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I. Holmesian Anti-Logic and the "Fallacy of Logical Form"

The life of the law is, and should be, logic suffused by experience and experience tempered by logic. That is the principal proposition I defend in this essay.

It is now a commonplace that Holmes’s declaration "The life of the law has not been logic; it has been experience" is, as Thomas Grey has said, the "central slogan of legal modernism." Holmes first offered it in 1880 in a review of C. C. Langdell’s book on contracts, and he repeated it prominently at the opening of *The Common Law*, published in the same year, where it serves as part of an extended admonition about the limitations of "logic" in the best explanation of common law doctrines:

The object of this book is to present a general view of the Common Law. To accomplish that task, other tools are needed besides logic. It is something to show that the consistency of a system requires a particular result, but it is not all. The life of the law has not been logic: it has been experience. The felt necessities of the time, the prevalent moral and political theories, institutions of public policy, avowed or unconscious, even the prejudices which judges share with their fellow men, have had a good deal more to do than the syllogism in determining the rules by which men should be governed. The law embodies the story of a nation’s development through many centuries, and it cannot be dealt with as if it contained only the axioms and corollaries of a book of mathematics.

I refer to this basic thesis as Holmes’s "anti-logic." The anti-logic thesis is not a passing fancy on Holmes’s part. Rather, he maintained and repeated it (though not always in the same words) for at least twenty-five years, from the 1880 review of Langdell’s book to his 1905 dissent in *Lochner v. New York*, in which he declared: "[G]eneral propositions do not decide concrete cases. The decision will depend on a judgment or intuition more subtle than any articulate major premise." The anti-logic thesis is, of course, also a major emphasis in his essay of *The Path of the Law*, and I detail Holmes’s anti-logic thesis in part I of this chapter and challenge it in several respects in part II.
tended to offer the prediction thesis not as a complete jurisprudential account of "the concept of law," but rather as a working explanation of the law from the limited point of view of the lawyer (which he reflects in the "bad man's point of view" ["Path" 174]). Holmes clearly speaks from the point of view of a legal official who is promulgating rules, not predicting the behavior of public officials.

Second, even as an account of the dominant concern of clients and lawyers, the prediction thesis is far too narrow in its focus on the behavior of courts—a point also long remarked by scholars.° Even "the prediction of the incidence of [the use of] public force through the instrumentality of courts" requires accurate prediction of behavior by several other public "instrumentalities," such as the police, administrative-agency field officers and administrative-law judges, congressional committees, special prosecutors, and district and U.S. attorneys. There is little evidence that Holmes understood this.

b. The Separation Thesis and the "Bad Man." Holmes introduces the perspective of the "bad man" as a heuristic device to illustrate his "first principle for the study of law," namely, the separation thesis: "[T]he only confusion of thought can result from assuming that the rights of man in a moral sense are equally rights in the sense of the Constitution and the law" ["Path" 171–72]. Arguing for this principle occupies just one quarter of the essay, in which Holmes first makes the point as a matter of abstract jurisprudence (169–78). In this part of the essay, Holmes discusses the bad man's view of the distinction presupposed in "the many discussions which have arisen in the courts on the very question whether a given statutory liability is a penalty or a tax" (173). In Holmes's view, courts tend to conflate legal norms and moral norms when they attempt to maintain and apply this distinction by assessing whether the conduct in question is "legally right or wrong." Were their views to be washed in the "acid bath" of the bad man's perspective, argues Holmes, legal reasoners would see no significance in the distinction. The real distinction could be found only in some additional difference in disadvantages (or other consequences) that judges attach to conduct in the name of a "penalty" compared to those they attach to conduct in the name of a "tax."

Holmes follows his more abstract jurisprudential argument about the separation thesis with three principal examples, two from contract law and one from tort law. Regarding contract law, Holmes argues that the "obligation" to keep a contractual promise is not moral; rather "[t]he duty to keep a contract at common law means a prediction that you must pay damages if you do not keep it and nothing else" (175). Moreover, "[m]orals deal with the actual internal state of the individual's mind," whereas "all contracts are formal, and the making of a contract depends not on the agreement of two minds in one intention, but on the agreement of two sets of external signs" (178). Regarding torts, Holmes argues that such terms as 'malice' occasion a confusing conflation of legal and moral concepts. Properly understood, the legal concept of malice is not well understood "in the moral sense, as importing a malevolent motive," but "only signifies that the tendency of [a defendant's] conduct under the known circumstances was very plainly to cause the plaintiff temporal harm" (176–77). Holmes sums up his separation thesis with this striking comment: "For my own part, I often doubt whether it would not be a gain if every word of moral significance could be banished from the law altogether, and other words adopted which should convey legal ideas uncloaked by anything outside the law" (179).

c. The "Anti-Logic" Thesis and the "Fallacy of Logical Form." After advancing and illustrating the separation thesis, Holmes turns to the second of his two "principles for the proper understanding of law," which he refers to as "the fallacy of logical form" (184). According to Holmes, the fallacy is "the notion that the only force at work in the development of the law is logic." This is a key argument, and I consider it in detail later.

d. The Rational Reform Thesis. To use William James's enduringly useful term, Holmes advanced many "tough-minded" skeptical sentiments in The Path of the Law: that "certainty generally is an illusion, and repose is not the destiny of man" (181); that "we do not realize how large a part of our law is open to reconsideration upon a slight change in the habit of the public mind" (181); that judicial decisions sometimes harbor "a concealed, half-conscious battle on . . . question[s] of policy" (182); that "the very ground and foundation" of judges' judgments are frequently "inarticulate and often unconscious" (182). Yet there is a vitally powerful element in the essay that acknowledges—indeed celebrates and trumpets—the power of abstract rational ideas in general and declaims both the possibility and the normative attractiveness of imposing rational reform upon legal doctrines. Nearly half of the essay is devoted to this theme, which I summarize here briefly.

Holmes begins this part of the essay by asserting that the law of his day was "at the beginning of a philosophical reaction, and of a reconsideration of the worth of doctrines which for the most part are still taken for granted without any deliberate, conscious, systematic questioning of their grounds" (185). Holmes identifies the unthinking imitation of the past and the undeclared following of tradition as the chief "impediments to rational generalization" of the law (190). "Everywhere the basis of principle is tradition, to such an extent that we even are in danger of making the role of history more important than it is" (191). Time and again, he complains, "tradition . . . overrides rational policy" (192). Not that history has no proper place in "the rational study of law"; it does, both because "without it we cannot know the precise scope of rules which it is our business to know," and because an understanding of history "is the first step toward an enlightened skepticism, that is, towards a deliberate reconsideration of the worth of those rules" (186–87). Holmes warns, however, that despite the value of understanding the history of legal doctrines and insti-
tutions, there is also a grand danger in attending to history in the wrong way. "It is revolting," he says, "as yet another of the essay's classic dicta, "to have no better reason for a rule of law than that it was laid down in the time of Henry IV. It is still more revolting if the grounds upon which it was laid down have vanished long since, and the rule simply persists from blind imitation of the past" (187).

What is to be done to overcome the intellectually confining shackles of the traditionalist's overvaluation of history? Holmes's answer is succinct and programmatic:

We must beware of the pitfall of antiquarianism, and must remember that for our purposes our only interest in the past is for the light it throws upon the present. I look forward to a time when the part played by history in the explanation of dogma shall be very small, and instead of ingenious research we shall spend our energy on a study of ends sought to be attained and the reasons for desiring them. (195)

Holmes places the "deliberated" study of the goals to be achieved by legal doctrines at the center of his exhortation to right-thinking legal moderns "to try to set some corner" of the legal world "in the order of reason" and collectively "to aspire to carry reason as far as it will go throughout the whole domain" (185). His axiologic program, as one might call it (a program focused on the values at which legal doctrines are properly aimed), is designed to help lawyers, judges, and scholars make legal doctrines and institutions "more rational and more civilized"; this effect is achieved "when every rule . . . is referred articulately and definitely to an end which it subserves, and when the grounds for desiring that end are stated or are ready to be stated in words" (186).

Holmes offers some additional intellectual tools to fill out and complement the axiologic program of rational reform. Economics is one. "Every lawyer ought to seek an understanding of economics," for such an understanding reveals that "for everything we have we give up something else, and we are taught to set the advantage we gain against the other advantage we lose, and to know what we are doing when we elect" (195). Jurisprudence is another tool. True to his earlier denunciation of "axiomatized" theories of law and his promotion of the prediction thesis, Holmes envisions "the study of what is called jurisprudence," the study of "law in its most generalized part" (195), not as "a striving for a useless quintessence of all systems," but rather as a means of providing an "accurate anatomy" (196–97) of one system—a device for "discern[i ng] the true basis for [law's] prophecy" (196). Holmes summarizes these several elements of his "ideal" program for rational legal reform thus:

In the first place, . . . follow the existing body of dogma into its highest generalizations by the help of jurisprudence; next, . . . discover from history how it has come to be what it is; and, finally, so far as you can, consider the ends which several rules seek to accomplish, the reasons why those ends are desired, what is given up to gain them, and whether they are worth the price. (198)

B. Five Senses of 'Logic' in The Path of the Law

There is much wisdom and insight in the four theses Holmes proffers, but along the path there are also some crucial missteps. Among them, in my view, is Holmes's analysis of the role of what he terms "logic"10 in legal reasoning, doctrine, and institutions. That analysis comes in his treatment of the second of what he refers to as two "first principles for the study of this body of dogma or systematized prediction which we call the law" (169), principles that he also calls "two pitfalls" that "lie perilously close to the narrow path of legal doctrine" (178) and two "fallacies." The first of these first principles is the separation thesis. (The associated fallacy, apparently, is failure to recognize its truth.) The second of the first principles is the "fallacy of logical form"—"the notion that the only force at work in the development of the law is logic" (180).11

To assess the cogency of Holmes's arguments about this supposed fallacy, we must first discern what exactly Holmes meant in speaking of "logic" and "logical form." This is no small task, since Holmes used the term 'logic' in the essay in several different senses, without defining and explaining which sense he had in mind at different points.12 This lack of systemic care is important. The anti-logic thesis has had such a misleading but powerful impact on the thinking of generations of law students, lawyers, judges, and scholars about the ways in which it is both possible and normatively desirable to recognize and promote the life of articulate reason in legal decision making.13 Obviously Holmes did not explain his understanding of logic in legal decision making only in *The Path of the Law*; the discussion there reflects a view that Holmes repeatedly articulated, and it will be helpful occasionally to refer to passages in other works to discern how he defines various meanings of 'logic'.

In *The Path of the Law*, Holmes uses the term 'logic' in at least five different senses. What he says about "logic" is true of only some of the varied references for that term. He thus slides quite close to a logical fallacy of his own (namely, equivocation). The five uses are these:

(i) 'Logic' as one of a set of roughly synonymous terms, including 'sensible', 'reasonable', 'warranted', 'advisable'. For example, "this really was giving up the requirement of a trespass, and it would have been more logical, as well as truer to the present object of the law, to abandon the requirement altogether" ("Path" 188); "there are some cases in which a logical justification can be found for speaking of civil liabilities as imposing duties in an intelligible sense" (175).

(ii) 'Logic' as syllogistic inference (or some other type of deductive inference). For example, "there is a concealed, half conscious battle on the question of legislative policy, and if any one thinks that it can be settled only deductively, or once and for all, I only can say that I think he is theoretically wrong" (182–83).14
(iii) 'Logic' as a formal deductive system, with axioms, rules of inference, and theorems, as in geometry. For example, "the danger of which I speak is... the notion that a given [legal] system, ours for instance, can be worked out like mathematics from some general axioms of conduct" (180).

(iv) 'Logic' as a rationally discernible pattern of cause and effect. For example, "The condition of our thinking about the universe is that it is capable of being thought about rationally, or, in other words, that every part of it is effect and cause in the same sense in which those parts are with which we are most familiar. So in the broadest sense it is true that the law is a logical development, like everything else" (180).

(v) 'Logic' as a set of argument types, individually invariant but distinct from one another. For example, "The training of lawyers is a training in logic. The processes of analogy, discrimination, and deduction are those in which they are most at home. The language of judicial decision is the language of logic. And the logical method and form flatter that longing for certainty and for repose which is in every human mind" (181).

C. 'Logic' in the "Fallacy of Logical Form"

1. SENSES (I) AND (II) — UNPROBLEMATIC. Use (i) is a common, nontechnical use of 'logical' and plays no troublesome role in Holmes’s anti-logic. Nor does use (ii) present any problem. In traditional logic deduction is, of course, an established type of logical inference (only one among several) and it would surely be a serious jurisprudential mistake to believe that "the only force at work in the development of law" is deductive logic. (Pace Holmes, it is difficult to find theorists who endorse this belief, and Langdell is pretty clearly not among them.) What Holmes labels the "fallacy of logical form" is what he takes to be a particular jurisprudential view about deduction — the view that an actual legal system can be formalized in a way that allows deductive inference of results in particular cases. Thus, Holmes’s real target is not deduction per se but some view — exactly what view we shall have to consider — about the role that deduction either does actually play in legal argument (a deductive claim), or can possibly play in legal argument (a conceptual claim), or should play in legal argument (a conceptual and normative claim). The problems come with senses (iii) and (iv).

2. SENSES (III) AND (IV) — VERY PROBLEMATIC. It may seem that the target of Holmes’s anti-logic is sense (iii), the view that actual legal systems are deductively axiomatizable. But here the assertions that comprise Holmes’s anti-logic become problematically unclear. Holmes concedes that the proposition "[The only force at work in the development of the law is logic] is true "in the broadest sense" (broad along what metric, one wonders) for sense (iv) ("Path" 180). This proposition is true, Holmes seems to believe, by virtue of the rather Kantian view that "the postulate on which we think about the universe is that there is a fixed quantitative relation between every phenomenon and its antecedents and consequents" (180). As Holmes also seems to recognize, this concession is a significant threat to the coherence of his anti-logic and prediction theses. To see why, note that the prediction thesis relies, at least implicitly, on the idea that judicial behavior, like other motions and behaviors of the universe (whether products of the intentional mind or not) has a rationally discernible causal structure. The whole idea of "prophesying" the law seems to rely on the assumption that in discerning the causal structure of judicial behavior, the lawyer or judge must examine examples of judicial behavior encountered in experience and recorded in case reports, generalize inductively, and predict, or "prophesy," on the basis of deduction ("logic" in sense (ii)). Thus the "logic" is used in sense (iv), Holmes’s own prediction thesis is an instance of the fallacy of logical form, unless he can distinguish this use from a different use of "logic" by other theorists, who, in Holmes’s view, really do commit the supposed fallacy. Does he distinguish his thesis successfully?

I think not. He does tell us that the "danger of which I speak is not the admission that principles governing other phenomena also govern the law, but the notion that a given [legal] system, ours for instance, can be worked out like mathematics from some general axioms of conduct" ("Path" 180). That is, those who commit the fallacy of logical form, unlike Holmesian predictors, think that the law is, or could be, deductively axiomatized — sense (iii) of "logic". But this brings up a tricky issue for the anti-logic thesis. As many scholars have observed, Langdell was a chief target for Holmes’s anti-logic. It is also well remarked that Langdell, in the brief passages in which he discusses the matter (probably too brief to get a clear picture of his view), seemed to think of the system of legal concepts as one that is generated by means of inductive generalization from decided cases, rather than from some a priori axiomatic structure, and only later applied deductively. Langdell, like Holmes, saw a crucial role for "logic" in sense (iv) in the "legal scientist’s" discernment of legal rules and principles. Langdell also saw a crucial role for the subsequent use of deductive inference ("logic" in sense (ii)), when the inductively discovered rules and principles are later applied to individual cases; surely Holmes’s prediction thesis sees an important role for deductive inference working on the rules and principles discovered from experience. In this way, Langdell’s conception of the role of logic was much closer to Holmes’s than Holmes acknowledged.

Despite these similarities, real differences of opinion about the role of logic in legal argument seemed to remain between Holmes and Langdell. Langdell was far more sanguine than Holmes about the possibility of organizing the inductively generated rules and principles into a coherent conceptual order that could later be applied to individual cases apodictically. In the helpful terms that Thomas Grey has brought to the analysis of "Langdell’s orthodoxy," Langdell
may have believed, along with other "legal scientists" of his day, that empirically (and inductively) generated legal rules and principles could in fact be organized into a system that is "complete" (i.e., such as to provide one right answer to every case), "conceptually ordered" (i.e., consisting of lower-level rules that can be derived from a smaller set of higher-order principles that are themselves coherent), and "formal" (i.e., such as to provide apodictic certainty for individual legal decisions). Although Holmes himself aspired, in much of his work, to render areas of law into conceptually ordered systems, he was also quite skeptical of the ability of any "legal scientist," himself included, to organize legal rules and principles so as to allow for one right and certain resolution—such as deduction could in theory provide—of every case. For Holmes, blind, "inarticulate," and irrational forces are too powerfully present in legal decision making for Langdell's conceptualistic goals to be realizable:

The logical method and form flatter that longing for certainty and for repose which is in every human mind. But certainty generally is an illusion, and repose is not the destiny of man. Behind the logical form lies a judgment as to the relative worth and importance of competing legislative grounds, often an inarticulate and unconscious judgment, it is true, and yet the very root and nerve of the whole proceeding. ("Path" 181)

This is a real disagreement, but if it is this view that Holmes was targeting as the fallacy of logical form, then the fit between the Langdellian ontology and epistemology of law (inductive discovery, conceptual ordering, deductive application) and the fallacy of logical form is tenuous at best. Again, in Holmes' terms, the fallacy is "the notion that the only force at work in the development of law is logic" (180, emphasis added). If 'logic' in this proposition is being used in either sense (ii) (deductive inference) or sense (iii) (a deductive system), then that proposition seems not to describe Langdell's view at all; as noted earlier, Langdell accorded a vital role to both inductive inference (close kin to 'logic' in sense (iv) — rationally discernible cause) and deductive inference ('logic' in sense (ii)), operating in a system conceptually ordered by the "logic scientists" ('logic' in sense (iii)). But Holmes concedes that in sense (iv), which Langdell thought a vital part of legal analysis, logic is a vital force in the development of law (indeed, he even suggests, "the only force," albeit only "in the broadest sense") (180). In sum, though there was genuine disagreement between Holmes and Langdell about the role of deductive logic in legal reasoning, the disagreement was not nearly as great as Holmes made out, in part because Holmes mischaracterized the complexity of Langdell's views about the role of different modes of logical inference in legal argument. (I discuss those different modes in some detail in the next section.)

3. Sense (v) — Most Promising. This brings me to a final point. Holmes seems unclear about what he himself understood to be within the scope of the kind of logic involved in the fallacy of logical form. The fallacy of logical form seems to be the view that law can be organized into an axiomatic system in such a way as to allow for apodictic resolution of individual cases. But at a crucial point in the anti-logic section of the essay, Holmes speaks as if it is neither solely deduction ('logic' in sense (ii)) nor solely a deductive system ('logic' in sense (iii)) that he has targeted, but rather something much more inclusive, namely, 'logic' in sense (v):

Judicial dissent is often blamed, as if it meant simply that one side or the other were not doing their sums right, and, if they would take more trouble, agreement inevitably would come.

This mode of thinking is entirely natural. The training of lawyers is a training in logic. The processes of analogy, discrimination, and deduction are those in which they are most at home. The language of judicial decision is mainly the language of logic. And the logical method and form flatter that longing for certainty and repose which is in every human mind. (181, emphasis added)

Now, it seems, the fallacious view about the possible role of logic in legal argument embraces not only "deduction" but also "the processes of analogy and discrimination" — that is, disanalogical argument! Such an inclusive critique of the role of logic in legal reasoning is surely: a far cry from the narrower and much more plausible view that law cannot be organized into an axiomatic system that is deductively applicable in every case. One has to be not just skeptical, but skeptical to an implausibly extreme, to deny that logic, in the broad sense of a patterned form of inference (including deduction and analogy), plays a vital role "in the development of law." And if the response on behalf of Holmes is that he is not critiquing the view that logic plays a vital role in the development of law, but is instead critiquing the literal belief that "the only force at work in the development of law is logic," well, we must ask who ever believed that logic, in any sense, was the only force at work in the development of law? If the proposition Holmes uses to describe the fallacy of logical form is taken literally, it seems no one, including the most formalist and deductivist of the legal scientists — German, British, or American — could have believed or endorsed that. The ball is in Holmes' court: if he really means it literally, he must show us that he is not attacking a straw theory.

Ironically, perhaps, it is this last of the five conceptions of logic that is the most promising for a cogent explanation of the role of different modes of logical inference in legal argument. As so often, even when Holmes is misguided and somewhat confused, his suggestions are fertile. In part II of this essay, I take up that "suggestion" and explore the role, not just of logic in the narrow sense of deduction, but in the broad sense of patterned inference. Marking the different patterns of logical inference that can be used in legal argument, that are used in legal argument, and that should be used in legal argument comprises the work of an ongoing intellectual enterprise. I call that enterprise the "Jurisprudence of logical form."
II. Anti-Anti-Logic: The Jurisprudence of Logical Form

A. Introduction: Central Tasks in the Jurisprudence of Logical Form

Holmes put the question of the relation between “logic” and “experience” on the jurisprudential map. This question, posed in The Common Law and in essays, including The Path of the Law, has had a powerful and lasting impact on succeeding generations of lawyers, judges, and scholars. His raising and framing of this issue, with typical stylistic grace, has been one of his most valuable contributions to jurisprudence, even though his views were either too unclearly expressed, too insensitive to significant distinctions, or too inadequately supported by accurate conceptual and descriptive analysis to be a useful guide to understanding the reasons and reasonings of law. In advancing the anti-logical thesis and describing the fallacy of logical form as a fundamental jurisprudential error, Holmes posed an eristic challenge to the philosophical friend of legal rationality. That challenge can be met only by answering three questions that are central to understanding the role of logic in legal argument.

First, as a matter of accurate description, what roles does logic play in legal reasoning? This descriptive question motivates a second, conceptual question, namely, What is logical inference? – when does it occur? What is its structure? As I have argued earlier, Holmes’s roughly sketched anti-logic was far too insensitive to this conceptual question, with the result that his own descriptive claim about logic and experience, while suggestive, is not convincing. Once we have a proper understanding of the conceptual terrain of logical inference and a clear description of how logical inference actually operates in legal reasoning,21 we may then pursue the answer to a third question: In what way ought logic to operate in legal reasoning (and “ought” from what points of view – prudential, moral, aesthetic, other)? I take the ongoing project of answering these three questions to constitute the jurisprudence of logical form.

Analytically, the jurisprudence of logical form is firmly analytically connected to many other jurisprudential issues, including the nature and proper role of rule-of-law values, the explication of the concepts of law and legal institutions, the relations among legal, moral, and prudential reasoning, and the theory of formal and informal argumentation. Despite his insights and literary flair, Holmes had a baneful impact on this fundamental area of jurisprudence. Because of his insufficiently discriminative placement of “experience” in opposition to “logic,” Holmes convinced many generations of lawyers, judges, and law professors (whether they trace the view back to Holmes or not) that the rigorous study of logical forms has virtually no proper place in a law curriculum. As a result, American legal culture – reflected in law school, lawyers’ briefing, judges’ opinion writing, law professors’ jurisprudential musings – is rife with poorly articulated justificatory arguments and the belief that judges and lawyers either cannot or should not live up to a higher standard of rational articulateness. Indeed, from time to time law professors even glorify rational inertialness as a virtue of legal argument. One of the most important normative tasks for the jurisprudence of logical form is to combat this legal culture, both by showing the conceptual possibilities of logically articulate legal argument and by arguing its normative merits.

For the most part, I pursue answers to the two questions that I posed earlier in this section: (1) As a matter of accurate description, what roles does logic play in legal reasoning? (2) What is logical inference? When does it occur? What is its structure? I approach these two questions together because they can be conceptually linked in a simple but heuristically powerful way: in explicating the actual roles of different modes of logical inference in legal argument, one necessarily explicates its possible roles. (Everything actual is possible.) I conclude with only the briefest remarks on the third question: (3) In what way ought logic to operate in legal reasoning? I do not seek in this short essay to give comprehensive answers to any of these questions. I shall consider the essay useful if it frames the issues clearly and locates them in the larger framework of jurisprudential analysis and the Holmesian anti-logical corpus.

B. Descriptive and Conceptual Elements in the Jurisprudence of Logical Form

1. LOGICAL FORM (MODE OF LOGICAL INFERENCE). (1) An argument is an ordered pair, consisting of a set of premises, each of which is a proposition that bears a truth value, and (2) a conclusion, another proposition that bears a truth value. An argument’s logical form (or mode of logical inference) is the relation between the truth of the argument’s premises and the truth of its conclusion. There are four fundamental types of logical inference,22 distinguished from one another by the relation that obtains between the premises of the argument and its conclusion when the argument yields the most warranted inference from premises to conclusion that it is logically capable of yielding. In a valid deductive argument, the truth of the premises guarantees the truth of the conclusion. In an inductive argument, the truth of the premises makes the truth of the conclusion (subjectively) probable but cannot guarantee it (the probability is always less than 1). In an abductive argument, the truth of the premises makes the conclusion a plausible candidate for further investigation and confirmation or disconfirmation. In an argument by analogy, the truth of the premises – itself already passed through a filter of confirmation or disconfirmation at an early stage of the multistep reasoning process – either guarantees the conclusion or makes it (subjectively) probable, depending on the method by which one of the premises is confirmed or disconfirmed.

2. ENTHYMEMATIC RECONSTRUCTION. Like most logically informal arguments, legal arguments, including arguments offered in judicial decisions, tend
to be enthymematic. An enthymeme is any argument, valid or invalid, deductive or nondeductive, whose logical form (i.e., whose mode of logical inference) is not perspicuous from its original manner of presentation. An enthymematically legal argument proffered by a judge becomes problematic — from interpretative, logical, and even perhaps some prudential or moral point of view — when, by virtue of the way in which it is presented, it is unclear which propositions are being offered to support which others, or which propositions are being inferred from which others, or what the claimed inferential relation is between what are identifiable as premises and conclusions. The work of discerning the logical form of an enthymematically moving from its enthymematically form to a form in which its logical form is perspicuous — is interpretative work. Among the prima facie interpretative options for the interpreter of a legal enthymeme are the four basic logical forms: deduction, induction, abduction, and analogy. The task of an interpreter faced with an enthymematically argument is to select from among these prima facie interpretative options the one that offers the best explanatory interpretation, all things considered.

3. FOUR BASIC LOGICAL FORMS

a. Induction. In an inductive argument, the truth of the premises cannot guarantee the truth of the conclusion, but when the premises are well chosen their truth can warrant belief in the truth of the conclusion to some degree of probability. There are two varieties of inductive inference: inductive generalization and inductive analogy. Inductive generalization involves generalizing from particular instances. The premises of this type of argument report features of the particulars, and its conclusion states a probabilistic generalization that is inferred from those particulars. Schematically, an inductive generalization looks like this:

Where

'\alpha_1, \ldots, \alpha_n' stands for a set of individual instances, and

'\phi' stands for one property that the individuals \alpha_1, \ldots, \alpha_n have been noted to possess, and

'\theta' stands for another property that the individuals \alpha_1, \ldots, \alpha_n have been noted to possess,

the pattern of inductive generalization is as follows:

(1) \alpha_i is both \phi and \theta (i.e., has both characteristics, \phi and \theta)

[e.g., Yokel is a law professor, and Yokel is logorrhctic.]

(2) \alpha_n is both \phi and \theta

[Pokel is a law professor, and Pokel is logorrhctic.]

(3) \alpha_i is both \phi and \theta

[Yokel is a law professor, and Yokel is logorrhctic.]

\[\alpha_n\] is both \phi and \theta

[The nth individual observed is both a law professor and is logorrhctic.]

(\# = 1) There were few or no observed instances of an \alpha that was \phi and also was not \theta.

[Probably] all \alpha's are \theta

[Probably all law professors are logorrhctic.]

The other type of inductive inference is inductive analogy. Instead of reaching a conclusion about a class of individuals, an inductive analogy offers a conclusion about one individual, based on a generalization about the classes to which that individual belongs; the generalization is that the individual (probably) has the characteristics that have been observed to be conjoined in the premises (e.g., from stated observations that one hundred law professors are logorrhctic and that Jones is a law professor, one concludes that Jones is probably logorrhctic as well).

Unlike valid deductive inferences, inductive inferences yield only a degree of subjective probability for the truth of the conclusion relative to the truth of the premises. How high a degree of probability a given inductive inference yields depends on several factors, including the number of instances in which individuals have been observed to exhibit the two (or more) characteristics that are the subject of the generalization, the explanatory relations that might obtain among the characteristics asserted in the inductive generalization, and various relevant similarities and differences among the individuals that are sampled in the premises. In law, a great many factfinders' decisions rely on inductive inferences, including the rather ubiquitous generalization-based judgments they are called upon to make regarding what is "reasonable" under the circumstances, what a trade usage or other community norm is, and what constitutes credible testimony by a witness. Judges also often rely on inductive inferences, and inductive judgments not infrequently become parts of authoritative common law doctrines, as in the presumption in contract law that services rendered between siblings are gratuitous.26

Despite its limited proper scope, the prediction thesis presents a nice opportunity to illustrate one role for inductive inference in legal argument. Consider the following bit of legal analysis, which, be it noted, reveals the triumph of Holmesian-legal realist quasi-skeptical thinking about the efficacy of legal rules:

[In the twentieth century, courts and commentators have advanced numerous doctrinal formulations in an attempt to provide judges with principled, clear, and administrable tests to determine when novel scientific evidence should be admitted or excluded. An examination of the history of this field, however, discloses that these doctrinal formulations possess very little predictive power regarding the decision to admit or exclude a
particular piece of evidence. Much more powerful predictors of admission-exclusion decisions can be found by peeling away the layer of doctrine to reveal the underlying functional criteria that actually animate courts in these decisions, irrespective of what doctrinal standard a particular court purports to apply.27

The authors then offer what are apparently inductively generated rules specifying several factors to be used as “more powerful predictors of admission—exclusion decisions.” I say “apparently” because this bit of legal analysis is enthymemetic; it calls upon us as interpreters to discern the logical structure of the authors’ argument from which these rule criteria have been generated.

Let us suppose that

\( \alpha_1 \ldots \alpha_n \) stands for a series of cases in which a court considered whether to admit or exclude proffered Novel Scientific Evidence (NSE) (in the “object language” presented here each individual series of cases is named \( \alpha_1 \ldots \alpha_n \));\(^29\)

\( \phi \) stands for a factor that has been observed to be present in the series \( \alpha_1 \ldots \alpha_n \) that is a factor that the authors claim is a good predictor of courts’ behavior (in the object language presented here, three factors are named \( F_1, F_2, \) and \( F_3 \)); and

\( \theta \) stands for an instance in which the court admitted the NSE or for an instance in which the court excluded the NSE (in the object language presented here these decisions are named \( P \) and \( P' \), respectively).

Let us also assume, for the sake of argument, that the authors are presenting warranted inductive generalizations. Accordingly, we assume that (1) for each factor \( \phi \) about which the authors offer an inductively generalized rule of the form ‘All instances of \( \phi \) are instances of \( \theta \),’ the authors had observed a series of cases \( \alpha_1 \ldots \alpha_n \) in which \( \phi \) was present and in which there were \( n \) decisions \( \theta \) either to admit \( P \) or to exclude \( P' \) the evidence, and (2) that the generalization was supported by a sufficient sample, with sufficient control conditions, such as can be effected by the use of Mill’s methods of agreement and difference. With these assumptions in place, we may reconstruct the pattern of inductive generalization as follows:

1. In \( \alpha_1 \) there was both \( \phi \) and \( \theta \).
2. In \( \alpha_2 \) there was both \( \phi \) and \( \theta \).
   ...
\( n \) In \( \alpha_n \) there was both \( \phi \) and \( \theta \).
\( n + 1 \) There were few or no observed instances of \( \alpha \) that was \( \phi \) and also was \( \neg \theta \).

\( \therefore \) Probably, all \( \phi \)'s are \( \theta \)'s.

Ideally, this argument pattern would underlie and justify the rules that the authors offer for each of the three factors they claim to be good predictors of courts’ behavior in admitting or exclude NSE. Following the schema just presented, I proceed to represent one of the three rules for the factors that the authors present in their article. Note that the authors offer these rules as sufficient conditions for a court’s decision to admit or to exclude NSE. Note also that each of the following rules is (presumably) the conclusion of an inductive generalization of the sort represented by the schema.

Enthymemetic text: Some types of evidence convey essentially subjective determinations via a technique that enjoys the objective aura of ‘science.’ Such evidence is often subject to a high level of scrutiny, and is typically excluded.28

Reconstruction: [Probably] in a case in which a court considers a proffer of NSE (call this case \( \alpha_{i} \), i.e., some member of the observed series of cases \( \alpha_1 \ldots \alpha_n \)), if the NSE conveys an essentially subjective determination via a technique that enjoys the objective aura of ‘science’ (call this predictive factor \( F_i \)), then a court will exclude it (call this \( P \); that is,

[Probably] if \( \alpha_i \) is an instance of \( F_i \), then \( \alpha_i \) will also be an instance of \( P \).

6. Abduction. The conclusion of an abductive argument is an explanatory hypothesis (sometimes referred to as an explanans). The premises consist of (i) a proposition that describes some event or phenomenon that the abductive reasoner believes stands in need of explanation (the explanandum), and (ii) a proposition to the effect that, if the explanatory hypothesis that appears in the conclusion of the abductive inference were in fact true or otherwise warranted, then the explanandum would be sufficiently explained for the reasoner’s purposes. The sufficient-explanation conditional asserts that, if the explanans were a valid theory in the jurisdiction, then it would explain the explanandum as a matter of course. I shall refer to this second premise as the sufficient explanation conditional.23 This premise appears in the form of a logical conditional (i.e., the form ‘If \( \Phi \) then \( \Theta \),’ in which the antecedent (\( \Phi \)) is the explanatory hypothesis (the explanans) that the reasoner has “discovered” in the course of the abductive reasoning, and the consequent (\( \Theta \)) is the explanandum that is asserted in the other premise of the abductive inference. Schematically, where

\( \theta \) stands for an explanandum;
\( \phi \) stands for an explanatory hypothesis (explanans), and

\( \text{If } \Phi \text{ then } \Theta \) stands for a sufficient explanation conditional.

All abductive inferences have three basic steps, arrayed as follows:

1. \( \Theta \).
2. If \( \Phi \) then \( \Theta \).
3. \( \Phi \).
A simple (but unpleasant) forensic example:

1. \( \Theta \).
   \[ \text{Explanandum: The victim died as the result of a bullet-shaped puncture to the chest, but there was no exit wound, and the coroner recovered no bullet.} \]

2. If \( \Phi \) then \( \Theta \).
   \[ \text{Sufficient explanation conditional: If it were the case that an ice bullet had been shot into the victim, it could cause his death and leave no trace other than water.} \]

3. \( \Phi \).
   \[ \text{Explanans: The victim was killed with an ice bullet.} \]

Several observations are due here. First, as with all modes of logical inference, the defining feature of abductive inference is the relation between the truth (or other warrant) of the premises and the truth (or other warrant) of the conclusion. Typically, an abductive reasoner begins the abductive process by assuming or knowing that the proposition expressing the \textit{explanandum} is true or otherwise warranted (a judgment made by observation, inference, memory). The ratiocinative centerpiece of abductive inference is the reasoner's "discovery" (creation, etc.) of a hypothesis that can explain the \textit{explanandum}. It is critical to understand that the second premise of an abductive inference merely selects one from among several possible explanations. Though I say "merely," often great ingenuity, sometimes genius, is required even to see what kinds of explanatory hypotheses might provide an adequate plausible explanation of the \textit{explanandum}. Charles Sanders Peirce, the first modern philosopher to highlight abduction and argue that it is a fundamental inference pattern along with deduction and induction, made the striking claim: "[A]ll the ideas of science come to it by the way of Abduction. Abduction consists in studying facts and devising a theory to explain them. Its only justification is that if we are ever to understand things at all, it must be in that way."\(^{90}\)

Second, the pattern of abduction is \textit{invalid} from a deductive point of view, because it commits the fallacy known as "affirming the consequent."\(^{31}\) Nevertheless, abductive inferences have vital \textit{epistemic} value in contexts in which reasoners must reason their way to an explanatory hypothesis. When properly attentive to the pattern of abduction, a reasoner asserts \( \Phi \) in the conclusion of an abduction, only to settle on it \textit{tentatively} as the proper explanatory hypothesis of \( \Theta \). This tentative "settling" on \( \Phi \) is supported by neither deductive validity nor a probabilistically calculable inductive warrant. Just as a reasoner should understand that the conclusion of a valid deductive argument is held with certainty, and just as she should understand that the conclusion of an inductive argument is held with varying degrees of probability (the more cogent the argument, the higher the degree of probability), so she understands that the conclusion of an abductive inference (\( \Phi \)) is asserted not as a truth, but as a tentatively held hypothesis that is \textit{sufficiently likely to be the proper explanation of} \( \Theta \) that it is worth the effort of confirming or disconfirming it. And the rational abducer recognizes that every abductive conclusion needs some kind of confirmation or disconfirmation. Thus, to return to my earlier example, from an epistemic point of view, in asserting the abductive conclusion "The victim was killed with an ice bullet," the abductive reasoner (a detective, let us suppose) is not warranted in believing that that conclusion is true whenever the premises are true (as he would be if the argument were a valid deduction), nor that any specifiable probability attaches to the conclusion; instead, the most he could be warranted in believing about this conclusion is that it is a sufficiently plausible working hypothesis to warrant the time that it will take to confirm or disconfirm it. He would not, in all likelihood, make that same judgment about the hypothesis "An invisible fairy came from nowhere and stole the deceased's spirit, killing him"—even though, if that proposition were true, it too might well explain the \textit{explanandum}. Given the background theories of nature that I assume this abducer to have, he would not judge that hypothesis sufficiently plausible to be worth any (further) effort at confirmation or disconfirmation.

Third, all abductive inferences share the basic form noted earlier. (I shall refer to this as the \textit{basic pattern}.) That basic pattern, while adequate for my purposes here, does not reveal the entire logical structure of the abductive inference, in that the typical conclusion of an abduction (the \textit{explanans}) is itself an explanatory "proposition" that has considerable internal logical complexity. One kind of complexity that is common in the conclusion (\( \Phi \), the \textit{explanans}) of an abductive inference is worth noting, since, it occurs in a quite typical pattern of abductive \textit{legal} inference. Many abductive inferences have conclusions that are from a logical point of view \textit{rules}. Abductive inferences in science are often of this type, where the "rule" abduced is a scientific law. As I shall explain shortly, one extremely common form of abductive inference in legal reasoning also adds this level of logical complexity to the basic pattern.

Fourth, there is of course a large literature discussing the concept of abduction, including debate about whether abduction is a distinct mode of inference and whether it has any role to play in rational inquiry, scientific or otherwise.\(^{72}\) I believe that abduction is a distinct form of inference, and that it has a vital role to play in many reasoning processes, including legal reasoning. (In this context, I might be said to be abducting abduction as the best explanation for certain phenomena of legal reasoning. It stands in need of confirmation.)

Abduction is a ubiquitous pattern in legal reasoning. So far I have discussed its basic structure, its logical limits (as an invalid form of inference), and its concomitant pragmatic strengths (as a rationally disciplined method of discovery). I now explain that there are distinct settings of legal argument in which usefully distinguishable abductive inferences are made. The task of making legal arguments presents legal reasoners with different kinds of \textit{explananda}, and, accordingly, they seek different kinds of explanatory hypotheses. According to the particular reasoning task the reasoner faces in a context of legal reasoning,
the type of abductive inference will differ; although its basic structure is of course invariant in all settings. Three legal-reasoning settings, calling for three types of abductive explanans, are worth noting. I discuss two of them here and defer discussion of the third for my treatment of analogical argument.

(1) Fact Abduction. When the explanatory hypothesis "abducted" explains an empirical fact, the legal reasoner engages in factual hypothesis abduction or, as I refer to it, fact abduction. (I use this only as a convenient short form, since it is not the fact itself, but a hypothesis that explains the fact, that is abducted.) Fact abduction is the effort to discover an explanation, \( \Theta \), for some fact or event, \( \Phi \). Of course, as always with abductive inferences, once abducted, \( \Theta \) must be confirmed or disconfirmed. Fact abduction is the familiar type of abduction used in philosophy of science, and it is what came to Peirce’s mind when he himself abducted abduction.33 I have already given a simple example ("the victim was killed with an ice bullet"). Fact finders in legal disputes are called upon to use abductive inferences to make judgments about the best factual explanation for events in the world that are the subject of legal dispute.34 Sometimes these inferences are made on a nonexpert basis, where the fact finder relies on what she knows from personal experience and memory and on inference from that knowledge. Sometimes these inferences are made with the help of experts. In these cases the legal fact finder does something of a “meta-abduction” — inferring the best explanation of disputed facts by relying in significant part on abductions performed by scientific experts.

(2) Legal-Rule Abduction. In legal-rule abduction, the reasoner is once again faced with a set of empirically encountered facts that call for explanation. As in fact abduction, the explananda are facts that occurred in the world. But the type of explanation sought here is either not empirical explanation at all or, if it is, empirical explanation in a special “corner” of the empirical world, namely, the symbol-soaked doings of legally authorized officials and the populations subject to their laws.35 Legal-rule abduction aims to explain its explananda by means of an intellectual apparatus consisting of the aims, methods, and judgments specific to legal reasoning as a distinct rational enterprise. In short, it aims to explain facts from a legal point of view, rather than, say, from a scientific, military, or business point of view.36 It is a type of reasoning that every lawyer does, and must do, when a client walks through the door seeking legal redress for something that happened to him. The legal reasoner’s task in legal-rule abduction is to “abduce” the legal rule (or the “theory of the case”) that makes “legal sense,” according to the rules of the jurisdiction, of the facts that have given rise to a potential legal dispute. Whereas in fact abduction the reasoner tentatively settles on an explanans as true (or otherwise warranted) from some empirical point of view, in legal-rule abduction the reasoner tentatively settles on a theory of the case that is true (or otherwise warranted) according to the laws of the jurisdiction in which the disputed event is to be litigated.

In most American jurisdictions, the same reasoning is also required of a judge before she can dismiss a complaint for “failure to state a claim on which relief can be granted.” Rules of pleading (certainly federal rules, also most state rules) permit a complaining litigant to offer no more than a very vague summary of the “facts” that are the basis of his complaint. The rules do not require the characterization of those facts in legal terms — that is, a well-pleaded complaint need not present the litigant’s own legal explanation of the facts. When it does not present such an explanation, the judge must try to abduce a legal rule that might give the complainant a sustainable cause of action if the facts alleged are later proven.

In legal-rule abduction, it is a legal rule that is “abduced” as the conclusion. Legal-rule abduction reflects the same basic pattern reflected in all abductive inferences:

1. \( \Theta \)
2. If \( \Phi \) then \( \Theta \).
3. \( \Phi \).

where

\( \Theta \) stands for the explanandum of a legal-rule abduction, namely, the set of facts the plaintiff thinks he can prove (or the judge thinks he might be able to prove), some of which have occasioned his petition for legal redress;

If \( \Phi \) then \( \Theta \) stands for the sufficient explanation conditional of a legal-rule abduction, namely, a proposition asserting that if the explanatory hypothesis \( \Phi \) were true, \( \Theta \) would be sufficiently explained for the legal reasoner’s purposes;

\( \Theta \) stands for the explanans of a legal-rule abduction, namely, a logically complex proposition that is a plausible theory of the case as well as a “valid” legal rule of the jurisdiction (e.g., violation of a statutory prohibition of sexual harassment, or violation of a constitutional right to equal protection); this explanans consists of a set of rules that links the “operative facts” that a plaintiff claims he can prove (namely, \( \Theta \)) to a remedy he desires or might desire, as antecedent and consequent, respectively.

Some observations about legal-rule abduction: first, as with all abductive inferences, the rule abducted must be confirmed or disconfirmed. To “confirm” a legal rule (or legal theory) is to ascertain whether the legal rule (or theory) is a “valid” rule in the jurisdiction or is otherwise warranted.37 Second, because \( \Phi \), the “theory of the case,” is comprised of legal rules that are believed to be valid (or otherwise warranted) in the jurisdiction, \( \Phi \) itself will contain a set of logically complex conditional propositions — as do the conclusions of abductive inferences to scientific laws. Third, closely related to the second point, in the con-
text of legal-rule abduction, “sufficient explanation” means in part that the explanans Φ, a “theory of the case” consisting of legal rules expressed as a logically complex proposition, asserts a legal rule that has a special logical feature: Φ links the statement of facts the plaintiff claims to be able to prove to some legal remedy the plaintiff desires, as antecedent and consequent, respectively. This feature of Φ allows it to satisfy the special need of a legal reasoner who has sought to abduce the legal rule, namely, to find an explanation of the facts (Θ) from a legal point of view. This explanation must in turn produce a rule that the judge could apply deductively, at least in the final stages of reasoning (after any gaps have been filled, possibly by other modes of inference, such as analogy).

Fourth is a Holmesian point, closely related to the third point, about the strategic context in which a lawyer performs legal-rule abductions. Both fact abduction and legal-rule abduction can take place within a complex pattern of legal reasoning in a single case, and when a lawyer uses both types of inference they have a close holistic connection to one another. The connection arises from the strategic need of the lawyer to abduce (and then argue to the court) only those legal theories Φ (i) whose required factual predicate Θ he thinks he can prove; if and when necessary; and (ii) that imply consequences that are remedies the client desires. That is, for any theory Φ that the lawyer might abduce in legal-rule abduction, he will look ahead to what he thinks he could abduce and prove in fact abduction, as well as to the desirability for the client of the result of the abduced rule.

One typical example of legal-rule abduction occurs when a judge is faced with a motion to dismiss for failure to state a claim. Faced with such a motion, the judge must try to abduce at least one legal rule (“theory of the case”) that will explain the complained-of facts from a legal point of view in such a way as to allow the plaintiff’s case to survive the motion to dismiss. (This task is imposed on a judge in those jurisdictions that have replaced code pleading with notice pleading, as most have.) In *Seegral v. New Jersey*, for example, a troubled man filed a *pro se* action complaining that the state of New Jersey had, more than a dozen years earlier, while he was in prison, injected him in the left eye with a radium electric beam, as the result of someone beginning to talk to him from inside his brain.⁴⁸ He brought an action in a federal district court, although it was doubtful whether that court had jurisdiction over his case. (There was no clear “federal-question” jurisdiction, and no diversity jurisdiction either.) Moreover, the state statute of limitations had run out on any tort claim he might have had, and the state moved to dismiss under Federal Rule of Civil Procedure 12(b)(6).⁴⁹ In effect, this rule required the judge to try to abduce the best legal rule that might be added to explain the facts of the case.

Before getting to the content of the abductions in *Seegral*, let us remind ourselves of the basic structure of this case.

Where

‘P’ stands for the *explanandum*: while the plaintiff was in custody, the defendant injected him with a radium electric beam.

‘T → P’ stands for the *sufficient explanation conditional*: if T is indeed a valid (or otherwise warranted) theory within the jurisdiction (and one that links the facts that the plaintiff claims to be able to prove to some remedy that he desires),⁵⁰ then it would explain the plaintiff’s case from a legal point of view in such a way as to allow the complaint to go forward.

‘T’ stands for the *explanans*: the state’s behavior, described by P, was unlawful under some relevant overall legal theory that is valid (or otherwise warranted) in the jurisdiction.

the legal-rule abduction the judge performs has this familiar structure:

1. P.
2. If T then P.
3. T.

The judge’s abductive task was to try to discover whether there really is any theory T that is both valid within the jurisdiction and implies a more specific rule P → Q such that P is a set of facts the plaintiff might be able to prove and Q is a remedy he might seek. In *Seegral*, the judge abduced and then sought to confirm or disconfirm two possible theories of the case that might meet these requirements. One was the theory that the state violated the plaintiff’s federal civil rights; the other was a sneering theory that there was an unlicensed radio communication to the plaintiff’s brain (which the judge shamefully, albeit shamelessly, suggested the plaintiff could alleviate by trailing a string of paper clips from his pants’ leg to the ground as a ground wire).⁵¹ The judge disconfirmed both theories⁵² and concluded that there was thus no legal rule that could be abduced to permit the complaint to go forward.

Fifth, there is no question that abduction, unlike other modes of logical inference, is a creative process. Peirce, who argued that abduction was a fundamental form of logical inference, also recognized that

(1) the abductive suggestion comes to us like a flash. It is an act of insight, although of extremely fallible insight. It is true that the different elements of the (explanatory) hypothesis were in our minds before; but it is the idea of putting together what we had never before dreamt of putting together which flashes the new suggestion before our consciousness.⁵³

Although abduction thus relies significantly on flashes of insight, it is nevertheless a rationally disciplined process. The rational discipline comes largely from the explanatory context in which the abduction takes place. The explana-
Regarding the kind of doubt that often triggers analogical analysis, it is hard to improve on Holmes’s own description (emended by the addition of one word):

I think it most important to remember whenever a doubtful case arises, with certain analogies on one side and other analogies on the other, that what really is before us is a conflict between two social desires, each of which seeks to extend its dominion over the case, and which cannot both have their way. The social question is which desire is stronger at the point of conflict. The judicial one may be narrower, because one or the other desire may have been expressed in previous decisions to such an extent that logic requires us to assume it to preponderate in the one before us. But if that be clearly so, the case is not a doubtful one. Where there is doubt the simple tool of [deductive] logic does not suffice, and even if it is disguised and unconscious, the judges are called on to exercise the sovereign prerogative of choice.

Note that analogy-warranting rule abduction is the third type of abduction that pervades legal reasoning, along with fact abduction and legal-rule abduction. (When analogies are used to close gaps occasioned by the vagueness of legal rules or the silence of existing legal rules, analogy-warranting rule abduction is a special kind of legal-rule abduction.)

Step 2. The analogical reasoner confirms or disconfirms, by a process of reflective adjustment, the rule abduced in step 1. The confirmation-disconfirmation process at work in step 2 has the same structure as the process identified in the work of Goodman and Rawls, known from the latter’s work as “reflective equilibrium.” In reasoning by analogy, however, that process is applied not to the justification of moral principles, but rather to the (analogy-warranting) rule that the reasoner has abduced in step 1 in the course of reasoning about what is relevantly similar among a set of example cases. At this crucial second step, the reasoner resorts to a rationale for adopting (or rejecting) the rule abductively hypothesized in step 1 (referred to in the theory as the analogy-warranting rationale). If in step 2 the rationales used by the analogical reasoner (whatever their content, whether drawn from a deductively justified system such as logic, or an inductively justified system such as empirical science, or from a moral or prudential system of practical reasoning) lead the analogical reasoner to disconfirm the rule abduced in step 1, she “goes back to the drawing board,” abduces another rule that might serve the purpose of resolving the doubt by asserting what is relevantly similar about the source examples and the target case.

Step 3. The reasoner applies to the case that occasioned the doubt whatever (analogy-warranting) rule has been abduced in step 1 and sufficiently confirmed in step 2.

Reasoning by disanalogy has the same basic structure as reasoning by analogy. The main difference is that in reasoning by disanalogy the reasoner, still
in a context of doubt about the scope of some term or phrase, uses examples that seem, at least prima facie, to be relevantly similar to the target case. The judge abduces a dissanalogy-warranting rule, which specifies what is sufficiently and relevantly dissimilar in the source and target case such that she is not warranted in concluding that the target case should receive the same treatment that the source cases received. (This is dissanalogy-warranting rule abduction.) As with all abductive conclusions, the reasoner must then confirm or disconfirm the rule. If confirmed, then, in step 3, the reasoner concludes that the source and target cases are not to be treated in the same way. Often, in cases in which the rule is disconfirmed, the reasoner goes back to the drawing board, seeking first to abduce and then to confirm or disconfirm a new analogy or dissanalogy-warranting rule.

Holmes himself offers a fine example of reasoning by dissanalogy in *McBoyle v. United States*, a case familiar to students of statutory interpretation. In *McBoyle*, the U.S. Supreme Court considered the scope of the National Motor Vehicle Theft Act, a criminal statute. The issue in the case was whether the interstate transportation of a stolen airplane fell within the proscription of a statutory text that prohibited the interstate transport of "motor vehicles," defined to include "Sec. 2 . . . an automobile, automobile truck, automobile wagon, motor cycle, or any other self-propelled vehicle not designed for running on rails.

The kind of doubt that occasioned the use of analogical/dissanalogical reasoning in *McBoyle* was vagueness in the statutory phrase "any other self-propelled vehicle not designed for running on rails."

Holmes compared the airplane to the other individual items that the act included in the definition of "motor vehicle." His reasoning can be explained as an application of the *ejusdem generis* rule, which requires a reasoner to deploy analogical or dissanalogical reasoning to decide what members of the "species" mentioned in a vague term are "of the same genus," that is, relevantly similar to the other specified items on a list. If the airplane is relevantly similar to "an automobile, automobile truck, automobile wagon, motor cycle," then the airplane falls within the scope of the statutory phrase "any other self-propelled vehicle not designed for running on rails." If not, then not. This judgment of relevant similarity or difference, in turn, calls upon Holmes to abduce a rule whose criteria (sufficient conditions, or necessary conditions) specify what is relevant. Holmes reasoned thus:

Section 2 defines the motor vehicles of which the transportation in interstate commerce is punished in § 3. The question is the meaning of the word 'vehicle' in the phrase "any other self-propelled vehicle not designed for running on rails." No doubt etymologically it is possible to use the word to signify a conveyance working on land, water or air, and sometimes legislation extends the use in that direction . . . But in everyday speech 'vehicle' calls up the picture of a thing moving on land. Thus in Rev. Stat. § 4, intended, the Government suggests, rather to enlarge than to restrict the definition, vehicle includes every contrivance capable of being used "as a means of transportation on land."

And this is repeated, expressly excluding aircraft, in the Tariff Act, June 17, 1930, c. 997, § 401 (b); 46 Stat. 590, 708. So here, the phrase under discussion calls up the popular picture. For after including automobile, truck, automobile wagon and motor cycle, the words "any other self-propelled vehicle not designed for running on rails" still indicate that a vehicle in the popular sense, that is a vehicle running on land, is the theme. It is a vehicle that runs, not something, not commonly called a vehicle, that flies. Airplanes were well known in 1919, when this statute was passed; but it is admitted that they were not mentioned in the reports or in the debates in Congress. It is impossible to read words that so carefully enumerate the different forms of motor vehicles and have no reference of any kind to aircraft, as including airplanes under a term that usage more and more precisely confines to a different class. The counsel for the petitioner have shown that the phraseology of the statute as to motor vehicles follows that of earlier statutes of Connecticut, Delaware, Ohio, Michigan and Missouri, to not mention the late Regulations of Traffic for the District of Columbia, Title 6, c. 9, § 242, none of which can be supposed to leave the earth.

Although it is not likely that a criminal will carefully consider the text of the law before he murders or steals, it is reasonable that a fair warning should be given to the world in language that the common world will understand, of what the law intends to do if a certain line is passed. To make the warning fair, so far as possible the line should be clear. When a rule of conduct is laid down in words that evoke in the common mind only the picture of vehicles moving on land, the statute should not be extended to aircraft, simply because it may seem to us that a similar policy applies, or upon the speculation that, if the legislature had thought of it, very likely broader words would have been used. *United States v. Thind*, 261 U.S. 204, 209.

Judgment reversed."

Holmes's opinion goes through each of the three steps of dissanalogical reasoning:

First, he compares the target case of the airplane with the source cases of the other types of vehicles mentioned on the statutory list - automobile, automobile truck, automobile wagon, motor cycle. At this stage, he acknowledges the prima facie force of the view that an airplane is indeed a vehicle, for purposes of this statute ("No doubt etymologically it is possible to use the word to signify a conveyance working on land, water or air, and sometimes legislation extends the use in that direction."). The rule he abduces - as it turns out, a dissanalogy-warranting rule - makes it a necessary condition for being within the scope of "any other self-propelled vehicle not designed for running on rails" that the vehicle in question "run on land."

Second, having abduced this rule, Holmes moves to the stage of confirming or disconfirming it. He relies on one primary justificatory source - an "objective" reading of the statute, given normative force by the norm of lenity and the rule-of-law norm of fair notice. This objective reading, with its normative support, confirms the rule abduced in the first step. Holmes also observes that, insofar as he can discern them, the data that permit inferences about the intent of Congress are consistent with the objective reading. (Although Holmes may..."
A Jurisprudence of Logical Form

have regarded these “data” as an independent source of justification and confirmation of the rule he had abduced, it seems unlikely that he, the great early champion of objective readings across the board, in both contract and statutory interpretation, would have accorded a “subjective” congressional intent much weight if it was, in his view, at odds with the objective reading. Third, having confirmed the abduced disanalogy-warranting rule, Holmes applies it deductively to the case at hand. Since, for purposes of this case, per disanalogy, inference, the only vehicles subject to the penalty are those designed for running on land, and since the airplane is not such a vehicle, the penalty does not apply to this defendant. (Holmes’s overall opinion thus obeys what I have referred to as the “law of deductive form.”)

A model of analogy (and disanalogy) such as the foregoing helps give content to the wavering but warranted intuition Holmes had about the proper scope of logic, namely, that it embraces “[t]he processes of analogy, discrimination, and deduction.” Moreover, it allows us to see that analogy, a vital organ of legal reasoning, is itself rationally disciplinable in its interaction with and reliance upon other methods of inference, including deduction, induction, and abduction.

d. Deduction. For our purposes, validity is the key defining feature of the relation between premises and conclusion in a deductively warranted argument. Informally speaking, in a valid deductive argument, the truth of the premises guarantee the truth of the conclusion. Slightly more formally, there are two ways to express the concept of formal deductive validity, one syntactic, the other semantic. According to the syntactic version, an argument consisting of a set of premises from which a conclusion is inferred is valid just in case the conclusion is derivable, by the rules of inference of that formal language, from the premises and the axioms of the formal language in which the proof is offered. According to the semantic version of the concept of validity, an argument consisting of a set of premises from which a conclusion is inferred is valid just in case the conclusion is true under all interpretations in which all of the premises are true.

Judges constantly rely on deductive inference in the course of making and evaluating legal arguments. They often rely on it even in the course of deploying other argument types, such as analogy and induction. They also rely on it when applying authoritative rules about which there is no active doubt about the meaning of a term or phrase that appears in the rule, nor doubt about which, if any, authoritative rule applies. The concept of “active doubt” is crucial for understanding the role of different modes of logical inference, and I pause to re-examine some perhaps familiar terminology. In speaking of “active doubt” I have in mind the critical distinction between the vagueness and the open texture of a term. A term is vague when, at a particular time, relative to a particular set of objects, a particular language user (or group of users) is undecided about whether the term applies to a given object among that set. A term is open textured when it yields the possibility of being vague at some time. Thus for a child learning the term ‘dog,’ once the child has been told something about its meaning and shown a few dogs, the term may not be vague for that child at time T, relative to the group of dogs the child has encountered and remembers. But if at time T, the child is shown a wolf or hyena, he may become uncertain about whether ‘dog’ properly applies to that animal as well. At T, the term was not vague for this child but was open textured. At T, it was vague (and open textured).

Every legal rule is open textured, but not every legal rule is vague at the point of application in a particular case. When an open-textured legal rule is not vague at the point of application, it can be applied deductively. However, when it is vague (or is in some other way semantically underdetermined, such as being logically, syntactically, or lexically ambiguous), the reasoner must first reason to a conclusion about how to resolve the underdeterminacy sufficiently for that case, and that supplemental reasoning often involves nondeductive modes of inference. Sometimes even the resolution of the meaning of a phrase that is vague at the point of application may be resolved by resorting to another deductively applicable rule, such as a rule of interpretation that is not vague at the point of application. Resolving a semantic underdeterminacy “sufficiently for a case” usually means articulating criteria (either necessary or sufficient conditions) for application of the doubtful phrase or concept in a legal rule, criteria that permit the rule, thus clarified, to be applied deductively in the final step of the judge’s reasoning. As we have seen, Holmes himself offers a nice example of this “precisifying” reasoning in McBoyle. Failure to recognize this feature of legal rules has led some legal theorists (Edward Levi and Felix Cohen come to mind, but there are many others who have adopted this view) to argue that legal rules are never deductively applicable. That is quite wrong. Typically, legal rules are deductively applicable, which is one reason why so many disputes that might be litigated, in our litigation-prone society, are not.

Though there is a good deal to say about the proper interpretive reconstruction of enthymematic judicial opinions into deductive form, a fairly simple example and some brief observations will have to serve. I offer an example of an enthymematic opinion, fairly typical in both its argumentative virtues and vices, that is fairly interpretable as the deductive application of a set of rules. In Ray v. Barone, the Maryland Court of Appeals considered a claim for breach of contract by a homeowner against a contractor. The contractor argued that, although he had signed every page of the final contract, he had not read it and should be excused from performance. The court’s opinion calls for some interpretive work—it is truly enthymematic, in that the order of its reasoning is far from perspicuous. Nevertheless, it may be fairly reconstructed as the deductive application of a few authoritative rules that center on one rule, the duty-to-read rule, which provides a sufficient condition for the contractual liability of a person who has signed a contract. The court’s basic reasoning was that because the
defendant in the case did sign, and because none of the rule's own excusing conditions was satisfied, he was liable. The opinion also invokes and applies a few related rules that orbit around the duty-to-read rule, including rules regarding parol evidence, contract interpretation, and what constitutes a sufficient writing. One of the main bits of evidence supporting my interpretation of this argument as rule deduction is that the court did not seem to feel that any of the principal concepts was vague at the point of application here, though the rules are certainly open textured and could be vague in other contexts. Restating the main argument in the enthymeme in simplified form, it looks like this:

If (P) a party signs a contract when

(i) there is no fraud and no duress,
(ii) there is no mutual mistake,
(iii) the contract is integrated,
(iv) the language of the contract reflects a clearly expressed and unambiguous intent, according to a reasonable interpretation,
(v) the specifications of the whole contract are contained in several attached documents, but with clear cross-reference,

then (Q) that party is contractually bound, regardless of whether he

read or had it read to him,

placed a different subjective intent on the terms of the contract, or

can adduce parol evidence of his different subjective intent.

Slightly more abstractly, the reasoning is a modus ponens:

1. If (P(i) & P(ii) & P(iii) & P(iv) & P(v)) then Q.

\[ \therefore \] (3) Q.

Again, this is but one small example of the way in which deduction plays a role in judicial arguments. It is certainly not the only way in which deduction operates, and I must emphasize that I do not claim that all judicial enthymemes can best be reconstructed as the application of deductively applicable rules. That would indeed be a reproachable "mechanical jurisprudence." But mine is not reproachable. Therefore, mine is not that. Rather, in its descriptive aspect, the jurisprudence of logical form reveals, indeed emphasizes, that distinct types of logical argument, including but not limited to deduction, play vital roles in legal argument. In its conceptual aspect, it reveals the ways in which it is possible for modes of logical inference to serve the needs and solve the problems of legal argument.

I turn now from description and conceptual analysis to prescription, recommendation, and hortation. In its normative aspect, the jurisprudence of logical form calls upon judges and other adjudicating legal officials to be rationally articulate about the structures of (putative) justification in their decisions. This includes being rationally articulate about the role that the different modes of logical inference play in those putative justifications of the exercise of state power.

C. Normative Projects in the Jurisprudence of Logical Form

1. The Principle of Rational Articulation. As a polity, we demand that the public exercise of adjudicatory power (and often, the private, too) be accompanied by a public putative justification. This demand is reflected, for example, in the practice of writing judicial decisions and in various norms of public law proscribing arbitrary decision-making behavior. The demand for rational articulation requires adjudicating legal officials to be clear about the structure of the putative justifications they offer. At the heart of that demand is a mandate that they be clear about the modes of logical inference they are deploying in those putative justifications. Members of the polity demand justification for the disposition of legal disputes but cannot know whether an argument and its conclusion are justified unless and until they can discern what that argument and conclusion are, and what logical relation is claimed (by the reasoner) to obtain between the argument's premises and conclusion.

In its normative aspect, the jurisprudence of logical form is most centrally concerned to insist on rational articulation and to provide an analysis of the values—prudential, political-moral, indeed, perhaps even aesthetic—that underlie the mandate of rational articulation. As a mandate on an adjudicator's behavior, the norm of rational articulation has several dimensions, and the explication of each of these is part of the task of the jurisprudence of logical form. One dimension is that of political morality. The political-moral value of rational articulation is in the family of values explored, for example, in Kant's discussion of the (meta)right to a public declaration of rights, in John Rawls's discussion of "public reason," in Ronald Dworkin's discussion of "articulated consistency," in Lon Fuller's discussion of "rule of law values," and in John Stuart Mill's promotion of critical public reflection in On Liberty. In part, the mandate of rational articulation is a prudential value, one that Joseph Raz, for example, has explored, arguing that from a prudential point of view, it at least presumptively behooves a state that wishes to use legal rules as means of social control to adhere to the rule-of-law values that Fuller explicates, including those that are directly concerned with rational articulation.

Despite his skepticism and his too pessimistic resignation to the realities of inarticulateness in judicial decision, Holmes himself may be counted among the friends of the normative jurisprudence of logical form and its core mandate of rational articulation. As I noted early in this essay, Holmes felt strongly the necessity of effecting rational reform in legal doctrine and legal decision making, and indeed his brief for rational reform occupies a much larger percentage of
The Path of the Law than do his skeptical musings. Immediately following his debunking discussion of the fallacy of logical form, Holmes argues for a “philosophical reaction” against potted-pluralism in the development of the law, and for “a reconsideration of the worth of doctrines which for the most part are still taken for granted without any deliberate, conscious, systematic questioning of their grounds” (“Path” 185). Holmes offers, for his immediate audience of law students and his mediate audience of posterity, something of a manifesto for the value of rational articulation:

It does not follow, because we all are compelled to raise faith at second hand most of the rules on which we base our action and our thought, that each of us may not try to set some corner of his world in the order of reason or that all of us collectively should not aspire to carry reason as far as we will go throughout the whole domain. In regard to the law, it is true, no doubt, that an evolutionist will hesitate to affirm universal validity for his social ideals, or for the principles which he thinks should be embodied in legislation. ... Still it is true that a body of law is more rational and more civilized when every rule it contains is referred articulately and definitely to an end which it subserves, and when the grounds for choosing that end are stated or ready to be stated in words. (185–86, emphasis added)

Although I would characterize the content of what a judge ought to articulate rather differently, Holmes is at least a fellow traveler in valuing rational articulation. I summarize my own view of the content of this norm in a principle of rational articulation: An officiating legal reasoner (judge or other public official) ought to clarify the logical form of each of the arguments that operate as elements in the overall justificatory legal argument he offers (or make sure that their form is readily "enthymematically recoverable" clear in context).

2. RATIONAL DEFAMILIARIZATION AND THE SOCRATIC MANDATE: THE UNEXAMINED DECISION IS NOT WORTH MAKING? The discipline of rationally articulating the justification for a legal decision is a philosophical task, a Socratic task in which the judge is called upon to honor the maxim “Know thyself.” But as a maxim of public reason motivated by a concern for rule-of-law values, for promoting public understanding, and enabling and sharpening public political debate about the norms that guide legal decision making, the "self" involved is not that of the judge as a private person, but is rather the self of the judge as agent for the "public self" of government. As a norm, the value of rational articulation imposes a heavy but not irrebuttable presumption that it is not acceptable for a judge to rest on "inarticulate" beliefs and judgments when rendering a decision. Sometimes the urgency of circumstance – time constraints combined with a need for rapid resolution of a case – may allow a less than articulate decision to suffice. But it is worth observing that, over time, if we had a legal culture in which law students, later to become lawyers and judges, were systematically trained in the arts and philosophical sciences of justification (i.e., the arts and sciences of rational articulation), the amount of time it would take to produce rationally articulate judgments would substantially decrease. Right now, given the anti-logical culture in so much of the legal academy and bar, it is the far rarer lawyer or judge who comes equipped with these tools.

The normative presumption of rational articulation is related to, but importantly distinct from, the presumption that a judicial decision ought to be candid. For at least two reasons, these are not the same prescriptive norms. A judge need not try to report the grounds of her decision in order to render a decision that is justified according to law. Many different motives — some noble, some base, some neutral — can motivate a judge to render a decision according to law. What counts is a rational articulation of some argument, not necessarily the argument that actually motivated the judge to render the decision. Moreover, rational articulation of even a disingenuous justification sometimes makes the disingenuousness easier to spot when held up to rational scrutiny. One of the great dangers of inarticulate decision making is precisely its ability to mask the abuse of power, a concern reflected in Hayekian rule-of-law norms concerned with the ability of rules to constrain government power. Even though they are not the same norm, there is a sure consonance between the value of rational articulateness and the value of candor in judicial decision making. The presumption in favor of candor, like that in favor of rational articulateness, is, it is irrebuttable. Candor is not required in all settings. The Nazi system, in which a judge might surreptitiously use the forms and procedures and institutions of law to undermine the power of that regime, is one that will strike many as a setting in which the presumption of rational articulation of the actual ground of decision is sufficiently rebutted. I shall not attempt here to provide the theory that undergirds these presumptions. I will observe that discerning the bounds of these presumptions is one of the most important normative projects in the jurisprudence of logical form.

One final observation about the content of the (prima facie) obligation on a judge to offer a rational articulation. I offer an analogy — perhaps a bit strained — to help explicate it. The literary theorists known as the Russian Formalists advanced a view of what art is and what, accordingly, art criticism should be. In their view (I adopt the words of their impresario, Viktor Shklovsky), art operates by the process of "making strange," of "defamiliarizing" the everyday world by holding it up in art for a more lively examination, appreciation, investigation, and engagement than is possible with the workaday habitualized perceptions and conceptions on which we tend to rely in daily life. As Shklovsky put it,

The process of "deklerization," the over-automatization of an object, permits the greatest economy of perceptive effort. Either objects are assigned only one proper feature — a number, for example — or else they function as though by formula and do not even appear in cognition... And so life is reckoned as nothing. Habitualization devours works, clothes, furniture, one's wife, the fear of war. "If the whole complex lives of many peo-
This concept of defamiliarization offers a heuristicly useful description of the task of rational articulation. To lead the examined life is to make routinized everyday life somewhat strange, somewhat unfamiliar, if only because everyday life does not typically call upon us to reflect on the structures of language and reason and passion in which we live. This philosophical task is precisely to step back from that life, to make it strange, to make it examined, to articulate its structures. It is a deep philosophical enterprise. This task is a vital element of a judge’s obligation of rational articulation. Far more than the average citizen, the judge must search his public soul, defamiliarize, the better to examine and articulate, his intuitions and instincts and gleanings and hunches and passions and prejudices. This baring of the public soul in the process of rational articulation is, in the judge’s work, a jurisprudential task. Holmes was correct, in a way that he perhaps did not know, when he said in The Path of the Law: “Theory is the most important part of the dogma of the law, as the architect is the most important man who takes part in the building of the house.” Through the never-ending task of discovering and articulating justification, the judge in the most mundane case can connect his decisions “with the universe and catch an echo of the infinite” and glimpse its not fully fathomable but nonetheless rationally investigable process. It is in this ratificative life of the law that the union of logic and experience occurs.

Notes
3 Oliver W. Holmes, Jr., The Common Law, ed. Mark DeWolfe Howe (Boston: Little Brown, 1965), 5. Holmes iterates the assertion, with an application to contract law, about logic and experience: “The distinctions of the law are founded on experience, not on logic” (244). Again, in slightly different terms, he repeats it, observing optimistically that “the law is administered by able and experienced men . . . who know too much to sacrifice good sense to a syllogism” (32).
4 Lechner v. New York, 198 U.S. 45, 76 (1905). That this is the same theme as “law is not logic but experience” is revealed by comparing it to Holmes’s second explicit reference to logic and experience in the chapter on void contracts in The Common Law. There he asserts that the “distinctions of law are founded on experience, not on logic” (244).
15 See text accompanying note 21.

16 We know that Holmes admired Kant, at least to some degree, for at the end of "The Path" Kant figures prominently in Holmes's eulogistic tribute to the power of intellect: "To an imagination of any scope the most far-reaching form of power is not money, it is the command of ideas. . . . Read the works of the great German jurists, and see how much more the world is governed to-day by Kant than by Bonapartes." (201-2). Reimann argues that Kant, in the very influence he exercised over the "great German jurists," was at least the superficial target of Holmes's anti-logic thesis in The Common Law. His real target, suggests Reimann, was Langdell, but Holmes the mere Harvard Law School lecturer could not, for political reasons, directly attack the dean of the school where Holmes might want to have a permanent job. Reimann also points out that Langdell's view of the role of logic in law was quite different from that of many of the "great German jurists," and that the views of at least one of them, von Savigny, were consonant with Holmes's own views, though Holmes never concealed the point. See Reimann, "German Legal Science." 146.

17 See Grey, "Holmes and Legal Pragmatism." 818. In correspondence with Pollock, Holmes said of Langdell's book on contracts:

"A more mischievous piece of marvelous ingenuity I never read: yet it is most suggestive and instructive. I have referred to Langdell several times in dealing with contracts because to my mind he represents the powers of darkness. He is all for logic and hates any reference to anything outside of it, and his explanations and rejections of the cases would have astonished the judges who decided them. But he is a noble old soul whose knowledge, ability, and idealism devotion to his work I revere and love.


19 Actually, the inductions that both Holmes and Langdell contemplated relied on an initial "abductive" inference as well, as do all inductive inferences. See section II.B.3.b of this chapter.


21 We must be sensitive to the possibility that different legal systems, such as common-law-based and code-based systems, or even British and American common-law-plus-statute-plus-regulation-based systems, deploy the same basic modes of logical inference (deduction, induction, abduction, analogy) in different ways to different extents. See P. S. Atiyah and Robert Summers, Form and Substance in Anglo-American Law: A Comparative Study of Legal Reasoning, Legal Theory, and Legal Institutions (Oxford: Clarendon Press, 1987).

22 Philosophers of logic dispute whether there really are four basic types of logical inference, and whether all of those on my list belong. Many would exclude abduction and analogy from the list, for example. For reasons beyond the scope of this essay, I follow Peirce in recognizing abduction as one of the fundamental types of inference. See, e.g., Charles S. Peirce, "Prolegomena to an Apology for Pragmatism," Monist 16 (1906):492; reprinted in Collected Papers of Charles Sanders Peirce, ed. C. Hartshorne and P. Weiss (Cambridge, Mass.: Belknap Press, 1960), section 541, note 1.


24 One line of thought worth pursuing in the theory of the enthymeme is the way in which enthymemematic arguments, including those that judicial decisions sometimes offer, violate pragmatic maxims of linguistic cooperation. The starting point for such an inquiry is Paul Grice's analysis of the general "Cooperative Principle," which, he argues, interpreters assume that speakers are conscientiously following ("Make your contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged") and the more specific maxims concerning manner, the supermaxim "Be perspicuous," and such others as "Avoid obscurity of expression," "Avoid ambiguity," "Be brief" (avoid unnecessary prolixity), and "Be orderly." See Paul Grice, "Logic and Conversation," in Studies in the Way of Words (Cambridge, Mass.: Harvard University Press, 1989), 26-27.


26 See, e.g., Brown v. Brown, 524 U.S. 1184, 1188 (D.C. 1987) ("We believe that, as a matter of common human experience, such services are usually performed out of a sense of family responsibility, not pursuant to a contractual agreement with the legitimate expectation of payment"; emphasis added).

27 ibid., 1400-91 (emphasis added).

28 There are two levels of abstraction here, one in a "metalinguage" (i.e., a language about a language), the other in a reconstructed and schematized version of the "object" language in which the Harvard Law Review authors offer their inductive arguments about the predictive factors. Even the "object" language is an abstraction, because I am offering a reconstruction of their enthymemes that seem, as a matter of interpretation, to underlie the analysis they offer. In the "metalinguage" occur the "metavariables" η, φ, and θ. These metavariables represent (I) the distinct series of cases α, . . ., ω, in which a predictive factor φ has been observed to occur, (II) the different factors φ, and (III) the decision θ to admit or exclude the NSE. In the object language, the distinct series of cases is represented by α, . . ., ω; the different factors are represented by Φ 1, Φ 2, . . ., Φ 3, the decision to admit NSE by θ; and the decision to exclude by θ'.


31 As does, for example, the following argument: "If Jones is a law professor, then Jones is logical; therefore, Jones is a law professor." 32 One of the best recent thorough treatments of the subject is Abductive Inference: Computation, Philosophy, Technology, ed. John R. Josephson and Susan G. Josephson (Stanford: Stanford University Press, 1994).

33 For Peirce's view on the importance of inductive inference in science, see the text accompanying note 30.

34 Legal academics have in recent years begun to explore the role of abduction in legal reasoning, and most such treatments deal with it in the evidentiary, fact-finding context. See, e.g., David Schuman and Peter Tillers, "A Theory of Preliminary Fact Investigation," Uni-
44. See Oliver W. Holmes, Jr., "The Theory of Legal Interpretation," in Collected Legal Papers, 203.
45. According to this "law" of judicial decision making, when, in a context of doubt about the scope of a legal concept (e.g., "vehicle"), a judge is to conclude that a given party has satisfied the criterion for that concept, she will specify a sufficient condition for the application of that concept. Having done so, she may then deductively conclude that the party satisfied it. Similarly, when in a context of doubt a judge is to conclude that a given party has not satisfied the criterion for an applicable legal concept, she will specify a necessary condition for the nonapplication of that concept. Having done so, she may then deductively infer that the party did not satisfy it. See Brewer, "Exemplary Reasoning," 997.
47. I use "underdetermine" instead of the more commonly encountered "indeterminate," to indicate that although the meaning of the term or phrase is not yet determined at a point of application, it can be determined by some kind of supplemental reasoning process. (If "underdeterminate" one means "not yet determined," then the two terms are synonyms.)
48. See, e.g., Edward Levi, An Introduction to Legal Reasoning (Chicago: University of Chicago Press, 1949), 1 ("It is important that the mechanism of legal reasoning should not be concealed by its pretense. The pretense is that the law is a system of known rules applied by a judge; the pretense has long been under attack"); and Felix Cohen, "The Ethical Basis of Legal Criticism," Yale Law Journal 41 (1931): 201, 215 ("The confusion arises when we think of a judicial decision as implying a rule from which, given the facts of the case, the decision may be derived").
52. The constructive model, however, does not support the policy of submerging apparent incompatibility in the faith that reconciling principles must exist. On the contrary, it demands that decisions taken in the name of justice must never outstrip an official's ability to account for these decisions in a theory of justice, even when such a theory must compromise some of its intuitions. It demands that we act on principle rather than on faith. Its engine is a doctrine of responsibility that requires men to integrate their intuitions and subordinate some of them, when necessary, to that responsibility. It presupposes articulated consistency, decisions in accordance with a program that can be made public and followed until changed, is essential to any conception of justice.
54. Several of the rule-of-law values that Fuller explicated are directly concerned with rational articulation by public officials, including the values of clarity in legal rules; see Lon Fuller, The Morality of Law (New Haven: Yale University Press, 1964), 63. He list discusses generality (46-49); non-retroactivity (51-62); non-contradiction (65-70); congruence (81-91); and non-contradiction (65-70). For further discussion, see Brewer, "Exemplary Reasoning," sections VI.A.1.5.
Holmes on the Logic of the Law

THOMAS C. GREY*

Again and again throughout his long career, Oliver Wendell Holmes, Jr., seemed to be waging a jurisprudential campaign against something he called “logic.” His first great one-liner (and it remains his most famous) was “The life of the law has not been logic; it has been experience.” 1 In a much-quoted letter, he described Christopher Columbus Langdell, Dean of the Harvard Law School, as representative of “the powers of darkness” in legal thought, because he “is all for logic and hates any reference to anything outside it.” 2 The Path of the Law includes six paragraphs denouncing the “fallacy of formal logic” in legal thought. 3 In his dissent in Lochner v. New York, Holmes wrote that “[g]eneral propositions do not decide concrete cases,” because judicial decision rests on a “judgment or intuition more subtle than any articulate major premise.” 4 And in a later dissent also attacking Constitutional judicial activism, he deprecated “pressing the broad words of the Fourteenth Amendment to a dizzy logical extreme.” 5

These passages are well known and have been influential, but it is natural for readers with a background in analytical philosophy to find confusion in them. Scott Brewer’s essay (Chapter 5 in this volume) does just that, arguing that Holmes was not clear on the target of his “anti-logic” campaign, for he seems to have meant various things by “logic”: systematic coherence, deduction, induction, analogy, and even just plain common sense. 6

Brewer is definitely onto something here, but after following out his suggestive leads, I still think that Holmes had a pretty consistent view of legal logic. 7 We can see this if we recognize that he gave the term a colloquial and not a technical meaning, and if we always take care to read him in context. A perhaps obvious second point, but one worth making in light of Brewer’s coinage, is that Holmes was by no means generally “anti-logic” in legal theory. He thought that logic, in its various related senses, was a significant (but not the only) force in shaping the law, 8 and also that it supplied important (but again not the only) criteria for evaluating legal inquiry. 9

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