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ESSAY

EXPLANATION IN LEGAL SCHOLARSHIP: THE INFERENTIAL STRUCTURE OF DOCTRINAL LEGAL ANALYSIS

W. Bradley Wendel†

INTRODUCTION

Consider a type of argument that is familiar in legal scholarship, such a commonplace in fact that its structure may lurk unnoticed in the background by the reader. The argument proceeds like this: (1) Here is some legal doctrine or rule; (2) courts and scholars (or at least my rivals) tend to think that its point, rationale, purpose, or function is $X$—that is, the doctrine is "all about" $X$; (3) but I think they're mistaken, and the doctrine is really "all about" $Y$; (4) here is some evidence supporting my claim; (5) therefore, we should understand the point of this rule or doctrine as $Y$. As an example of this pattern of argument, take a recent paper on the consideration doctrine in contract law. In a classic article, Lon Fuller argued that the consideration doctrine aims to accomplish three purposes: to provide evidence that a contract was entered into, to slow down the contracting parties and cause them to memorialize carefully the terms of their agreement, and most importantly to channel the interactions of parties into legally effective transactional forms.¹ Two modern authors claim, however, that the consideration doctrine "lack[s] a sound theoretical justification."² Under this argument, received wisdom among contracts scholars is mistaken; the distinction between promises that will be enforceable without consideration and those that are legally unenforceable should actually be understood as a way to make anticommodification norms more robust. That is, treating certain kinds of promises as market transactions violates social taboos.³ The consider-

† Professor of Law, Cornell University. Thanks to participants in faculty workshops at Cornell and the University of Southern California for feedback. Scott Altman, Alexander Capron, Ori Herstein, Greg Keating, Oskar Liivak, Jeff Rachlinski, and Gideon Yaffe provided particularly helpful comments. I am also grateful for the research assistance of Sarah Horsch.

¹ See Lon L. Fuller, Consideration and Form, 41 COLUM. L. REV. 799, 800-03 (1941).
³ See id.

1035
ation doctrine therefore should be understood in terms of the value of anticommodification, in the sense that requiring consideration for certain types of promises and not others reinforces the social norm that some promises should not be given the same legal significance as arms-length commercial transactions.4

This Essay is aimed at understanding what kind of logical inference underwrites the conclusion that some area of law is "all about" some end or value. It is a contribution to the metatheory of law—that is, it is a theory about what makes theories more or less acceptable. To put it another way, it is an account of explanation in law. The inferential move analyzed here is familiar in legal theory, yet it is ironically undertheorized by those who employ it. This Essay therefore draws from the resources of the philosophy of science, in which the methodology of inference to the best explanation (IBE) has been thoroughly analyzed.5 The analogy with scientific explanation does not depend on a close correspondence with the methods of the empirical sciences. I am not trying to make some kind of Langdellian claim here that the analytic techniques of legal thought are essentially scientific, although I do think many legal scholars are unwittingly continuing the Langdellian project. (More specifically, there may not be as much theoretical space between Langdell and Dworkin as legal scholars generally assume, a point to which I will return later.) Rather, the reason for invoking IBE in science is to suggest that legal scholarship, in its effort to render some area of law intelligible by positing an explana-

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4 See id. at 1322.

EXPLANATION IN LEGAL SCHOLARSHIP

6 Salmon, Four Decades, supra note 5, at 126–29. See Philip Kitcher, Explanatory Unification, in Theories of Explanation, supra note 5, 167, 169–70 (taking the domain of scientific theories as responses to “explanation-seeking why-questions”). I am taking this question as the starting point, as opposed to beginning with other problems, such as what we mean by scientific knowledge, in order to avoid numerous issues that are essential to the philosophy of science but not relevant to this inquiry into the metatheory of law. An example would be the debate between scientific realists and critics like Bas van Fraassen over whether scientific theories need only be empirically adequate or whether they must be believed to be true. See van Fraassen, supra note 5 at 9–13; Salmon, Four Decades, supra note 5, at 135–38. Another issue not germane to metatheory in law (and also explored by van Fraassen) is the symmetry between explanation and prediction. See, e.g., Bas C. van Fraassen, Laws and Symmetry 86–88, 292–317 (1989).


8 For Dworkin’s principal contributions to the metatheory of law, see generally Ronald Dworkin, Law’s Empire (1986) [hereinafter Dworkin, Law’s Empire] (critiquing legal positivism); Ronald Dworkin, Hard Cases, in Taking Rights Seriously 81 (1977) [hereinafter Dworkin, Hard Cases] (describing the questions judges must ask themselves in order to determine the rights of litigating parties in difficult cases). For a particularly clear state-

EXPLANATION IN LEGAL SCHOLARSHIP

tion, tacitly appeals to criteria for inferring to the best explanation. The arguments back and forth about the theoretical justification of some doctrine are actually appeals to these criteria for theory selection. The overall strategy of this analysis is to derive conditions of explanatory adequacy from the answer to the pragmatic question, “what good are explanations?” This Essay aims to begin with this question in law—“what good are legal explanations?”—and proceed from there through some foundational issues in jurisprudence, such as the autonomy of legal reasoning, the objectivity of law, and the role of morality (if any) in the explanation and justification of law and legal authority.

While a few scholars have given attention to these methodological considerations in different areas of law, so far the metatheory of the dominant style of legal doctrinal analysis has not been well developed. An important exception, discussed at length below, is the literature on Ronald Dworkin’s interpretive theory of law. Dworkin faces

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the metatheoretical question squarely but resolves it in a way that many legal scholars do not accept, for he insists that an interpretation of law must both fit with past political decisions and justify the decision in terms of the community's morality. If legal scholars reject the Dworkinian approach, however, they have the burden of articulating different criteria for theorizing legal explanation. Dworkin has an answer to the question, "what good are legal explanations?" His answer has to do with the authority of law—that is, with connecting jurisprudential issues about the nature and validity of law to the role of law in constituting political communities. Any adequate metatheory of law must similarly connect an account of legal explanation to such broader concerns.

This Essay considers only a certain type of legal–doctrinal explanation. The concern here is with explicit or tacit claims that some rule or area of law is intelligible in light of some end, organizing principle, or some consideration of social policy. This plainly excludes empirical scholarship that uses established social science methods. Whatever one might say about the usefulness of empirical legal studies, the style of scholarship that creates a methodological puzzle for legal scholars is one that is not based on observation and data analysis.

See Dworkin, Law's Empire, supra note 8, at 96–98.

See id. at 87–113.

Cf. Lee Epstein & Gary King, The Rules of Inference, 69 U. Chi. L. Rev. 1, 9–4 (2002) (noting that even doctrinal work includes empirical arguments). As discussed in section II below, statistical explanations such as those offered by empirical legal scholars are a recognized subset of scientific explanation. However, the inferential methods under consideration here are, at best, only analogous to explanation in the natural sciences and empirical social sciences.
My concern is also not with what I will call frankly normative arguments. A frankly normative argument is one that asserts that some desirable state of affairs will be brought about if the law is understood in a particular way, or possibly reformed along certain lines. Consider a hypothetical paper one might encounter, arguing that the separation between investment banks and commercial banks created by the Glass–Steagall Act of 1933 should be reimposed because doing so would mitigate conflicts of interest that potentially expose depositors to excessive risks. The argument in that paper explains the proposed law instrumentally, with reference to some external end (reduction of risk), and argues that the law would be justified to the extent it accomplishes that end. It also assumes some intentional intervention by legal officials—in this case, passing new legislation.

The most important distinction between frankly normative arguments and those considered here, however, is that doctrinal legal analysis, by its very nature, concerns itself with rhetorical practices that are internal to law, avoiding reliance on extralegal normative considerations. Frankly normative arguments are also explicitly intentional. As discussed below in connection with functional explanation, intentional acts are easy to explain in terms of an end state and an agent’s desire to bring it about. When combined with extralegal normative considerations (such as efficiency or justice), legal scholarship that is frankly normative can be explained on a fairly standard pattern. One simply shows that the author believes a particular change in the law would do well at bringing about some desired end.

By contrast with the hypothetical paper appealing explicitly to extralegal concerns, the sorts of arguments I am concerned with here are not aimed at guiding the intervention of legal officials, at least not

12 The word “frankly” is important to differentiate these arguments from what may be a tacit appeal to normative criteria in the type of argument considered here. To use a term that was somewhat more current a decade or two ago, one might refer to frankly normative arguments as pragmatic. See, e.g., Symposium, The Renaissance of Pragmatism in American Legal Thought, 63 S. CAL. L. REV. 1569 (1990); Thomas C. Grey, Holmes and Legal Pragmatism, 41 STAN. L. REV. 787, 790–91 (1989). Richard Posner, who calls himself a pragmatist, offers a brief overview and history of pragmatism in American law. See RICHARD A. POSNER, So What Has Pragmatism to Offer Law?, in OVERCOMING LAW 387, 387–95 (1995).

13 The decline of doctrinal legal scholarship has been noted for a long time. See, e.g., Harry T. Edwards, The Growing Disjunction Between Legal Education and the Legal Profession, 91 MICH. L. REV. 54, 42–43 (1992) (noting the decline of “practical” legal scholarship, which is doctrinal); see also RICHARD A. POSNER, The Triumphs and Travails of Legal Scholarship, in OVERCOMING LAW, supra note 12, at 86 (1995) (contending that “[t]he legal doctrinalists are being crowded by economic analysts of law, by other social scientists of law, by Bayesians, by philosophers of law, by political theorists, by critical legal scholars, by feminist and gay legal scholars, by the law and literature people, and by critical race theorists, all deploying the tools of nonlegal disciplines”). While I have no empirical evidence of the relative proportion of doctrinal, normative, and empirical legal scholarship, there still appears to be a market for doctrinal scholarship, as evidenced by the publication success enjoyed by many producers of it.
directly, and do not presuppose the intentional action of any human agent. Rather, they take the law as given and attempt to render it intelligible with reference to some overarching theoretical concern. Frankly normative arguments are about the justification of some legal norm. By contrast, the subject of this Essay is explanation, not justification. As we will see, however, normativity creeps back into legal scholarship in interesting ways. Indeed, a substantial goal of this Essay is to make this covert normativity explicit so that it can be dealt with on its own terms, rather than being handled indirectly under the guise of logic, coherence, or simple gut-level, quasi-aesthetic responses. There is nothing wrong with legal explanation making reference to moral concerns. In fact, it may be the inevitable result of the law’s claim to legitimacy. In order for moral reasons to be relevant to legal explanation, however, they must be incorporated into the materials of the law in some way. It may be the case that moral values can become part of law—a “social fact” in jurisprudential terms—to the extent that they play a role in the conventional practices of judicial reasoning. Thus, looking with some care at the rhetoric of legal analysis may have some payoff in terms of making progress on other theoretical debates, such as the controversy in jurisprudence over whether source-based criteria are adequate to identify valid laws.

Here are some more examples, from various areas of legal scholarship, of the arguments for which an adequate metatheory should be

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14 Cf. Coleman, Practice of Principle, supra note 8, at 28–29 (distinguishing claims that tort law ought to produce a certain outcome from explanations that refer to these outcomes as the most plausible explanation of certain features of tort law).

15 Insofar as I understand it, this may be a similar aim of a well-known critical legal studies paper, Pierre Schlag, Normativity and the Politics of Form, 139 U. Pa. L. Rev. 801, 809–11 (1991), although our approaches to the problem are quite different.

16 See Jules L. Coleman, Negative and Positive Positivism, in Markets, Morals and the Law 3, 4–5, 16 (1988) (discussing the “rule of recognition,” a standard that determines which of the community’s norms are legal ones); Kent Greenawalt, Too Thin and Too Rich: Distinguishing Features of Legal Positivism, in The Autonomy of Law: Essays on Legal Positivism 1, 16–19 (Robert P. George ed., 1996) (examining moral judgments in the context of legal positivism); E. Philip Soper, Legal Theory and the Obligation of a Judge: The Hart/Dworkin Dispute, 75 Mich. L. Rev. 473, 509–18 (1977) (discussing the relationship between the law and morality); David Lyons, Principles, Positivism, and Legal Theory, 87 Yale L.J. 415, 416 (1977) (book review). Raz argues that one should be careful with the term “incorporation” of morality into law. See generally Joseph Raz, Incorporation by Law, 10 Legal Theory 1 (2004) (casting doubt on the idea that morals can become a part of the law through incorporation). In some cases, a court or administrative agency may have discretion to consider X, and if X is a moral principle, the law does not “incorporate” X just by reiterating that an official may take X into account; in that instance, the law is merely being perfectly clear that X is not excluded. Id. at 14 (“[W]hat appears as incorporation is no more than an indication that certain considerations are not excluded.”) For Raz, the important thing is the nonexclusion of morality by law because we are all bound by morality in any event. Id. at 16–17. One may grant this point, however, and still believe there is an open question concerning the role some consideration X plays when there is not an express grant of discretion to the decision maker to take extralegal considerations into account.
EXPLANATION IN LEGAL SCHOLARSHIP

I am setting them out as the briefest possible blurb summaries of these theories, which are obviously considerably more complicated and subtle than I make them seem here. I have attempted to select works from different areas of law and with different ambitions (some dealing with one principle or doctrine, others taking on an entire legal subject), in the hopes that readers will be familiar with some of these positions and recognize the inferential structure of the arguments that these theorists offer.17 The intention here is not to suggest that these scholars are being imprecise, only that these are the types of arguments we are trying to theorize. In fact, the analysis here is quite careful, even if it is not always explicit about the underlying methodological issues.

1. Beebe on intellectual property.18 We tend to think that the purpose of intellectual property law is to promote technological and cultural progress by creating incentives for investing time and energy in creative enterprises.19 That is a mistake. In fact, the purpose of intellectual property—or, at least, what is coming to be a significant purpose of intellectual property—is to enforce social hierarchy by facilitating the construction of status-based individual and group identities, or at least to preserve the capacity of people to differentiate themselves from others through their patterns of consumption.20 Intellectual property laws can thus be explained as a means to sustain the possibility of making consumption-based distinctions in status.

2. Underkuffler on the notion of property.21 We hold multiple, conflicting ideas about the point of property law. Sometimes we see it as granting stringent protection for individual rights, but in other cases, we permit property-rights claims to yield to other public interests.22 The variable power of property rights is predictable, and justified, given the structure of property law.23 The only way to make sense of the idea of property is to see it as encompassing plural values.24 Any

17 In truth the selection principle is more like “works that came to my attention during the years I served on the faculty appointments committee, or that I otherwise ran across in the course of my own scholarship.”
19 See id. at 813 (“To be sure, the express purpose and primary effect of intellectual property law remains the prevention of misappropriation and the promotion of technological and cultural progress.”).
20 See id. at 814.
22 See id. at 64 (noting that under the operative conception of property, property law identifies protected individual interests but also recognizes that these interests change as the result of societal needs).
23 See id. at 75–84 (setting forth a model that predicts when claimed rights will and should have trumping power).
24 See id. at 16–33.
attempt at unifying the underlying values of property law is bound to oversimplify, and thus fail to explain, its subject.

3. Markovits on contract law. Contract law scholars generally take an individualistic perspective on the subject, assuming that the purpose of contract law is to promote individual freedom, protect the expectations of other parties, or promote the efficient allocation of resources (and therefore the welfare of both parties). But this misses the point of contracts. Contracts should be understood as establishing relationships of respect and recognition, a kind of community, among those who enter into them. This is true even if the contracting parties have basically self-interested motivations for entering into agreements. Thus, contract law is fundamentally all about collaboration.

4. Luban on the attorney–client privilege. The traditional justification for the attorney–client privilege is that, without it, clients will not be forthcoming with their lawyers and thus will receive less effective representation. A better way to understand the rationale behind the privilege, however, is to focus on the cruelty that would result from putting a client in the situation of either revealing an incriminating fact to her lawyer, remaining silent, or lying to the lawyer. Being required to testify against oneself—which is effectively what would happen in the absence of the attorney–client privilege—is a core instance of humiliation and violation of human dignity. Thus, we should see the attorney–client privilege as aimed at protecting human dignity.

5. Siegel on justiciability. Standing and other justiciability doctrines are a puzzle. Scholars have explained these doctrines as giving litigants a stake in disputes, or giving courts some wiggle room to avoid making socially divisive rulings (as occurred in the Newdow case on the Pledge of Allegiance). These explanations are inadequate, however, and a better understanding of justiciability would emphasize its role in ensuring that courts rule only on the legality, as opposed to the wisdom, of actions by other branches of government.

26 See id. at 1419.
27 See id. at 1420.
29 See id. at 80.
30 See id. at 81.
31 See id.
33 See id. at 87.
34 See id. at 108.
36 See Siegel, supra note 32, at 125.
6. Coleman on the tort system.\textsuperscript{37} Economic analysis is a bad explanation of tort law.\textsuperscript{38} Economic analysis says that torts is all about welfare-maximization.\textsuperscript{39} The negligence standard, for example, indicates which precautions are cost justified and which need not be taken.\textsuperscript{40} However, economic analysis fails to explain certain core concepts in tort law, such as duty, wrong, and responsibility. The rival account of corrective justice is a better explanation of tort law because it better accounts for observed features of the law (such as the duty element) and the relationship among the constitutive elements of tort law.\textsuperscript{41}

I

A Brief Overview of Explanation in the Sciences

A brief caveat is necessary before considering explanation in the natural sciences. My claim is not that science is the model of all inquiry. There are many intellectual problems that call for explanation. History, anthropology, literature, and art can all prompt the question, "what is that all about?"\textsuperscript{42} In the arts, we are accustomed to thinking in terms of interpretation, not explanation, and thus might wonder why a metatheory of legal scholarship should not focus on interpretat-

\textsuperscript{37} Coleman, Practice of Principle, supra note 8. Coleman's book is particularly interesting because he first works through methodological issues with some care and uses what I take to be an IBE methodology to defend his preferred conception of the role of tort law.

\textsuperscript{38} See id. at 23.

\textsuperscript{39} See id. at 16.

\textsuperscript{40} See id. at 14.

\textsuperscript{41} See id. at 21.

tion. Law, as a human artifact may be subject to interpretation in the same way as a work of art or a ritual like a rain dance. As the following discussion makes clear, I do not argue that legal explanation is just like scientific explanation. Legal explanations, however, do aspire to some of the same virtues that characterize good explanations in science, such as elegance, parsimoniousness, and consilience. Moreover, there may be little difference between an explanation and an interpretation once we understand how scientific explanation works.

Among other things, science aims to provide an explanation of observed phenomena in the natural world. Accordingly, a substantial part of the metatheoretical project in the philosophy of science has been to understand what is involved in providing a scientific explanation. Science may also have other, more instrumental goals, such as developing potentially useful new technologies, but one of the principal ends of science is to answer "why?" questions about the world, and that is what it means to explain. Additionally, philosophers of science may be concerned with questions such as whether science aims to discover knowledge, how we can infer from observation to truths about the unobservable world, and whether there really are entities such as electrons and DNA, and properties such as mass, electrical charge, and the like. Scientific realists argue that science is aimed at discovering truth about the world, including unobservable phenomena; antirealists of various sorts contend in response that science is instead about prediction, controlling the environment, or discovering truth, but only with respect to observable phenomena (empirical adequacy). By narrowing our focus to scientific explana-

43 One might contend that explanation in humanities disciplines like history and humanistically influenced disciplines like cultural anthropology, inevitably involves interpretation. See Clifford Geertz, The Interpretation of Cultures 24–28 (1973); see also Elster, Explaining Social Behavior, supra note 5, at 52–74. As discussed below in section II, the notion of interpretation is central to Dworkin's jurisprudence. See Dworkin, Law's Empire, supra note 8, at 50, 90–92, discussed infra notes 125–92.

44 Cf. van Fraassen, supra note 5, at 6–7.

45 Id. at 134.

46 See the helpful overview of scientific realism and antirealism in Nola & Sankey, supra note 5, at 337–41. For prominent realist arguments, see generally Stateth Tilso, Scientific Realism: How Science Tracks Truth (1999); Hilary Putnam, Meaning and the Moral Sciences (1978). For important antirealist positions, see generally Larry Laudan, Science and Values: The Aims of Science and Their Role in Scientific Debate (1984); van Fraassen, supra note 5. Note that the argument structure here—namely that science is "about" such-and-such an aim—is the same type of argument with which we are concerned in legal scholarship. Thus, what for philosophy of science is an issue of metamethodology is a second-order metatheoretical question in law. See Nola & Sankey, supra note 5, at 81 (distinguishing scientific theories, scientific methodologies, and metamethodologies). The metamethodological question is a vigorously contested one in the philosophy of science, see, e.g., Wesley C. Salmon, Why Ask, "Why?": An Inquiry Concerning Scientific Explanation, in Causality and Explanation 125, 125 (1998) [hereinafter Salmon, Causality], and will not be pursued here, except as an analogy. It is interesting to note, however, that the Supreme Court has called upon judges to determine, in some
EXPLANATION in Legal Scholarship

We can avoid some of these difficult theoretical issues. That is, by focusing on the goal of explanation in science, we can draw useful analogies between the values endorsed as criteria for assessing the adequacy of scientific theories and principles of theory-acceptance in legal scholarship.47

The first part of the following discussion provides a quick and dirty overview of the straightforward case of explanation in science using inferences from general scientific laws. It also considers what happens when we go the other way and try to work from observations toward confirmation of a hypothesized scientific explanation. The method of positing theoretical explanations and confirming them using empirical evidence is called hypothetico-deductivism (H-D).48 The reason for going through this introduction is not to engage with the myriad technical problems related to the H-D method, explanation, and confirmation, but to show the motivation for the rival method of inference to the best explanation (IBE) and to begin to flesh out some of the criteria for theory-acceptance that can be employed in legal explanations, by analogy with scientific explanations.

A. The Standard Model: Deductive–Nomological Explanation and Hypothetico–Deductive Confirmation

For much of the twentieth century, philosophers of science believed that scientific explanation was a matter of constructing arguments deducing the occurrence of some event from general laws of nature.49 This is the so-called deductive–nomological (D-N) model of scientific explanation.50 The thing to be explained, the explanandum, is shown to be related to the explanans, a set of premises with empirical content, which must contain at least one general law and which also contains a description of the relevant background conditions.51

47 Nola & Sankey, supra note 5, at 34, 51. The distinction in the text is between general aims or goals that are constitutive of a certain conception of science and more specific norms that bring about the general aim. As I will argue below, a great deal turns on what ends are assumed to be constitutive of the relevant activity, whether science or academic legal scholarship.

48 For the classic paper, see generally Carl G. Hempel, Studies in the Logic of Confirmation, in Hempel, Aspects, supra note 42, at 3 [hereinafter Hempel, Confirmation].

49 Salmon, Four Decades, supra note 5, at 8–10.

50 See Carl G. Hempel, Aspects of Scientific Explanation, in Hempel, Aspects, supra note 42, at 335–47 [hereinafter Hempel, Aspects]. If the idiotic typeface rules in the Bluebook are to have any function at all, here it would be to differentiate Hempel’s paper, Aspects of Scientific Explanation from the collection of papers by the same title.

51 See, e.g., Richard Bevan Brathwaite, Scientific Explanation 12–21 (1955) (describing the structure of a scientific system as a deductive system that includes a generalization and several levels of empirical hypotheses); Carl G. Hempel, Philosophy of Natural Science 49–51 (1966) [hereinafter Hempel, Philosophy] (noting that an explanation

HeinOnline -- 96 Cornell L. Rev. 1045 2010-2011
The explanation takes the form of a deductive inference from the general laws in the *explanans* to a conclusion, which is a description of the empirical phenomenon to be explained.\textsuperscript{52} That is the "deductive" part of a model of explanation, which is the link between explanation and a separate but related pattern of confirmation.\textsuperscript{53} We may be interested in offering a hypothesis to explain observed phenomena and then finding out whether the hypothesis is true (or at least empirically adequate).\textsuperscript{54} A hypothesis is just a statement being tested; it can be a fairly discrete principle meant to explain observations (such as Torricelli's conjecture that the earth is surrounded by a sea of air that exerts pressure on the surface below), a general scientific law (such as Kepler's laws of planetary motion), or even an ambitious theory such as natural selection or general relativity.\textsuperscript{55} In a simple, idealized pic-

\textsuperscript{52} See Carl G. Hempel & Paul Oppenheim, *Studies in the Logic of Explanation*, 15 Phil. Sci. 135, 136–37 (1948), reprinted in Hempel, Aspects, supra note 42, at 247–49. There must be constraints on what is "admissible" in the *explanans*. See id. at 137. A significant issue for the Hempel/Oppenheim account is how to understand the requirement that scientific laws be general. The statement, "[n]o gold sphere has a mass greater than 100,000 kg" is law-like and general in form, but it is nevertheless not a scientific law. Salmon, Four Decades, supra note 5, at 15. Similarly, the argument "[c]rows are the color of coal; [c]oal is black; [t]herefore, [c]rows are black" is deductive, but it clearly is not an explanation of why crows are black. Peter Achinstein, *The Nature of Explanation* 123 (1983).

\textsuperscript{53} It is common to blur the distinction between deductive-nomological (D-N) explanation and hypothetico-deductive (H-D) confirmation because they function together in a model of scientific method. When scientists explain something, they take confirmed scientific hypotheses to be true and use them to explain observed phenomena. The correctness of the scientific hypothesis is presupposed by its use in an explanation. When testing a hypothesis, by contrast, scientists are working in the other direction, taking the observations as given and using them to confirm or disconfirm the hypothesis, whose correctness is yet to be established. See Lipton, supra note 5, at 27 ("The deductive-nomological model should produce a sense of *déjà vu*, since it is isomorphic to the hypothetico-deductive model of confirmation . . ."); Salmon, Four Decades, supra note 5, at 7.

\textsuperscript{54} The qualification here is necessary to bracket questions about scientific realism. See generally Van Fraassen, supra note 5 at 6–15 (comparing scientific realism, which aims to give a literally true story of what the world is like, with constructive empiricism, which aims to give theories that are empirically adequate).

\textsuperscript{55} See Hempel, Philosophy, supra note 51, at 5–11. A brief note on the terminology of theory and hypothesis: scientists use the term "theory" to refer to "the total set of those basic theoretical principles that leads to experimentally testable consequences." Id. at 26–27. A theory can be tested by the H-D method, in which case it is appropriate to refer to it as a hypothesis. A great deal of misunderstanding in the public discourse around teaching evolution in public schools arises from the ordinary-language use of the word "theory," which can be understood as meaning something like "conjecture." Thus, opponents of teaching evolution attempt to stigmatize it as something other than accepted scientific knowledge. A better term that would capture the way the word theory is used by scientists would be Lakatos' idea of a scientific research program, which contains a hard
ture, if predicted observations can be deduced from the hypothesis and compared with experimental observations, we may be able to confirm or disconfirm the hypothesis. So, for example, one may hypothesize that as-yet inexplicable variations in the movement of Uranus can be explained by another planet, with a specified mass and position; the hypothesis would then be confirmed by the observation of a new planet, Neptune, with the predicted mass and position.

Like the existence of Neptune, many D-N explanations are superficially causal but in fact refer to underlying regularities expressed by scientific laws that function as a kind of shorthand for a more complex causal explanation. The expansion of a balloon may be explained by the ideal gas law, $PV = nRT$, even though the law does not “cause” the balloon to expand. A genuinely causal explanation would have to refer to principles of thermodynamics and how physical quantities such as heat and pressure are related at the level of the average kinetic energy of molecules. The ideal gas law is a noncausal law, even though it refers to causal processes. Things get a bit more complicated when the general scientific laws in the explanans refer to statistical generalizations about causal processes. In Hempel’s example, the explanation of the fact that patient John Jones recovered from a streptococcus infection is that John Jones had been given penicillin. Logically speaking, the explanandum cannot be deduced from the explanans, but given a sufficiently high degree of association between the independent and dependent variables (administering penicillin and recovery from a streptococcus infection), the conclusion

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can be shown not to be certain, but to be predictable with a high degree of inductive probability. There are constraints, beyond bare probabilities, on what counts as a statistical explanation. Salmon showed this using a bogus explanation: John Jones recovered from his cold within a week because he took Vitamin C, and almost all colds clear up within a week after taking Vitamin C. The problem with this explanation, of course, is that almost all colds clear up within a week anyway, regardless of taking Vitamin C. Thus, the facts cited in the explanans must be tested to see whether they make a difference to the probability of the explanandum.

The idea of testing returns us to the problem of confirmation, which will provide the background to contemporary debates about IBE. Very roughly, take a hypothesis \( H \), which can be any generalization, but in science is usually a natural law or theory offered to explain observations. We would then like to use bits of evidence, \( E_1, E_2, \ldots E_n \), to confirm or disconfirm \( H \). It has long been understood that although confirmation is inductive, it cannot be done in a straightforward enumerative way; simply toting up positive correlations between a consequence of the hypothesis, \( C \), and observed evidence \( E_n \) does not logically confirm the hypothesis. In fact, the following argument is fallacious (affirming the consequent):

If hypothesis \( H \) is true, then we would expect consequence \( C \);

Consequence \( C \) is observed;

\( H \) is true.

Changing the logical form of the argument so that it is no longer invalid still does not fix the problem with enumerative induction as a method of confirmation, as Hempel famously showed with his ravens paradox. For the hypothesis, "all ravens are black," observing a black raven tends to confirm the hypothesis while observing a non-black raven tends to disconfirm it. Unfortunately, the hypothesis "all non-black things are non-ravens" is logically equivalent to the hypothesis we are testing, so the observation of any non-black non-raven (a white swan, for example, or an orange basketball), tends to confirm

\[\text{Salmon, Four Decades, supra note 5, at 58-59.}\]
\[\text{Sophisticated statistical techniques for testing causal explanations underpin contemporary empirical social science disciplines, including empirical studies of law. See Epstein & King, supra note 11, at 19-114 (proposing rules to help empirical researchers).}\]
\[\text{Hempel, Philosophy, supra note 51, at 7.}\]
\[\text{Hempel, Confirmation, supra note 48, at 14-20. This is obviously only a suggestive example because it does not express a scientific law that is of much interest, but the same kind of relationship between a universal and its instantiations holds for laws like "all metals expand when heated" or "all planets move in ellipses." See Statthis Psillos, Causation and Explanation 162-67 (2002) [hereinafter Psillos, Causation and Explanation] (emphasis omitted).}\]
the hypothesis. Intuitively, seeing lots of white swans has nothing to do with whether we believe that all ravens are black, but "it has turned out to be tantalizingly difficult to articulate [how induction can play] even . . . a limited role [in confirming scientific hypotheses]."

B. Why IBE?

The inferential structure known as inference to the best explanation (IBE) is intended to circumvent the logical difficulties, including the ravens paradox, in the use of enumerative induction as a method of confirmation. It takes the following form:

\[ E_1, E_2, \ldots, E_n \text{ are bits of evidence (observations, instances, facts, what have you);} \]
\[ \text{Hypothesis } H \text{ explains } E_1, E_2, \ldots, E_n; \]
\[ \text{No competing hypothesis, } H^*, \text{ explains } E_1, E_2, \ldots, E_n \text{ as well as } H \text{ does;} \]
\[ \text{Therefore, } H \text{ is probably true.} \]

Note several things about this form of argument. First, it is inherently contrastive. The third step in the argument asserts that no rival hypothesis \( H^* \) does as well as \( H \) at explaining the evidence. Without a rival hypothesis, it would be nonsensical to talk about an explanation being better or the best. Second, it is inherently normative. The inference depends on \( H \) being better than \( H^* \) at explaining the observed evidence, and this presupposes criteria—standards of judgment—for what makes a better or worse explanation. Third, although this is not explicit, the IBE argument works only if there is some prior filter or constraint on what counts as a plausible hypothesis in a context. Some hypotheses are implausible explanations in light of our background beliefs. For example, consider two rival hypotheses to explain how Michelangelo was able to paint the ceiling of the Sistine Chapel: \( H = \) he built scaffolding and climbed up each day; \( H^* = \) he levitated up to the ceiling. Obviously, given what we know

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67 See NOLA & SANKEY, supra note 5, at 182–83 for a clear explanation of the ravens paradox.
68 LIPTON, supra note 5, at 15. See also NOLA & SANKEY, supra note 5, at 183 ("The task for any theory of confirmation will be to remove the [ravens] paradox.").
69 See Harman, supra note 5, at 90–91 ("If . . . we think of the inference as an inference to the best explanation, we can explain when a person is and when he is not warranted in making the inference from 'All observed A's are B's' to 'All A's are B's.'").
70 NOLA & SANKEY, supra note 5, at 121.
71 Cf. Harman, supra note 5, at 89 ("[S]uch a judgment will be based on considerations such as which hypothesis is simpler, which is more plausible, which explains more, which is less \textit{ad hoc}, and so forth.").
72 See Thagard, supra note 5, at 79.
73 This example is from NOLA & SANKEY. See supra note 5, at 124. Harman talks about these background beliefs as lemmas that are obscured by seeing experimental confirmation as enumerative induction. See Harman, supra note 5, at 93; see also LIPTON, supra note 5, at 59 ("[I]t is important to notice that the live options version of potential explanation
about the laws of physics generally, $H^*$ is not even a candidate for a true explanation. Finally, the IBE argument concludes with a qualifier, "probably," to indicate that the inference yields something less than certainty. In this way, IBE is nicely compatible with the way in which science aspires to be open to critical scrutiny and revision.

Peter Lipton distinguishes between the likeliness of an explanation and its loveliness. The likeliest explanation is the one that is the best warranted on the total available evidence. The loveliest explanation is the one that provides the deepest understanding. Newtonian mechanics is a lovely explanation even though, given the work of Einstein and others in the twentieth century, it is now not the likeliest one. Lipton’s insight is that we cannot solve the problems of inductive confirmation with a model of inference that seeks the likeliest explanation. Instead, we must infer contrastively, comparing candidate explanations to their rivals and assessing each for their respective loveliness. Of course, what it means for an explanation to be “lovely” is a matter for careful exploration, since a great deal rests on this quasi-aesthetic standard. A substantial problem with IBE in science, which will not be considered further here, is the question of whether we have any warrant for believing that lovely explanations are more likely to be true ones. In an inherently normative field like legal scholarship, however, it may not be surprising that quasi-aesthetic criteria like loveliness have a central role in metatheory. Truth in science is a different matter from truth in, say, the theory of property or contract law. An attractive theory in one of these latter disciplines will tend to possess aesthetic virtues like elegance, simplicity, coherence, and perhaps the capacity to surprise. While one might understandably wonder what these criteria have to do with empirical reality, it makes more sense to see them as features of a good theory in already assumes an epistemic ‘filter’ that limits the pool of potential explanations to plausible candidates.”.

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74 See NOLA & SANKEY, supra note 5, at 122–23 (noting that “Rescher argues that we should not draw the conclusion that $H$ is true, or that it is reasonable to suspect that $H$ is true,” but that we should rather conclude “only that $H$ has greater verisimilitude than its rivals”).
75 See Lipton, supra note 5, at 59–61.
76 Id. at 60.
77 See id. at 60–61.
78 See id. at 61.
79 See, e.g., NOLA & SANKEY, supra note 5, at 129–30; VAN FRAASSEN, supra note 5, at 88 (discussing the virtues of a theory beyond empirical adequacy); see also Jesse Hobbs, Book Review, 60 PHIL. SCI. 679, 679 (1993) (“[T]he fact that $S$, if true, would be a better explanation than $T$ cannot establish either that $S$ is true or an actual explanation . . .”); Peter Milne, Book Review, 53 PHIL. & PHENOMENOLOGICAL RES. 970, 971 (1993) (noting challenges to Lipton’s theories in the course of reviewing his book); Jonathan Vogel, Book Review, 102 PHIL. REV. 419, 420 (1993) (noting in reviewing Lipton’s book the common view that “it would be foolhardy or dogmatic to assume that explanatory adequacy and truth coincide”).
a discipline that deals with values such as political legitimacy and justice.

The classic example of an IBE argument in science is Darwin's list of facts that can be explained by $H$, his theory of natural selection, but are not as well explained by the rival hypothesis $H^*$, that species had been separately created by God. The presence of vestigial organs, the variability in closely related species, the geographic distribution of species, the sterility of hybrid species, and other observations are better explained by Darwin's theory, and this gives us a reason to believe that Darwin's theory is true. These observations are the evidence, $E_1, E_2, \ldots E_n$, in the argument above. The question is what it means to assert that $H$, the theory of natural selection, does a better job of explaining the observations than the rival hypothesis, $H^*$, which asserts the work of a Creator. There are numerous criteria for favoring one theoretical explanation over its rival or rivals. Each of these criteria should be read with a ceteris paribus clause—that is, a clause specifying that "all other things being equal, a theory should be preferred that . . . ." These criteria may also be in tension with each other in some cases, in which case judgment will be required to balance them in deciding which theoretical explanation is the best one. The interesting question, to be discussed further in the next section in connection with legal explanation, is how these criteria are generated from higher-order considerations about the purpose of some activity—empirical science or law. Consider, for example, why we would think that a simpler theory is more likely to be true. There seems to be no reason to simply assume that the laws of nature are simple. Simplicity is likely to be a pragmatic virtue, related to one of the principal virtues of science as a practice, namely its susceptibility to testing and falsifiability. Simplicity gains plausibility as a criterion for theory-acceptance in science because we have a prior commitment to a

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80 See, e.g., Lipton, supra note 5, at 206; Nola & Sankey, supra note 5, at 120; Thagard, supra note 5, at 77; see also Philip Kitcher, Abusing Science: The Case Against Creationism 50-54 (1982).

81 See Nola & Sankey, supra note 5, at 120.

82 See Lipton, supra note 5, at 64.

83 For example, when fitting a curve to observed data, an experimenter may prefer a curve that passes through more data points or is simpler. Two potential rules, "always choose the simple curve" and "always choose the more complex curve," have opposing virtues and vices. The "always simple" rule may lack empirical accuracy while the "always complex" rule will deviate from the true curve because of noise in the data. Thus, some judgment will be required to make the best tradeoff between considerations of fit and simplicity. See Nola & Sankey, supra note 5, at 141. Paul Thagard insists that "[t]heories must not achieve consilience at the expense of simplicity," Thagard, supra note 5, at 89, but in some cases, the tradeoff may be inevitable.

84 See Hempel, Philosophy, supra note 51, at 42.

85 Id. at 44 (considering Popper's view).
picture of the purpose of science in which testability is paramount.\textsuperscript{86} The “best” qualifier in IBE can therefore be seen as best-relative-to-the overall aim of science.

With that in mind, here are some criteria for theory selection in science. As with virtually everything discussed in this section of the Essay, there are technical complications involved with applying them, and philosophers disagree over many details. Nevertheless, these are the sorts of things that count as explanatory virtues in science.

1. \textit{Consilience}. A theory is to be preferred when it explains more of the observed evidence, $E_1, E_2, \ldots, E_n$, than its rivals.\textsuperscript{87} Antoine Lavoisier’s oxygen theory of combustion was better than the rival theory that used a hypothetical substance, phlogiston, to explain combustion because the oxygen theory could explain the fact that combusting bodies increase in weight.\textsuperscript{88} Making oxygen, rather than phlogiston, could serve as a conceptual bridge to other theories, such as Newtonian mechanics.\textsuperscript{89} Similarly, Darwin’s theory of natural selection was able to account for observations that initially seemed unrelated, such as those pertaining to anatomy (the presence of vestigial organs) and zoology (the observed differences in related species). Theories such as the oxygen theory of combustion are more powerful when they are able to unify observations and link up with other seemingly disparate inquiries.

2. \textit{Simplicity}. A theory should be preferred over its rivals if it makes use of fewer independent postulates, axioms, fundamental principles, or entities than are necessary to enable the theory to explain some observation, $E_n$.\textsuperscript{90} The familiar inferential principle of Ockham’s razor tells us not to multiply entities without necessity.\textsuperscript{91} The classic example of preferring a simpler explanation is the replacement of Ptolemaic astronomy by the Copernican system.\textsuperscript{92} The Ptolemaic system had become so cumbersome, and relied on so many ad

\begin{footnotesize}
\textsuperscript{86} See id.
\textsuperscript{87} HEMPEL, PHILOSOPHY, supra note 51, at 34 (“If the earlier cases have all been obtained by tests of the same kind, but the new finding is the result of a different kind of test, the confirmation of the hypothesis may be significantly enhanced.”); Thagard, supra note 5, at 79 (“[O]ne theory is more consilient than another if it explains more classes of facts than the other does.”); see also EDWARD O. WILSON, CONSILIENCE: THE UNITY OF KNOWLEDGE 266 (1998) (arguing for the unification of all human knowledge, including science and the humanities). For the value of consilience in legal explanation, see Coleman, Practice of Principle, supra note 8, at 41–43.
\textsuperscript{88} THOMAS S. KUHN, THE STRUCTURE OF SCIENTIFIC REVOLUTIONS 69–72 (2d ed. 1970); Thagard, supra note 5, at 77–78, 81.
\textsuperscript{89} KUHN, supra note 88, at 71.
\textsuperscript{90} Thagard, supra note 5, at 86.
\textsuperscript{91} See, e.g., NOLA & SANKEY, supra note 5, at 42.
\textsuperscript{92} KUHN, supra note 88, at 68–69. As Kuhn notes, Copernicus showed considerable insight in seeing as disconfirming evidence what other astronomers viewed only as puzzles to be solved by the application of Ptolemaic principles. Id. at 79.
\end{footnotesize}
hoc assumptions to fit with the observed data, that astronomers were warranted in believing that Copernicus had better explained the movement of heavenly bodies.\textsuperscript{93} An assumption that explains no more than that which it was introduced to explain is ad hoc, and a theory that becomes encumbered with too many of these is less likely to be the best explanation of observed data.\textsuperscript{94} In a similar way, phlogiston chemistry had fragmented into numerous subtheories as chemists struggled to account for laboratory results using explanations that depended upon phlogiston. One of the attractive features of the oxygen theory was that it replaced all these different versions of phlogiston chemistry with one simple, unified approach.\textsuperscript{95} One might question whether reality is really simple, and therefore whether simplicity ought to be a criterion of explanatory success.\textsuperscript{96} This observation suggests a fault line between scientific realists and antirealists, the former who assert that science does (or ought to) describe reality, and the latter who are content with a theory of science that emphasizes virtues other than truth-functional (alethic) ones.\textsuperscript{97} Presumably, a realist would be willing to abandon simplicity as a theoretical virtue if she were able to show that reality is, in fact, quite complicated. Because assertions about what is actually true of reality tend to depend on explanations of observed phenomenon, however, alethic virtues seldom appear directly in a theory but come in indirectly via competing assumptions about whether or not scientific laws that accurately describe reality are simple.

3. **Fruitfulness**\textsuperscript{98} A theory should enable us to say significant things, generate insights, and have implications for future research. When Newtonian mechanics replaced the classical view that material bodies moved because of their inherent nature, they opened up new realms of inquiry.\textsuperscript{99} Observations about, say, the behavior of colliding bodies could be reinterpreted in light of the new laws of motion, and these further findings could lead to a reinterpretation of other phenomena, such as the movement of particles in a gas. Experiments on these particles might then lead to further discoveries about the relationship between the macroscopic and microscopic worlds.\textsuperscript{100}

\textsuperscript{93} See id. at 68–69.
\textsuperscript{94} Thagard, supra note 5, at 87.
\textsuperscript{95} KUHN, supra note 88, at 70–72.
\textsuperscript{96} See NOLA & SANKEY, supra note 5, at 41–43 (questioning whether we are in a world in which maximum parsimony is the best guide to truth).
\textsuperscript{97} See NOLA & SANKEY, supra note 5, at 337–41.
\textsuperscript{98} See KUHN, supra note 88, at 104; LIPTON, supra note 5, at 122.
\textsuperscript{99} See KUHN, supra note 88, at 103–04.
\textsuperscript{100} See SALMON, FOUR DECADES, supra note 5, at 124–26 (describing experiments to measure Avogadro’s number).
4. Unification. The purpose of explanation is seeking understanding, and an aspect of understanding is conceptual economy.\textsuperscript{101} To explain a phenomenon is to fit it within a coherent whole.\textsuperscript{102} This means, in many cases, reducing one kind of explanatory consideration to another, more fundamental one. Our understanding is enhanced if we can show that a number of seemingly independent phenomena actually can all be explained in terms of one overarching principle.\textsuperscript{103} Newtonian physics, for example, explained both the principles of terrestrial motion elucidated by Galileo and Kepler’s laws of planetary motion.\textsuperscript{104} Similarly, the kinetic theory of gases enabled unification of several natural laws that were previously deemed independent.\textsuperscript{105}

5. Empirical adequacy. A scientific explanation must account for observed phenomena.\textsuperscript{106} This is not the same as asserting that science aims at truth. There may be aspects of reality that lie behind observations—the unobservable realm that includes not only postulated particles and forces, but also includes the scientific laws that describe relations among them. Antirealists (and constructive empiricists like Bas van Fraassen) assert that empirical adequacy is enough and that science should not make promises on which it cannot deliver, such as providing explanations that are true of reality.\textsuperscript{107} Realists such as Hilary Putnam reply that, unless scientific explanations did “track truth,” it would be hard to account for their success in making predictions.\textsuperscript{108} Realists and antirealists are united, however, in believing that science is necessarily “all about” disciplining belief by comparing it with observation\textsuperscript{109} and that what differentiates science from various kinds of pseudoscience as well as humanistic inquiries is that critical evaluation and revision is motivated, at least in part, by accounting for observation.\textsuperscript{110}

\textsuperscript{101} Psillos, Causation and Explanation, supra note 66, at 265.
\textsuperscript{102} See id.
\textsuperscript{103} See Hempel, Philosophy, supra note 51, at 83 (“What scientific explanation . . . aims at is . . . an objective kind of insight that is achieved by [a] systematic unification, by exhibiting the phenomena as manifestations of common underlying structures and processes that conform to specific, testable, basic principles.”); Philip Kitcher, Explanatory Unification, in Theories of Explanation, supra note 5, at 167, 167.
\textsuperscript{104} Nola & Sankey, supra note 5, at 127.
\textsuperscript{105} Michael Friedman, Explanation and Scientific Understanding, in Theories of Explanation, supra note 5, at 188, 195.
\textsuperscript{106} See Nola & Sankey, supra note 5, at 55–56, 74–77.
\textsuperscript{107} See id. at 341.
\textsuperscript{108} Id. at 341–44 (discussing Putnam’s “no miracles argument” and considering whether it is IBE, only at the metamethodological level).
\textsuperscript{109} See id. at 55.
\textsuperscript{110} The principle of demarcation, differentiating science from nonscience, is associated with the work of Karl Popper, although it is an important background norm in the philosophy of science overall. See generally Karl Popper, The Logic of Scientific Discovery (1959). For an overview of the history of the demarcation principle, see Nola & Sankey, supra note 5, at 253–74. In popular culture, TV shows like Mythbusters and Penn
The task of the next section will be to generate a similar list of explanatory virtues for law. The process of inference will be the same: working from assumptions about the nature and purpose of the practice (science or law), we can derive criteria for what counts as doing better or worse at offering an explanation within that domain.

II
EXPLANATION IN LAW

A. Are Legal Explanations Functional?

It may be the case that legal explanations, of the sort we are considering here, are functional in nature. Many everyday explanations make reference to goal-directed behavior: why did I go to Wegmans? Because I needed to buy groceries and it's the best grocery store in town. My conscious desire to buy groceries, coupled with my belief that Wegmans is a good place to do this, explains my action. Where conscious intent is absent, however, functional explanations can get a bit mysterious, or at least metaphorical, particularly if we try to retain causality as part of the explanation. Classical scientific explanations made widespread appeals to teleological notions like "final causes" or "vital forces," but modern philosophers of science are careful to avoid invoking empirically inaccessible factors. We may speak loosely in terms of teleology, for example in explaining a jackrabbit's large ears with reference to the goal of controlling the animal's temperature in hot environments. However, in order to make this explanation scientifically respectable, it must be elaborated in terms of a mechanism that has empirically testable implications. Causality enters the explanation indirectly, via natural selection mechanisms that favor the survival of organisms with features that confer an advantage with respect to the goal of survival or reproduction. It is also necessary to distinguish the function of something from its accidental effects. How do we know that the function of the jackrabbit's ears is to cool its body temperature and not to enable it to hear better? The answer is that we can look at features of an organism's environment and see what characteristics of the organism are necessary to enable it to maintain itself in proper working order.


112 The example is from SALMON, Comets, supra note 58, at 60–61.

113 See SALMON, FOUR DECADES, supra note 5, at 111-14 (discussing how behavior or a feature of an organism can be understood causally if it has been causally efficacious in the past at bringing about some goal).

114 See HEMPEL, Functional Analysis, supra note 111, at 306.
here is some notion of the proper working order of an organism, which in turn gains content from the goals of survival and reproduction.

Jules Coleman provides a sophisticated model of functional explanation in law, as a preface to his own functional argument that the tort system should be understood as being oriented around the function of corrective justice, not economic efficiency. Legal explanations generally cannot rely on intentional, goal-directed behavior because legal doctrines do not arise from the creative act of an individual or some group whose intentions can be coherently aggregated. In Coleman’s view, an IBE argument in law is an appeal to a kind of functional explanation:

The best explanation is the one which not only fits the shape of the institutions or practice, but also reveals it in its best light, as the best version of the sort of thing it purports to be (the value component).

In offering an interpretation in this sense, one needs to posit a point, purpose or function of the institution or practice. The component parts must then be shown to hang together in a way that makes this function or point perspicuous. Thus, the function provides a lens through which the component aspects of the practice are seen to cohere and to be mutually supporting.

He refers to this pattern of argument as a constructive interpretation in Dworkin’s sense, while elsewhere he claims to be a critic of Dworkin’s methods. We will return to this point below; for now, the point to notice is the possibility that the best explanation for some feature of the law may be given in functional terms. The question is how to cash out a functional explanation for some feature of the law, and whether it is a distinct pattern of explanation or whether it is really something else, like IBE.

Returning to the functional model of scientific explanation, recall that the crucial explanatory notion is some end state or goal—survival and reproduction, in the case of biological organisms—which enables us to distinguish the function of something from its incidental

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Id. Leaving aside the problem of aggregating individual intents, a statute may sometimes be explained functionally (or purposively) in terms of some problem in response to which it was enacted. (As English lawyers would say, a statute makes sense in light of the “mischief” it was designed to remedy. See Heydon’s Case, (1584) 76 Eng. Rep. 637 (K.B.) 658, 3 Co. Rep. 7 a, 7 b.) The examples given in the introduction, however, do not appeal to the intent of an individual lawmaker or legislature and thus pose the problem we are interested in here, namely what it means to explain something more general, like a legal doctrine.
117 Coleman, supra note 7, at 193.
118 See id.
119 See, e.g., id. at 194 (noting that “if economic analysis is an interpretive theory in the Dworkinian sense, then it is a particularly bad one on the dimension of fit”).
effects. Like the jackrabbit's ears, a feature of the law can be explained functionally if it would not have existed had the environment been different. Otherwise, a putative functional explanation is nothing more than a fable or a just-so story. Coleman argues that proponents of the economic analysis of torts cannot avail themselves of a functional explanation, at least for the core of tort law (although efficiency may be the incidental by-product of other behaviors). Interestingly, his argument for why this is so subtly shifts into an IBE pattern: there are simply too many features of the common law of torts, such as the doctrines of but-for causation and duty and its bilateral nature (victims seek redress from specific injurers), that cannot be accounted for by an economic explanation. Coleman has it backwards: it is not that IBE explanations inevitably collapse into functional ones. Rather, functional explanations necessarily appeal to considerations familiar from IBE arguments.

This leads directly into the next section because the question in law, as in science, is what criteria to use in determining whether a proposed explanation is better than its rivals or is the best explanation. Here Coleman rightly notes that Dworkin has a ready answer. A Dworkinian explanation seeks to show that a principle or doctrine fits with existing law (“past political decisions” as Dworkin likes to say) and also contributes to a justification of the whole area of law (“shows the community[ ] in a better light . . . from the standpoint of political morality”). Integrity, for Dworkin, is not merely consistency or coherence or, if it is, it is a special kind of coherence. It is coherence with the political morality of a particular community. The point,
purpose, or function of the legal doctrine is necessarily connected with moral considerations. Dworkin's approach provides a straightforward answer to the question, "what makes an explanation better?" His answer is that an explanation is better than its rivals if it shows how a legal doctrine makes sense in light of some purpose or function that is, itself, morally attractive. In his explanation for the recoverability by bystanders of damages for emotional distress, Dworkin refers to criteria of theory selection such as consilience, but it is clear that most of the explanatory work is being done by considerations of political morality, such as whether "people [ought to be] entitled to be compensated fully whenever they are injured by others' carelessness," or whether that principle is "a radical view not shared by any substantial portion of the public and unknown in the political and moral rhetoric of the times." We can call this a functional explanation, with the function given by some political end, but it is clearer to acknowledge this as something closer to a normative explanation.

The Dworkinian approach to explanation reveals the connection between jurisprudential theories and legal explanation. In order to determine what is a good explanation in law, we have to make some background presuppositions about the point of law. For Dworkin, the point of law is, roughly speaking, to constitute and sustain a special kind of political community—a community of principle, in which citizens regard each other as equals and accept obligations of mutual concern among themselves. A putative explanation of some legal doctrine should therefore be rejected if it does not cohere with an overall scheme of principles of political morality that are presupposed by the community's laws. Dworkin strenuously denies subscribing to a natural law stance, but it is difficult to see how this is really a legal positivist position if one of the criteria for the adequacy of a legal explanation is coherence with moral principles. The point here is not to enter into debates between natural law and positivism, or inclusive and exclusive positivism. Rather, the goal for the remainder of this

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127 See Coleman, Practice of Principle, supra note 8, at 29-30.
128 See Dworkin, Law's Empire, supra note 8, at 244.
129 See id. at 247 (arguing that his ideal judge Hercules "must take into account not only the numbers of decisions counting for each interpretation [i.e. enumerative induction], but whether the decisions expressing one principle seem more important or fundamental or wide-ranging than the decisions expressing the other.").
130 Id. at 249.
131 Id. at 166, 185-90, 198-202, 211-15 (noting that "[w]e have a duty to honor our responsibilities under social practices that define groups and attach special responsibilities to membership").
132 Id. at 211.
Essay is to develop the connections between the explanations generally offered by legal scholars and working assumptions about the nature and function of the law. In the background will be the question posed by Dworkin, namely whether it is necessary for legal theory to reach outside the law—to considerations that belong to the domain of morality—in order to offer an explanation of anything within the law. The principal task, however, will be to analyze some of the rhetoric of doctrinal legal scholarship, and hopefully to learn something about the jurisprudential positions presupposed by these arguments.

B. What Good Are Legal Explanations?

Everyone has heard the explanation given by Willie Sutton for why he robbed banks: “that’s where the money is.”\(^\text{134}\) Social scientist Alan Garfinkel retells that story and situates it in the context of an interview with a priest who was trying to reform Sutton.\(^\text{135}\) The priest wanted to know why Sutton robbed banks, as opposed to, say, depositing money in them; Sutton was explaining why he robbed banks, not, for example, old farmhouses. The point of this version of the story is that an explanation really only counts relative to a context.\(^\text{136}\) The Sutton story also shows that the context is often contrastive. We want to know, “why this rather than that?”\(^\text{137}\) The idea of context-specific, contrastive explanation will be important in understanding legal explanations. Recall that the modifier “best” in “inference to the best explanation” is given content relative to the aims of science.\(^\text{138}\) It is not enough to say simply that science aims to understand and explain because these are the very ideas we are trying to understand. Rather, we have to consider the characteristics and virtues of science as a practice, and from those considerations derive criteria for a good (or “the best”) scientific explanation.\(^\text{139}\)

Like the priest and Willie Sutton, science often defines its aims negatively. A scientific explanation is, among other things, one that

\(^{134}\) Garfinkel, supra note 5, at 21.

\(^{135}\) Id.

\(^{136}\) An example to which all parents can relate is from Lipton, supra note 5, at 33. When the author asked his three-year-old son why he threw his food on the floor, his son answered that he was full. The author, of course, was asking why the three-year-old threw his food on the floor rather than leaving it on his plate, so the explanation failed to satisfy the relevant “why?” question.

\(^{137}\) See Garfinkel, supra note 5, at 28–41 (noting that when we ask why the sky is blue, we “are really asking of the sky why it is blue rather than some other color”); Van Fraassen, The Scientific Image, supra note 5, at 126–29 (noting that the correct general, underlying structure of a why-question is “Why (is it the case that) P in contrast to (other members of) X,” where X is a set of alternatives).

\(^{138}\) Cf. Nola & Sankey, supra note 5, at 32 (noting that our values enter into our decisions about science, particularly our acceptance or rejection of theories).

\(^{139}\) See, e.g., id. at 123–30 (exploring different theories of “what is meant by being a better explanation”).
avoids appeals to final causes, vital forces, or general bunkum. Consider, for example, the notorious unscientific explanation, offered by a character in a Molière play, that opium puts people to sleep because it contains a dormitive principle, or the Aristotelian idea that nature abhors a vacuum. If a method of inquiry is to deserve the label science, it must answer to criteria of empirical adequacy. In particular, it must be general, capable of supporting counterfactuals, and above all, it must make claims that purport to be true or false with reference to something external; that is, science must relate to the natural world in some way. In this way we can see the relationship between the aims of science, considered at a very general level, and criteria that can be used to assess the adequacy of scientific explanations and adjudicate among rival explanations. The criteria for theory-acceptance, which support a conclusion that one theory or another is the best explanation, are themselves justified with reference to the virtues of scientific inquiry.

At the risk of sounding grandiose, I believe a criteria of theory-acceptance in legal scholarship can (and indeed must) be derived from higher-order characteristics and virtues of legal reasoning as a practice. Start with a historical illustration (one which, I take it, no one accepts anymore): Grant Gilmore describes how Langdell subscribed to both an ideological claim about law, that it was timeless and unchanging, and a methodological thesis, that the goal of the legal scholar should be progressive simplification, reducing the unruly plurality of doctrines to a small number of higher-order principles. As in science, it remains to be demonstrated why theoretical consilience “tracks truth” in legal analysis; nevertheless, the great Langdellian metatheoretical imperative was to show that a single overarching concept like torts could explain seemingly disparate phenomena like liability for battery, negligence, conversion, misrepresentation, fraud, and so on. Holmes, by contrast, had a metatheoretical commitment to messiness, but avowed substantive jurisprudential positions of sweeping breadth; again, the relationship between these stances was never clarified.

The question for modern legal scholars is what they take the relationship to be, between substantive claims about what law is, or what it is for, and methodological theses about how one justifies a legal explanation. Consider the familiar example of law and economics, as applied to tort law. The economic explanation of various doctrines (the

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140 See HEMPEL, Functional Analysis, supra note 111, at 304.
141 See supra notes 106–10 and accompanying text.
143 See id. at 46 (noting the development of the word “tort” to cover a range of concepts).
144 Id. at 48–56.
causation requirement, the reasonable care standard, etc.) is that they contribute to the goal of social welfare maximization. To argue for this explanation, one shows that efficiency is an ideal that transcends the various doctrines and holds them together. This is the Langdellian imperative, to show how seemingly disparate phenomena can be demonstrated to be instances of a more general concept. What is not Langdellian in this argument is the tacit appeal to “the independent moral attractiveness of the goal of efficiency.” That kind of appeal belongs to a more Dworkinian style of analysis. Thus, when one argues against an economic interpretation of tort law, the underlying methodology of the argument reveals one’s jurisprudential commitments. It is possible, of course, to challenge directly the normative attractiveness of efficiency. Interestingly, however, most critics of the economic analysis of torts do not take this tack. A different strategy would be to concede or bracket the moral value of welfare maximization, but to attempt to demonstrate that it does not provide the best explanation for tort law as a whole or various tort doctrines. This is the most prominent critical methodology in the tort theory literature, associated with the work of many corrective-justice and civil-recourse theorists. Their argument is that law and economics fails as an explanation because it does not account for many of the observed features of tort law.

In an interpretive or normative discipline, the idea that we should test a theory against observations (in this case, features of legal doctrine) is known as seeking reflective equilibrium. In a moral

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146 Posner, supra note 145, at 103 (noting that wealth maximization resonates well with several moral theories and offends none).

147 Coleman, Practice of Principle, supra note 8, at 30.

148 Coleman, supra note 147, at 30. (noting that the normative failures of [economic analysis of the law] are so great that they cast doubt on its descriptive claims).


theory, one begins with considered moral judgments and works from the bottom up to arrive at sets of moral principles that can be inferred from given background theories. Including background theories ensures that a set of moral principles is not an accidental generalization, but instead is connected with wider normative and epistemological concepts.\footnote{Rawls. See John Rawls, A Theory of Justice 48–51 (1971). See generally John Rawls, Outline of a Decision Procedure for Ethics, 60 Phil. Rev. 177 (1951).} Theories can then be evaluated for plausibility with reference to "the whole system of interconnected theories already found acceptable."\footnote{Considered moral judgments are not merely intuitions, but those initial judgments that have been "filtered" to screen out judgments made under conditions that may be conducive to errors. Daniels, supra note 150, at 258, 266. In this way they are quite different from the moral intuitions studied by social psychologists. See, e.g., Jonathan Haidt, The Emotional Dog and Its Rational Tail: A Social Intuitionist Approach to Moral Judgment, 108 Psychol. Rev. 814, 814 (2001) (arguing that moral intuitions come before moral judgments). The reactions observed in Haidt's subjects have not been subjected to rational reflection and thus do not count as considered moral judgments. I am not claiming here that reasoning is the cause of moral judgments, and in fact, I am not making any causal claims at all. Cf. id. at 815 (claiming that the social intutionist model is "an antirationalist model only in one limited sense: It says that moral reasoning is rarely the direct cause of moral judgment"). The analysis here is of theory construction, not moral decision making. Cf. id. at 815 (claiming that the social intutionist model is "an antirationalist model only in one limited sense: It says that moral reasoning is rarely the direct cause of moral judgment"). The analysis here is of theory construction, not moral decision making. Cf. id. at 815 (claiming that the social intutionist model is "an antirationalist model only in one limited sense: It says that moral reasoning is rarely the direct cause of moral judgment"). The analysis here is of theory construction, not moral decision making.} Significantly, considered moral judgments are not deemed self-evident, incorrigible, or inflexible, and may be revised if they cannot be squared with moral principles.\footnote{Daniels, supra note 150, at 262.} The ideal end of this process is a type of coherence among (1) pretheoretical moral judgments about right and wrong, justice and injustice, etc.; (2) a set of principles that systematizes these judgments; and (3) various normative and empirical background theories. In order to achieve this coherence, it may be necessary to reject a pretheoretical moral judgment, no matter how certain it initially appears. "[W]e are constantly making plausibility judgments about which of our considered moral judgments we should revise in light of theoretical considerations at all levels."\footnote{Daniels, supra note 150, at 267. Daniels rightly says that this is a Quinean view about the relationship between facts (in this case, considered moral judgments instead of nonmoral observation reports) and theories. Id. at 267 n.16. See generally Willard Van Orman Quine, Word and Object (1960). Coherence (and holism) about truth and meaning is also associated with the work of Davidson. See Donald Davidson, Inquiries into Truth and Interpretation 17–54 (2d ed. 2001).}

Theoretical explanation in law may proceed along similar lines. A theorist begins with an initial set of materials that are taken as given. In law, these materials are decided cases, principles, and lines of doctrine.\footnote{See, e.g., Ernest J. Weinrib, Legal Formalism: On the Immanent Rationality of Law, 97 Yale L.J. 949, 967 (1988).} In torts, for example, the observed data to be explained in-
clude things like the duty requirement and exceptions such as the no-duty-to-rescue rule, the recoverability or nonrecoverability of damages for certain types of harms (such as emotional distress and pure economic losses), the requirement of showing a causal connection between the defendant's wrong and the plaintiff's harm, and so on. Background theories include assumptions about the nature and function of law, which can include substantive considerations such as economic efficiency, social welfare, justice, and fairness, and procedural virtues such as stability, determinancy, administrability, and institutional competence. Background theories may also include the sorts of middle-level moral principles that function as familiar "policy" arguments within legal discourse. The task, then, is to arrive at an explanation that provides a satisfactory account of observations in light of background considerations.

An instrumental explanation would show how some doctrine furthers a particular end (efficiency, say). A functional explanation would do something similar, by showing that a doctrine contributes to the overall capacity of the law (or some particular area, like torts) to achieve a particular end. The explanations we are dealing with here are neither instrumental nor functional, which is what makes them difficult to pin down. The next section will examine some of the arguments summarized in the introduction, to see what rhetorical "moves" theorists make, and how these are meant to connect with explanatory virtues. Many of these moves make use of a coherentist or reflective equilibrium methodology. A coherentist explanation seeks to bring together particulars—cases and doctrines and such—with broader principles and theoretical considerations, and to show how the whole apparatus hangs together. The argument that a legal rule or principle cannot be "all about" some consideration often trades on the inability of that explanation to account for other features of the relevant doctrine. To the extent these arguments make reference to coherence only with other aspects of legal doctrine, they are consistent with legal positivism. One might say they are also consistent with a Langdellian view of the autonomy of legal reasoning. It may be possible to study the law from a Langdellian perspective if one were concerned only with establishing coherent theories that took due account of the body of decided cases. My hypothesis in approaching these scholarly works, however, was that coherence is not the only

156 Coleman argues, for example, that there is an intuitive difference between "misfortunes owing to human agency and those which are no one's responsibility," and this helps explain features of tort law such as the malfeasance vs. nonfeasance distinction. Coleman, Practice of Principle, supra note 8, at 44.
157 See, e.g., Posner, supra note 145, at 111.
158 See supra notes 111–13 and accompanying text.
159 Zipursky, supra note 8, at 1704.
consideration relevant to theory-acceptance and that many arguments within doctrinal legal scholarship tacitly appeal to quasi-aesthetic criteria such as simplicity, elegance, and other virtues that go toward making a theoretical explanation "lovely." Doctrinal arguments may also appeal, tacitly or explicitly, to moral criteria. Whether this is an embarrassment for the proffered theory or a virtue of it depends on whether one believes that law should be methodologically pure or formal in some way, or whether law is inescapably a practice of making arguments that, at some level, trade on moral and political evaluative considerations.

To answer the question in this section's title, "what are legal explanations for?," metatheoretical considerations of the type we are examining here are relevant as disciplining rules of a practice. When lawyers talk about concepts like legal validity or legitimacy, they appeal to normative standards that establish constraints as to what arguments lawyers can make, how judges should decide cases, and what laws legislators should pass. I have argued that rule-of-law considerations structure the ethics of lawyers, not only when they act as advocates but when they serve as transactional advisors or legal counselors. Ben Zipursky has argued that legal theory has become liberated from the need to answer to higher-order philosophical concerns such as truth, knowledge, and objectivity. If this is the case, however, it is incumbent upon legal theorists to provide an account—a metatheory—of how legal reasoners of all types are supposed to know when they have arrived at the best theoretical explanation of the law. It seems to me that there are two possibilities here: either legal scholars follow Dworkin, and agree that the best legal explanation is one that displays the virtue of integrity, or they run from Dworkin and try to find refuge in some kind of repackaged Langdellianism. As the next section shows, however, even in actual empirical science, to say nothing of Langdell's widely mocked claim that law can be treated as a science, criteria for theory-acceptance often go beyond purely empirical matters and incorporate normative considerations such as aesthetics. Given that theory construction is necessarily normative, the focus should be on finding the right theoretical virtues. Dworkin's

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160 Cf. STANLEY FISH, The Law Wishes to Have a Formal Existence, in There's No Such Thing as Free Speech and It's a Good Thing, Too 141, 141 (1994) (imputing to law—metaphorically, obviously, while literally referring to legal theorists—the desire not "to have recourse to [any] supplementary discourse" that would compromise the law's autonomy).

161 See DWORKIN, LAW'S EMPIRE, supra note 8, at 243.


163 Zipursky, supra note 8, at 1714–16.

164 See DWORKIN, LAW'S EMPIRE, supra note 8, at 225–75.
argument is that the primary theoretical virtue of law is the special kind of coherence he calls integrity, which consists of the right kind of overlap between legal principles and the community's moral principles, reflecting a way that the state can treat citizens with respect. It remains to be seen whether doctrinal legal scholarship offers criteria for theory selection that have the same kind of normative attractiveness.

C. Theory-Acceptance in Law

Barton Beebe's paper on intellectual property argues that preserving the ability of people to use consumption to signal their status is an explanation for intellectual property laws. The paper is a tour de force of IBE methods. The hypothesis that intellectual property laws function as a sumptuary code depends on the following observations: people apparently have a need to differentiate themselves by status and thus establish a social hierarchy, and one way to do this is through consumption. However, market failures imperil the capacity of consumption to signal class distinctions. Simply purchasing more expensive stuff is wasteful; it leads to mutually offsetting expenditures that leave everyone in the same place, in terms of their relative status—a classic arms race. In addition, it is now possible to copy expensive items relatively inexpensively; if one can readily purchase a South Korean "super copy" of a Chanel handbag, then Chanel bags lose their ability to differentiate their owners from others. The result is overwhelming noise in the market and the inability to set oneself apart from others. Beebe's argument is that intellectual property laws have certain features that are best explained as a social response to the challenge that arms-race-type market failures and the ease of copying pose for the maintenance of social hierarchies. The two most noteworthy features are antidilution protection and the protection of geographic origin designations for wine, food, and other products in which a significant component of the perceived value is related to its origin. The best way to account for these features is by positing that

165 See supra notes 125-33 and accompanying text.
166 See Beebe, supra note 18, at 815.
167 Id. at 813, 820. This observation requires its own IBE argument, inferring from the existence of sumptuary laws throughout history to an explanation in terms of a social need for consumption-based systems of creating class distinctions. See id. at 812-13.
168 Id. at 814, 825-27.
169 Id. at 818 & n.33 (also referring to super copies as "genuine fakes"). California and other New World winemakers' "Champagne" presents a similar problem. See id. at 832.
170 Beebe describes the problem as follows: "[T]he majority of consumers would likely confront a marketplace consisting of goods that will set them apart only briefly, if at all, before quickly being copied and rendered commonplace." Id. at 837.
171 Id. at 816, 869-71. Antidilution protection prevents the use of a trademark even if there is no possibility of confusion regarding the origin of the good or service, for example
intellectual property is “about,” at least in part, the regulation of consumption to preserve status hierarchies.\textsuperscript{172}

In the case of diluted trademarks, the harm really is not a diminution in the creator’s incentive to produce the product. Selling Tylenol snowboards does not take away from any incentives the manufacturer of Tylenol has to make safe, effective pain relievers. Thus, the existence of antidilution protection is an anomaly that cannot be explained with reference to preserve the incentive to innovate.\textsuperscript{173} Like successful scientific explanations, the \textit{explanans} in a legal explanation should be able to account for a wide variety of observed phenomena. On the IBE pattern of inference, a hypothesis \(H\) is to be preferred over its rival \(H^*\) if it better accounts for the observed evidence \(E_1, E_2, \ldots, E_n\).\textsuperscript{174} To “better” account for the evidence means, in part, to be able to unify the observations under one higher-order concept. Picking up on the theoretical virtues of consilience and explanatory unification, a common move in doctrinal legal criticism is to fault a competing theory for failing to account for an important aspect of existing doctrine. Beebe’s argument for the sumptuary explanation trades primarily on the failure of the incentives explanation as a unifying concept. The object of protection is the prestige associated with a mark, and there is no way to account for that interest if we assume that intellectual property law is all about creating incentives.\textsuperscript{175}

Pointing to the inability of an explanation to account for an observed feature of a doctrine is a staple of the criticism of law and economics in tort theory. One of the observed features of tort law is its bilateralism. Rights to redress arise only upon a showing that a particular actor, the defendant, harms a particular victim, the plaintiff.\textsuperscript{176} In this way torts is differentiated from small-scale accident compensa-

\begin{itemize}
  \item \textsuperscript{172} Beebe concedes that one purpose of intellectual property law remains the prevention of misappropriation and thus the creation of incentives for technological and artistic innovation. \textit{Id.} at 813. It is clear, however, that he wants to claim pride of place for his explanation in terms of sumptuary regulation. Antidilution and authenticity protection, he writes, “operate according to assumptions that run contrary to nearly everything we conventionally believe about the nature of intellectual property and the purposes of intellectual property law.” \textit{Id.} at 817.
  \item \textsuperscript{173} See \textit{id.} at 847.
  \item \textsuperscript{174} See \textit{supra} notes 69–72 and accompanying text.
  \item \textsuperscript{175} Beebe, \textit{supra} note 18, at 886–87.
  \item \textsuperscript{176} COLEMAN, \textit{PRACTICE OF PRINCIPLE}, \textit{supra} note 8, at 16. For a similar criticism of the economic analysis of contract law based on its inability to account for bilateralism of remedies, see Nathan B. Oman, \textit{The Failure of Economic Interpretations of the Law of Contract Damages}, 64 \textit{WASH. \\& LEE L. REV.} 829, 851–53 (2007).
\end{itemize}
tion schemes like workers’ compensation\textsuperscript{177} and the system established to redress vaccine-related harms,\textsuperscript{178} and comprehensive ones such as that administered by the New Zealand Accident Compensation Corporation.\textsuperscript{179} The trouble with the economic analysis of tort law, contend its critics, is that it cannot account for bilateralism. “There is simply no principled reason, on the economic analysis, to limit the defendant or plaintiff classes to injurers and their respective victims.”\textsuperscript{180} Bilateralism is thus an observed phenomenon that cannot be brought within the unifying framework of economic analysis.\textsuperscript{181} It is troublesome for the theory, and for this reason I term it a recalcitrant observation.

Thomas Kuhn showed how a sufficient number of recalcitrant observations can lead scientists to reformulate their explanations, but he also showed how “normal science” can remain untroubled by these observations for a long time if there is a way to account for the observations within the existing paradigm.\textsuperscript{182} The interesting thing about this history is that recalcitrance can serve as the trigger for wholesale theory revision, or it can merely point out puzzles to be solved within the theory.\textsuperscript{183} In reflective equilibrium in ethics, neither considered moral judgments nor ethical theories have an a priori claim to precedence.\textsuperscript{184} A theory may have to be revised to account for considered moral judgments, but it also may be necessary to regard some of our considered moral judgments as wrong. Bilateralism may be deemed a recalcitrant feature of torts that tells against economic theories, but it also may simply be the case that no one has yet worked out an adequate economic explanation for the fact that plaintiffs sue defined defendants and seek tort remedies. Alternatively, the lack of fit between bilateralism and economic explanations may be a consideration that tells against the existing doctrine, which ought to be reformed in the name of increasing efficiency. Note that this latter approach is not really an explanation of law, but what I earlier called a frankly


\textsuperscript{179} For a description of the program, see the ACC website, http://www.acc.co.nz/ (last visited Oct. 6, 2010).

\textsuperscript{180} Coleman, supra note 7, at 186.

\textsuperscript{181} See COLEMAN, PRACTICE OF PRINCIPLE, supra note 8, at 17–19.

\textsuperscript{182} KUHN, supra note 88, at 64, 68–72 (recounting examples of crisis and paradigm shift within astronomy and chemistry).

\textsuperscript{183} See id. at 79 (pointing out that certain astronomical observations were counterinstances for Copernicus but merely puzzles for adherents to Ptolemaic cosmology).

\textsuperscript{184} See Daniels, supra note 150, at 257.
normative argument, seeking the extension, modification, or reversal of existing law on the basis of some extralegal consideration.\footnote{The language here is borrowed from FED. R. CIV. P. 11 and is meant to underscore the distinction between explaining existing law and seeking to change existing law.}

The term "extralegal" suggests that the difference between frankly normative appeals for changing existing law and arguments that trade on explanatory or metatheoretic concerns has to do with the status of the norms to which the argument appeals. One of the most important problems in jurisprudence is the relationship between law and morality. Section II set forth several criteria for theory selection in the natural sciences: a theory is to be preferred when it explains more of the observed evidence, $E_1, E_2, \ldots E_n$, than its rivals. A theory should be preferred over its rivals if it makes use of fewer independent postulates, axioms, fundamental principles, or entities than are necessary to enable the theory to explain some observation, $E_n$. A theory should enable us to say significant things, generate insights, and it should have implications for future research. A scientific explanation must account for observed phenomena. Similar theory-selection criteria apply in legal theory, but a further question remains regarding the content of the raw data, $E_1, E_2, \ldots E_n$, which must be taken into account, and from which we may conclude that one explanation is more consilient, fruitful, simple, etc., than its rivals. Legal theorizing is distinguished from normative theorizing generally by its careful attention to the boundary between considerations that count in favor of a conclusion of law and those which are somehow external to the rhetorical practices of legal reasoning. To illustrate, consider one of the arguments summarized briefly in the introduction.

David Luban wishes to argue that the attorney-client privilege and the related duty of confidentiality are all about protecting human dignity.\footnote{LUBAN, supra note 28, at 80.} The traditional argument for confidentiality and privilege is utilitarian. Unless lawyers can offer their clients an ironclad guarantee that they will not disclose what they learn in the course of representation, clients will not trust that they can be candid and thus will withhold information that could be crucial to their case.\footnote{See id. (noting that the "familiar justification of these doctrines lies in the concern that without confidentiality, clients will be chilled from telling their lawyers what the lawyers need to know to represent them").} Lawyers will not only be less able to prepare effective cases in litigated matters, but without a relationship of trust and confidence, they may also be unable to give their clients candid advice that will lead to compliance with the law.\footnote{The most powerful argument along these lines is Monroe Freedman's. See MONROE H. FREEDMAN & ABBE SMITH, UNDERSTANDING LAWYERS' ETHICS 127-40 (2d ed. 2002).} Luban questions whether this is the best explanation for the law of confidentiality and privilege. His argument relies on
the situation of a client with guilty knowledge of some sort, seeking legal representation. The client would be faced with an agonizing choice to either lie to his lawyer, withhold the information, or reveal the secret to his lawyer knowing it will be disclosed. The effect, says Luban, is essentially coerced self-incrimination.\textsuperscript{189} Norms against self-incrimination have constitutional status in the United States, of course, but the further question is what deep, underlying value is expressed in both the Fifth Amendment and the attorney–client privilege. Luban’s argument is that there is a unifying concept of human dignity at work, which has effects in diverse areas of law: “[t]o be a witness against yourself means to assume the disinterested outsider’s stance toward your own condemnation.”\textsuperscript{190} This same conception of dignity also explains the permissibility of so-called Alford pleas, in which a criminal defendant pleads guilty but denies having committed the crime charged.\textsuperscript{191}

Notice the tacit appeal to theoretical consilience here. The dignity-based explanation has greater power than the utilitarian explanation because it is better able to unify seemingly diverse phenomena: the Fifth Amendment’s self-incrimination clause, the duty of confidentiality and attorney–client privilege, and the practice of Alford pleas. The other quite crucial feature of this explanation is that the value of human dignity here is not a general moral philosopher’s value, but a specifically legal notion of dignity, derived from its expression in legal norms. Luban identifies the wrong of humiliation, the assault on the value of dignity, as involving someone in “an extraordinary kind of self-alienation, as if the only interest you have in the matter is the state’s interest in ascertaining the truth and apportioning blame.”\textsuperscript{192} The explanation appealing to the value of dignity exhibits theoretical consilience over a particular domain. The “evidence” to be explained, $E_1, E_2, \ldots, E_n$, is the way in which the legal system protects important human interests in various contexts. None of the bits of evidence, $E_n$, includes extralegal philosophical conceptions of dignity. One might refer to dignity as involving self-respect, social honor, freedom from control, or behaving in a manner that reflects one’s self-esteem.\textsuperscript{193} Luban does not start with this kind of ordinary language analysis, however, but looks to the way in which the value of dignity is instantiated in legal protections that can be understood as aimed at preserving human dignity.\textsuperscript{194} In terms of logical form, dig-
nity is not a premise in a deductive justification of a legal norm. Instead, it is the conclusion of an inference to the best explanation for the content of legal norms.

Not just any appeal to consilience will do. Many things can be unified under one overarching explanatory concept, but a good theory will do so in a way that conveys a sense that order has been created out of apparent chaos. There is an inevitable aesthetic dimension to evaluating a legal explanation. Some appeals to consilience have an additional, admittedly hard to theorize, quality of elegance. Luban's use of criminal defense advocacy, compelled self-incrimination, and Alford pleas is elegant in its invocation of contexts in which the reader intuitively feels that the same kinds of values are at stake. The image of the lonely, frightened, friendless criminal defendant is a staple of the justifying narratives offered by lawyers.195 The value inherent in the attorney-client privilege is therefore linked with an image that has considerable power elsewhere in the law, such as the context of the criminal defendant facing the power of the state and the possibility of compelled self-incrimination. On the other hand, some attempts at unification feel ad hoc or strained. The first article cited in the introduction, on anticommodification as an explanation of the consideration doctrine in contract law, attempts to unify some of our intuitions about promises (e.g., that a promise to take one's significant other out for dinner conveys affection and should not be handled using the same norms that apply to a promise to deliver goods on time) by appealing to an explanatory concept that seems to be doing very different work in unrelated areas of the law.196 Why do we prohibit a market in infant adoption or donor organs? Because some things should just not be the subject of market transactions.197 That seems to have little to do with the consideration doctrine in contract law, which applies to promises with respect to transactions where there is no intuitive sense that market-based norms are inappropriate. This explanation lacks the quality of elegance because it feels like it cobbles together bits and pieces of legal doctrine without any prior relationship to each other.

196 Gamage & Kedem, supra note 2, at 1302–03.
197 The authors cite Carol Rose for the proposition that one can (and should) bring a bottle of wine to the host of a dinner party but to bring an equivalent amount of cash would cause serious offense. See id. at 1325 (citing Carol M. Rose, Whither Commodification? (Yale Law Sch. Pub. Law & Legal Theory Research Paper Series, Paper No. 84; Ctr. for Law, Econ. and Pub. Policy, Research Paper No. 308, 2005), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=706644#%23.
An elegant explanation also avoids treating relatively inconsequential doctrinal wrinkles as major counterinstances that require wholesale theoretical revision. The invocation of anticommodification norms is supposed to explain why nominal consideration is permitted by contract law while alternative forms of promising that convey the parties' intention to be bound (such as using a seal) are not.\textsuperscript{198} It is certainly a puzzle why contract law treats a peppercorn as adequate consideration while using a seal is treated as a "mere formality," not satisfying the consideration requirement.\textsuperscript{199} But it is not a serious puzzle, requiring an elaborate explanation in terms of taboos around monetizing all aspects of human relationships. Sometimes puzzles can be left as puzzles. On the other hand, a theory may be faulted if a puzzle is serious enough and the theory fails to address it. It is difficult to give non-question-begging explanations of the requirement in tort law that the plaintiff show actual causation,\textsuperscript{200} but a theory of torts that glossed over the requirement of showing causation, treating it as a puzzling anomaly but not worthy of sustained analysis, would be a deficient one. The difference between a certain feature of the doctrine and a curious outlier is, itself, not easy to theorize, but it will be apparent to anyone with experience with the relevant area of law. It will appear as a paradigm, not in the sense in which that word is used by Kuhn, but in a sense familiar to lawyers. A paradigm case illustrates a general principle in its most obvious form. If the principle means anything, it must mean that the paradigm case comes out in the way it did.\textsuperscript{201} If a theory cannot account for a paradigm case, so much the worse for the theory. On the other hand, as a case gets farther away from the paradigm case, the more latitude a theorist has to treat it as a mere puzzle.

Elegance is an aesthetic value, which illustrates Peter Lipton's claim that a scientist relying on IBE seeks the loveliest explanation for observations.\textsuperscript{202} If this is the case even in the natural sciences, then in an inherently normative discipline like law, which depends for its legitimacy on persuasive connections between past events and present rights and duties, explanation should be understood as similar to literary and artistic criticism. Taken at face value, this is a fairly banal point. Scholars have been arguing for a long time that legal argument

\textsuperscript{198} Id. at 1321.
\textsuperscript{199} See, e.g., Arthur Linton Corbin, Corbin on Contracts § 127 (one vol. ed. 1952).
\textsuperscript{200} See, e.g., Jeremy Waldron, Moments of Carelessness and Massive Loss, in Philosophical Foundations of Tort Law, supra note 145, at 387, 398.
\textsuperscript{202} See supra note 75 and accompanying text.
is an interpretive practice,\textsuperscript{203} so it would appear to follow that legal \textit{theory} also must be understood in terms of rhetoric. As noted at the outset, it is widely assumed that law belongs to the domain of practical reason and cannot be assessed using scientific methods.\textsuperscript{204} The legal theorist who has best captured the unscientific, but not unrigorous, theoretical foundations of the law is Dworkin, with his insistence that judicial decisions respect the value of integrity. Dworkin's critics, most prominently Stanley Fish, have noted that he sometimes struggles to avoid collapsing interpretation into either judicial subjectivism or the recovery of the "true" meaning of texts.\textsuperscript{205} According to Fish, a judge who respects the virtue of integrity is merely doing what judges do, which is to say using whatever rhetorical devices judges use in order to make their opinions persuasive.\textsuperscript{206} Fish, the mischievous antitheoretician,\textsuperscript{207} wants to deny that anything we say at the level of theory is useful to practice, so he would undoubtedly be doubly skeptical of metatheory.

This is a bit unfair to Dworkin, however, who makes a substantive claim along with a methodological one. Dworkin's substantive claim is that integrity must respect both past political decisions and the community's moral principles.\textsuperscript{208} He is not telling judges merely to do whatever they were doing but reminding them that the legitimacy of adjudication depends on a certain kind of connection between their decisions and wider moral concerns. It is certainly the case that Dworkin resists foundationalism.\textsuperscript{209} He does not, however, deny the objectivity of legal judgments. Indeed, his work has consistently connected

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\textsuperscript{203} See, \textit{e.g.}, Richard A. Posner, \textit{Judicial Opinions as Literature}, \textit{in Law and Literature} 255, 255 (rev. and enlarged ed. 1998); James Boyd White, \textit{Reading Law and Reading Literature: Law as Language}, \textit{in Heracles' Bow: Essays on the Rhetoric and Poetics of the Law} 77, 77 (1985); Jessica Lane, \textit{The Poetics of Legal Interpretation}, \textit{in Interpreting Law and Literature} 269, 269 (Sanford Levinson & Steven Mailloux eds., 1988). Although the word "interpretation" is perhaps more common, I use the term "criticism" to distinguish the problem of interpretation in most analytic jurisprudence, which is concerned more with questions such as the relationship between texts and meaning, the problem of objectivity, and whether intention is relevant to interpretation. \textit{See generally Law and Interpretation: Essays in Legal Philosophy} (Andrei Marmor ed., 1995) (examining whether recent methodological developments in interpretation are good).

\textsuperscript{204} Posner, \textit{supra} note 203, at 272.


\textsuperscript{206} See Stanley Fish, \textit{Still Wrong After All These Years}, \textit{in Doing What Comes Naturally}, \textit{supra} note 205, at 356, 357.

\textsuperscript{207} See Stanley Fish, \textit{Dennis Martinez and the Uses of Theory}, \textit{in Doing What Comes Naturally}, \textit{supra} note 205, at 372, 372 (reporting that Dennis Martinez, a baseball pitcher, had received advice from his manager to "[t]hrow strikes and keep 'em off the bases . . . What else could he say?" (internal quotation marks omitted)).

\textsuperscript{208} See \textit{supra} notes 125–27 and accompanying text.

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EXPLANATION IN LEGAL SCHOLARSHIP

objectivity in law with political legitimacy. The central argument of his legal theory is summarized in a passage in *Law's Empire*.

According to law as integrity, propositions of law are true if they figure in or follow from the principles of justice, fairness, and procedural due process that provide the best constructive interpretation of the community's legal practice.210

If one asks, "How do we know which explanation is better?," Dworkin has a ready answer. The explanation to be preferred is the one that makes the most satisfying fit with the community's moral principles.211 A lawyer, judge, or legal scholar aims to offer an explanation that is the best it can be, in terms of justice, fairness, and other political values. In my view, Dworkin's moralized account of theory-acceptance shifts the burden to doctrinal legal scholars to either accept the role of moral principles in legal explanation, or articulate metatheoretical criteria that show why we should prefer one explanation to another, without reference to morality.

CONCLUSION

There are two bigger issues at stake in this Essay, which I have discussed somewhat obliquely and, I fear, incompletely out of space constraints. One is the autonomy of nonnormative, nonpragmatic theoretical legal scholarship as a discipline. The second is the relationship between aesthetic values and legitimacy. By autonomy, I mean the capacity of the discipline to resist being reduced to something else; it is what Langdell meant by his claim that law could be approached as a science, or the more modern formalist claim that departments of law exhibit "immanent rationality" that renders the law intelligible to the scholar or judge.212 Legal scholars are of course familiar with the use of disciplines such as economics, philosophy, sociology, anthropology, and psychology to illuminate some problem in the law. These disciplines offer rigor and breadth to what might otherwise be an insular, somewhat naive discipline. Here is Richard Posner on interdisciplinary scholarship:

There is still more to discomfit today's legal doctrinalist. He is a student of texts, and the hermeneuticist has exposed the naiveté of legal interpretation . . . , while the economist has derided the doctrinalist's grasp of policy and the feminist and the critical legal


210 *Dworkin, Law's Empire*, supra note 8, at 225.

211 See id. at 256.

212 See Weinrib, supra note 155, at 956, 963–65.
scholar have exposed the unconscious biases that permeate legal scholarship.\textsuperscript{213} Doctrinal scholarship has to be able to respond to this challenge by establishing its methodological bona fides, and so far it has not done so in a systematic way. If it fails to do so, there would be no reason to respect the conclusions of these scholars or to continue to grant disciplinary autonomy to doctrinal analysis.

The deeper problem is the most plausible metatheory of doctrinal scholarship is IBE, and the essence of IBE is an aesthetic judgment that one explanation is “lovelier” than another.\textsuperscript{214} The familiar objection to IBE in the empirical sciences—that we have no reason to believe that a lovely explanation tracks truth\textsuperscript{215}—can be raised by analogy here. The difference is that the truth claims made about scientific theories, which are underwritten by IBE arguments, cannot be validated in other ways, so that IBE presents itself as a pretty good alternative to doing without theories of explanation. Unlike van Fraassen’s example of the mouse in the wall, which is the best explanation for the observed mouse droppings, scratching noises, and disappearance of cheese, the postulated entities and scientific laws that function in scientific explanations cannot be directly observed.\textsuperscript{216} Appeals to explanatory loveliness may be the best we can do in science. In legal explanation, however, we do not need to infer to the existence of something unobservable or mysterious. We already have a whole toolbox of normative concepts that bear on legal explanation, such as efficiency, justice, fairness, equality, truth, legitimacy, and so on. The point here is not so much that legal scholars ought all to become pragmatists. Rather, it is merely to point out that it is curious that so much effort in doctrinal scholarship goes into evading direct appeals to moral ideals. In many cases, the legal explanations considered here could be recast as arguments for the desirability, in moral and political terms, of some legal principle. That such an argument seems to be present in an indirect, covert way suggests that legal scholarship cannot let go of moral and political arguments. To quote Stanley Fish once more, “... and it’s a good thing, too.”\textsuperscript{217}

\textsuperscript{213} RICHARD A. POSNER, The Triumphs and Travails of Legal Scholarship, in OVERCOMING LAW, supra note 12, at 81, 88.
\textsuperscript{214} See NOLA & SANKEY, supra note 5, at 128.
\textsuperscript{215} See, e.g., id. at 129–30.
\textsuperscript{216} VAN FRAASSEN, supra note 5, at 20–21.
\textsuperscript{217} FISH, supra note 160, passim (alterations omitted).