes initiated and targeted toward a particular individual? How do the general laws in place come to be enforced in particular cases against particular individuals? These include rules governing *who* is able to and responsible for initiating a case against particular individuals (police, prosecutors, individual citizens, etc.), *on what basis* a case can be initiated (mere allegation by anyone that certain elements or triggering conditions are satisfied, some standard such as probable cause to arrest, etc.), what *evidence* must be supplied to prove that this basis is present in this case, what *stages* are involved in initiating a case (allegation, arrest, court order, temporary order, detention, etc.), what *investigative powers* are available to monitor or investigate people prior to explicitly or publicly targeting them (powers and rights regarding search and seizure, warrant requirements, surveillance powers, subpoena or compelled production powers, etc.), what targeted individuals can do to *prevent* being targeted or *respond* to inapt targeting (sanctions for frivolous lawsuits or charges, provision of legal fees for those wrongly charged, etc.), and what protections targeted individuals are entitled to (legal representation, employment protection and childcare to minimize the harm of simply being targeted and detained, etc.). We can think of this as the systemic machinery involved in shining a spotlight on particular individuals and bringing someone into the legal system. How does it work? What limits are in place? What are the incentives at play affecting the behavior of those empowered to initiate cases? How are those people selected, trained, monitored, evaluated? What is in place to make the targeting likely to be accurate? Very little of any of this has been the focus of legal epistemological discussion, although it obviously has great bearing on overall accuracy, how presumptions and burdens of proof should be set, and much else.

A second core component of the legal epistemic structure: the investigative apparatus. This straddles the pre- and post-targeting phases, as there will be investigation that takes place prior to the decision to target a particular individual and initiate a case against them, as well as investigation that

continues after that has happened. There are rules and practices governing who is involved in investigation, how those people are selected and trained, what their incentives are (how they are evaluated, promoted, etc.), what they are empowered to do, what resources they have at their disposal, and what constraints they must observe. There are also rules and practices concerning the mechanics of investigation. How do investigations start, what is typically done and in what order, to what extent do investigators typically rely on physical evidence, eyewitness testimony, expert testimony, testimony from confidential informants, testimony from cooperating co-defendants, interrogations and confessions? How is physical evidence obtained, tracked, and evaluated? How is testimony obtained, recorded, presented, and assessed? The details matter, but, in the criminal context, for example, much of this process takes place through complex, often partially shrouded interactions between police departments and prosecutors' offices (with added complexity resulting from internal structure, assignments, priorities, and incentives within each of those). And there are similar intricacies regarding how investigation happens in the context of enforcement of immigration law, child protective services, and involuntary commitment on grounds of mental health. This context, in particular, is one that requires knowledge and understanding both of the official rules and guidelines, and how those actually are observed and implemented in practice, suggesting the need for engagement with those who engage in empirical study of legal actors and legal institutions. Again, with a few exceptions (Lackey (2020), for example), epistemologists interested in law have mostly not focused on the investigative process, let alone considering the details of actual legal practice. As a detailed social epistemic set of practices, however, there is much to discuss and consider. Every modern legal jurisdiction has detailed rules concerning the collection, storage, tracking, testing, retention, and destruction of physical evidence, including rules regarding so-called "chain of custody" documentation and "destruction memos" in cases in which evidence must be destroyed. There are similar detailed rules governing interrogation, solicitation and use of testimony from confidential informants, and much else. Although interesting and epistemically important in their own right—particularly when one thinks about considerations like epistemic safety, possibility of review and appeal, and how to affect the complex incentives of epistemic agents—these practices also are interesting and suggestive when contrasted and compared to other non-legal social epistemic practices.

There are rules and practices governing what happens prior to any kind of official trial. In most cases in the criminal context, almost everything happens prior to trial. Few cases actually go to trial. Negotiations concerning plea bargains of various kinds are common, with prosecutors often pursuing aggressive strategies with respect to what charges they are bringing against defendants, and many defendants accepting plea deals. In the United States, for the last several decades now, around 90-95% of state and federal felony convictions have been the result of plea bargains.[13] Trial procedure, including all the complex rules of evidence, the rules governing burdens and standards of proof, and everything else, never directly applies in the vast majority of cases. The familiar view is that these things still matter, albeit indirectly, because plea bargaining happens in the "shadow of trial" so that the rules that would govern trials affect how and why people take plea deals. But Stephanos Bibas (2004, 2012) and others have convincingly shown that this 'shadow-of-trial' model is more fiction than fact. Instead of having an informed view of what might happen at trial, based on understanding and knowledge of those rules and likely outcomes given those rules and the evidence in the case, and making a decision to accept a plea deal in the shadow of that, defendants often face a very skewed decision situation in which many other factors drive their decisions. These factors include the quality of legal representation defendants have, structural influences affecting lawyers on both sides (including caseload, reputation, connections, ability, and politics), wide charging discretion on the part of prosecutors and dramatic potential sentences that can be wielded to rationally force plea agreement, the length and cost to defendants of pretrial detention along with the high cost of bail, and rules that limit how much defendants are told about the evidence against them and that even allow deception on that score. Bibas (2004) also draws attention to the importance of psychological factors including loss aversion, risk preferences, framing, and anchoring dynamics that also serve to skew bargaining outcomes and which are known and exploited by prosecutors and (in some

[13] For discussion, see Bibas (2004), 2465-67.

cases) even an individual's own defense attorney. Some of these might seem outside the purview of legal and social epistemologists, but it is important to understand and potentially criticize these practices and systemic influences, as they have a dramatic effect on ACCURACY and other epistemic aims of the system. Indeed, given the above, if one is really interested in legal procedure as an epistemic system, practices of plea bargaining should be at the forefront of our attention, and most questions about other rules and practices should be framed in terms of the potential effects on actual plea-bargaining practice. Bibas (2016) and others have made suggestions about how to improve "factual, moral, and legal" accuracy in the plea-bargaining system, given that it has now largely supplanted the jury trial as the main process in place that might ascertain whether triggering conditions obtain in particular cases, but legal epistemology is nearly silent concerning plea-bargaining. This strikes me as akin to the situation concerning the epistemology and philosophy of science prior to the shift to consider the values, biases, and institutional structure of science and scientists.

Despite this shift, trial rules and procedures of course also remain important components of the overall epistemic system. These include the different actors and roles within the trial context—government lawyers/prosecutors, defense lawyers, jury members, judges—and how those roles are defined. Is there an adversarial system, with a judge overseeing an adversarial presentation and discussion of arguments and evidence that will be evaluated in large part by a citizen jury? Or an inquisitorial system, with the judge serving a prominent investigative and fact-finding role? How are jury members selected? How are judges and the various lawyers educated, trained, selected, and empowered in the trial setting? There are important issues of trial structure and epistemic responsibility (e.g. prosecutor case-in-chief, defendant case-in-chief, rebuttal, sub-rebuttal, motions for judgment as a matter of law or judgment of acquittal, closing arguments, jury instructions from judge, etc.), burdens of production (requirements to produce evidence sufficient to establish particular facts), burdens of persuasion on particular issues, presumptions covering different kinds of facts, and burdens of proof. There are different potential standards of proof—the degree of confidence the factfinder has to have in the correctness of the relevant propositions at issue to support a vote in a particular direction—including things like "preponderance of the evidence," "clear and convincing evidence," and "beyond a reasonable doubt," that can be explained and defined in more or less specific terms and applied to cover different components of the case. There are complex rules of evidence governing the presentation and admissibility of evidence at trial—things like rules governing relevance, testimony (hearsay, competence), expert testimony, authentication and exhibition of physical evidence, confrontation and cross-examination, and much else. There are evidentiary privileges that limit some potential sources of evidence—lawyer-client, doctor-patient, marital, executive/official, privileges against self-incrimination. If there is a jury, there are rules governing what questions go to the jury, how jury deliberation is to proceed, how large the jury will be, how many votes are required to convict, and so on. And, for all of these, there are debates about the background justification of the rules in question. Some of these justification concern epistemic aims; others are more complex, perhaps more related to moral constraints and considerations of various kinds—something I will turn to in a moment. These rules and practices have been much more the central focus of legal epistemologists,[14] although even so there has not been enough attention paid to broader systemic considerations.

Beyond the initial trial, there are also in many cases stages of appellate review and rules governing what can be reviewed, what has to be shown by the person seeking review, what the standards are that a reviewing court will use, and so forth. Perhaps even more than with the trial in relation to plea-bargaining, appellate review casts a significant shadow over the initial trial, as lawyers and judges keep in mind what issues and questions might be challenged on review.

Finally, throughout all of this extended and elaborate legal procedure, there is a question of legal representation. In most modern legal systems, individuals targeted by the government might be represented by legal counsel throughout many of the above stages. There are questions about whether there is a right to have legal representation, and whether that right extends to the right to have a lawyer

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[14] For a very helpful survey of and introduction to much of this work, see Gardiner (2019).

paid for by a public fund if one cannot afford to pay a lawyer. In that latter case, there is a question of where those funds come from, and in all cases there is a question of quality oversight and quality thresholds. There are questions about the scope of representation: what role is a lawyer supposed to serve, when does legal representation begin, how involved are they during the investigative and plea-bargaining stages, and so on. There are rules governing what lawyers are legally and ethically allowed to do. There are obviously important practical questions concerning how lawyers are trained and educated, how they are selected and hired, how they are evaluated and monitored, and what incentives they face. All of this has important epistemic implications, as the complexity of law and legal process means that ordinary people are poorly placed to represent themselves or make an effective case, whatever the underlying facts might be. Without effective and broadly available legal representation, we should expect a system to do relatively poorly by all of ACCURACY, DEFERENCE, and LICENSING ACTION. Unfortunately, given the woefully inadequate funding of publicly provided legal defense in most places, including the United States, this is what we see, as rushed and harried public defenders do not have time or resources to do well by their clients, and the accuracy of the system suffers as a result. (And that is just to focus on indigent criminal defense, not even considering the absence of state-provided counsel in the vast majority of immigration cases, termination of parental rights cases, and involuntary commitment cases.)

V. The Moral/Epistemic Interaction in Social Epistemic Systems

Legal procedure is often viewed in non-epistemic terms, as protecting *moral* rights that individuals have—in the criminal context, for example, to know what they are being charged with, to know the evidence against them, to contest those charges in a trial of some kind, and so forth. I've suggested that these rights, rather than being fundamental interests themselves, are there to protect other fundamental rights and that doing so effectively is intimately connected to epistemic considerations of accuracy. Further complexity emerges, however, as we see these moral considerations interact with epistemic ones throughout the system. Indeed, some might view legal procedure as not really an epistemic system at all, because of the ways in which morality intrudes.[15] Although moral considerations do play a large role in limiting and structuring the epistemic system, I want to suggest that this is true of any social epistemic system. Legal systems are not unusual in this regard. All social practices—even epistemic practices—involve actions, and actions are governed by moral considerations, even when they are motivated by epistemic ones. Legal procedure actually provides a useful example of this moral/epistemic interaction and how that interaction might be structured and regulated.

Legal procedure is suffused with examples of places where a moral line is drawn that makes off-limits something that might be epistemically valuable and improve ACCURACY. A straightforward example of this is the so-called "exclusionary rule" present in the United States, which excludes evidence obtained in an illegal manner (typically, in violation of the Fourth Amendment rules regarding search and seizure) from being admitted in a criminal trial. The Fourth Amendment to the U.S. Constitution prohibits unreasonable searches and seizure and sets out requirements for obtaining search warrants. The justification here is straightforwardly moral, not epistemic, concerning privacy rights and rights against government intrusion and surveillance. The exclusionary rule was developed by the Supreme Court as a way of more effectively enforcing the Fourth Amendment protections.[16] There are exceptions—if the evidence would have inevitably been discovered despite the 'tainted' source, if the chain of causation between the illegal action and the tainted evidence is too attenuated, if the state officials were acting with the good faith belief that they had a valid warrant—but in general this rule serves to keep out much evidence that might be epistemically valuable on the grounds that doing so has a broader moral

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[15] For a sustained argument that accuracy is the proper aim of legal process and that these moral considerations are typically misguided or undermotivated intrusions, see Laudan (2006).
[16] Weeks v. United States (1914).

importance. That is also true of the more primary privacy-protecting rules against unwarranted government search and intrusion.[17]

There are other examples of moral considerations entering in to limit the availability of epistemically useful evidence. Consider the so-called "marital" or "spousal" privilege, which allows one spouse to refuse to testify against his/her defendant spouse, and which protects private communications between spouses during the marriage from being compelled and introduced as evidence. The justification for this rule is debated, but it is not epistemic, and is plausibly moral—stemming from the importance of a realm of privacy within a marriage and/or an assumption that it is too much morally to ask one person to act against their spouse. Similar "privileges" exist—with some important limitations—between doctors and patients, lawyers and clients, and other relationships whose value would be compromised or undermined if there was no way to communicate openly in private confidence. Other examples of moral/epistemic interaction—perhaps more controversial regarding their epistemic benefit—include the restriction on "hearsay" testimonial evidence and the use of "character" evidence, both discussed at length by Ho (2008).

Some of moral/epistemic interactions in legal procedure are more naturally seen as relating to LICENSING ACTION, rather than ACCURACY. For example, requiring higher thresholds for criminal convictions—beyond a reasonable doubt, rather than mere "clear and convincing evidence"—is a way of limiting what action is licensed by even very strongly evidentially supported beliefs. Those involved might have beliefs that are just as accurate, but there is a moral, non-epistemic reason for wanting our errors to fall on one side—acquittal of the guilty—rather than the other—conviction and punishment of the innocent. Arguably, this doesn't affect epistemic evaluation of beliefs formed based on a set of evidence—whether those beliefs are justified, whether they constitute knowledge, etc.—but it does limit what actions can be taken on the basis of the beliefs that are based on that evidence. This is a way of understanding the "beyond a reasonable doubt" standard that interprets it as something other than an example of "moral encroachment"—where the more serious moral stakes (criminal conviction and punishment) alter epistemic facts about justification or knowledge. Instead, here the level of evidential support or justification doesn't affect whether a belief is justified or constitutes knowledge, but it does affect the "scope of use" of the belief, rendering it "unactionable" as the basis for criminal punishment, for example, because of the greater moral significance.[18]

Although these legal examples are significant, they are not unusual or aberrational. Any social epistemic system will interact with morality at various turns, as practices of investigation and inquiry run into moral rights and moral considerations. Consider the ethical limitations placed on scientific, medical, and other academic research, which require detailed review of proposed experiments and informed consent on the part of those affected by the research. Some have argued that unethical research should not be used or published.[19] These debates look very much like the debates concerning the exclusionary rule and its limitation of the use of illegally obtained evidence in law. At a less systemic level, we see similar complicated interactions between the moral and the epistemic in the context of privacy, trust, and deference and interpersonal relationships such as friendships or family relationships. Those interested in social epistemic systems and practices might be able to both draw on what is done in law, and to inform reforms to law concerning the interaction between moral and epistemic considerations.

VI. Conclusion

As should be evident, a systemic approach to legal epistemology and to the evaluation of elements of an epistemic system requires significant investment in time, engagement with relevant empirical literature, and a more realist, "non-ideal" approach to social epistemology so that one might see

[17] For extended discussion of the law of criminal procedure and evidence in the U.K., including discussion of analogous moral/epistemic interactions, see Roberts and Zuckerman (2010).
[18] For extended discussion, see Guerrero (2021).
[19] For helpful discussion and overview, see Higgins et al. (2020).

surprising or unanticipated effects of various rules and practices as they are put into place by imperfect human beings in specific social contexts. I hope the likely benefits are similarly evident. One significant benefit is simply in drawing attention to epistemological questions and issues that might not otherwise have received much attention: interrogation techniques and conversational deception, testimonial incentives and the use of confidential informants, practices regarding striking potential jurors from the jury pool and attempting to curate a non-biased pool of evaluators, the benefits of structured cross-examination practices, and much else emerge as important as one considers the broader epistemic system. Perhaps even more significantly, a systemic approach improves the quality of our evaluations of particular epistemic elements, as we attempt to understand the full epistemic effects of specific rules, practices, and institutions.

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