

Exemplary Reasoning: Semantics, Pragmatics, and the Rational Force of Legal Argument by Analogy

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ARTICLE

EXEMPLARY REASONING: SEMANTICS, PRAGMATICS, AND THE RATIONAL FORCE OF LEGAL ARGUMENT BY ANALOGY

Scott Brewer

TABLE OF CONTENTS

	PAGE
I. INTRODUCTION: ANALOGY AND THE RATIONAL FORCE OF "EXEMPLARY REASONING" IN LAW AND IN THE SCIENCES	925
A. <i>Central Aims, Questions, and Issues</i>	925
B. <i>What Is at Stake for Legal Theory and Legal Practice in an Explication of Analogical (Exemplary) Reasoning?</i>	929
C. <i>The Reasoning "Data" to Be Explained: The Broad Family of Exemplary, Analogical Arguments</i>	934
1. <i>The Common Law Method of Reasoning from "Precedential" Analogies</i>	934
2. <i>Equal Protection "Doctrine" in Law and Morals</i>	936
3. <i>The "Ejusdem Generis" Canon of Construction</i>	937
4. <i>Reflective Equilibrium</i>	938
5. <i>Modus Tollens Counterexample Arguments</i>	939
6. <i>A Note on the Use of the Phrases "Analogical Argument" and "Exemplary Argument"</i>	940
II. BRIEF REMINDERS ABOUT "LOGICAL FORM": INDUCTION, DEDUCTION, ABDUCTION	942
A. <i>Deduction</i>	943
B. <i>Induction</i>	944
C. <i>Abduction</i>	945
III. THEORIES OF EXEMPLARY, ANALOGICAL ARGUMENT: A TAXONOMY	949
A. <i>A Note on the Etymology of 'Analogy'</i>	949
B. <i>Mystics, Skeptics, and Rational Force</i>	951
1. <i>The Mystics</i>	952
2. <i>The Skeptics</i>	953
3. <i>The Modest-Proposal Rationalist</i>	954
C. <i>Reductivist and Propositionalist Theories of Analogy</i>	955
1. <i>"Reductivist" and "Antireductivist"/Sui Generis Theories</i>	955
2. <i>"Propositionalist" and "Argumentive" Theories</i>	955
3. <i>"Pluralist" Theories</i>	956
4. <i>The Taxonomist's Disclaimer</i>	956
5. <i>The Taxonomist's Claimer: Why Does Taxonomy Matter?</i>	956
IV. ANALOGY-WARRANTING RULES AND ANALOGY-WARRANTING RATIONALES	962
A. <i>Summary of the Model of Exemplary Reasoning</i>	962
B. <i>The Basic Model for Exemplary, Analogical Argument</i>	963
C. <i>"Source" and "Target," "Shared" and "Inferred" Characteristics</i>	966
D. <i>Inductive Analogy-Warranting Rules</i>	967
E. <i>Deductive Analogy-Warranting Rules and the Entailment Requirement</i>	968
F. <i>Why Analogy-Warranting Rules at All?</i>	971
1. <i>A Note on the Meaning of 'Rule'</i>	972
2. <i>Two Examples of Exemplary Rules</i>	972

G. <i>Two Objections to the Model of "Analogy-Warranting Rules"</i>	975
V. ABDUCTION AND "CONTEXTS OF DOUBT" IN EXEMPLARY ARGUMENT	978
VI. SEMANTICS, PRAGMATICS, AND THE LOGICAL FORM OF LEGAL EXEMPLARY ARGUMENTS	983
A. <i>The Enthymeme in Legal Argument</i>	984
B. <i>Structural and Practical Enthymemicity</i>	985
C. <i>Semantics, Pragmatics, and Logical Form</i>	987
D. <i>Pragmatic Constraints on the Reconstruction of Legal Enthymemes</i>	989
1. <i>The Rule of Law Norms as "Context" for Legal Analogies</i>	990
2. <i>Deduction, Vagueness, and Rule of Law Values</i>	993
3. <i>Confirming Evidence: The "Law of Deductive Form" in the Practice of Judicial Decisionmaking</i>	997
4. <i>Deductive Clarity and the Rule of Law as a Regulative Ideal</i>	999
5. <i>Disconfirming Evidence: "Gestaltism" and the Practice of Judicial Decisionmaking</i>	1000
VII. DEDUCTIVE FORM IN LEGAL EXEMPLARY ARGUMENT	1003
A. <i>Deductive Form in Legal Analogical Argument</i>	1003
B. <i>Deductive Form in Legal Disanalogical Argument</i>	1006
1. <i>"Distinguishing" Cases as Disanalogical Argument</i>	1006
2. <i>"Competing" Analogies as Disanalogical Argument</i>	1012
C. <i>Applying the "Law of Deductive Form" to Arguments by Analogy and by Disanalogy</i>	1016
VIII. DEFEASIBILITY AND DISANALOGY	1017
A. <i>The Semantics of Defeasibility</i>	1017
B. <i>The Pragmatics of Deductive Defeasance</i>	1018
IX. EXEMPLARY ABDUCTION REVISITED: CONFIRMATION, DISCONFIRMATION, AND THE ROLE OF ANALOGY-WARRANTING RATIONALES	1021
A. <i>Justification, Truth, and Analogy-Warranting Rationales</i>	1021
B. <i>Is Abduction a Form of Mysticism?</i>	1026
X. CONCLUDING THOUGHTS AND SOME PRACTICAL HEURISTICS FOR THE ART OF LEGAL ANALOGY	1027

EXEMPLARY REASONING: SEMANTICS, PRAGMATICS, AND THE RATIONAL FORCE OF LEGAL ARGUMENT BY ANALOGY

*Scott Brewer**

Reasoning by analogy is one of the most frequently used techniques of legal argument. In this Article, Professor Brewer presents a detailed model of that reasoning process. With its focus on the special features of analogies that are offered as justificatory arguments, Professor Brewer's model provides clear criteria that lawyers, judges, students, and scholars can use critically to assess any given argument by analogy. Moreover, challenging a widely held view, Professor Brewer uses this model to argue that legal reasoning by analogy, like analogical argument in logic, mathematics, and the natural sciences, can have a great deal of rational force when properly executed. He explains that reasoning by analogy is a three-step rule-guided process that legal reasoners typically deploy when they are in doubt about the scope of a legal concept or rule and want to use an analysis of examples to help resolve that doubt. The three-step process consists of an inference (of the type known as "abduction") from chosen examples to a rule that could resolve the doubt; confirmation or disconfirmation, by a process of reflective adjustment, of the rule thus inferred; and application of the confirmed rule to the case that occasioned the doubt. Professor Brewer also highlights the interpretive criteria that readers of analogical arguments should use in trying to understand their exact structure and content. He maintains, for example, that analogical arguments offered by judges who endorse certain widely shared rule of law values should presumptively be interpreted as relying in a special way on deductively applicable rules within the broader three-step analogical reasoning process. His discussion locates issues regarding the proper interpretation of legal analogies within broader jurisprudential debates over the extent to which legal arguments can, do, and should satisfy rule of law values.

I. INTRODUCTION: ANALOGY AND THE RATIONAL FORCE OF "EXEMPLARY REASONING" IN LAW AND IN THE SCIENCES

A. *Central Aims, Questions, and Issues*

Law, considered as an intellectual discipline, consists of certain methods of argument. To have such mastery of these methods as to be able to apply them with constant facility to the "ever-tangled skein of human affairs"¹ is among the chief intellectual skills of a lawyer, and hence to acquire that mastery is an important part of the business of every earnest student of law. This Article aims to advance our understanding of these methods.

* I am indebted to many people for comments on earlier versions of this Article. To the participants in legal theory workshops at Columbia, Harvard, Oxford, the University of Texas at Austin, the University of Toronto, and Yale; to Richard Fallon and John Finniss, my commentators at Harvard and Oxford, respectively; to Jonathan Amsterdam, Brian Bix, Jules Coleman, Richard Craswell, Katherine Elgin, Deborah Hellman, Duncan Kennedy, Frank Michelman, Robert Nozick, Joseph Raz, Tim Scanlon, Fred Schauer, and Cass Sunstein. For outstanding research assistance, thanks also to Julius Christensen and David Nagle. Needless to say, . . .

¹ C.C. LANGDELL, *Preface to the First Edition of A SELECTION OF CASES ON THE LAW OF CONTRACTS* at viii (2d ed. Boston, Little, Brown & Co. 1879).

Several such methods help to do the Law's work. Some of them, such as induction, deduction, and the less well known form called "abduction," are often associated not with legal reasoning, but rather with reasoning in the demonstrative sciences (mathematics and logic) and in the empirical sciences (the natural sciences and the social sciences). Similarly, legal argument is often associated with its own distinct method,² usually referred to as "reasoning (or argument) by analogy";³ indeed, if metaphor is the dreamwork of language, then analogy is the brainstorm of jurists'-diction.

There is greater methodological reciprocity between legal reasoning and other intellectual disciplines than these associations would suggest. On the one hand, the methods associated with the natural and demonstrative sciences (deduction, induction, and abduction) also play a vital role in legal argument. On the other hand, theorists and practitioners in all intellectual disciplines, scientific and nonscientific alike, routinely rely on analogical reasoning.

What is distinctive about reasoning by analogy is not that it is uniquely the tool of legal argument, but rather that, despite its importance to all disciplines and its special prominence in legal reasoning (and in casuistic reasoning more generally), it remains the least well understood and explicated form of reasoning. This Article aims to help close that explanatory gap by developing a philosophical explanation of analogical reasoning, including, but not limited to, the kind that is especially familiar in Anglo-American legal practice.

This Article's aims and topics can usefully be described by reference to both its broader overarching themes and its narrower explanatory steps. Perhaps its most important overarching thesis is that, to a far greater extent than other theories of analogy have recognized, *context* plays a vital role both in the cognitive phenomena that are broadly thought of as "analogy" and in the best explanation of those phenomena. Specifically, this Article shows that the context in which an analogical *argument* is offered significantly shapes the structure of that argument. Moreover, the analogical arguments that are this Article's subject are *justificatory arguments*, and the context of justification also significantly shapes their structure. Of particular importance in the discussion below will be the following claim about the influence of justificatory context on legal argument: when a legal reasoner — paradigmatically, a judge — accepts certain rule of law ideals, the

² This same method that is thought to be a distinct feature of legal argument is also often associated with other forms of "casuistic" reasoning — normative reasoning whose special focus is the relation in normative arguments between practical norms, such as rules and principles, and the particular circumstances to which those norms are applied.

³ Although 'argument' sometimes has the broad sense of any disagreement, I use it in this Article in the narrower sense of a set of premises from which a conclusion is inferred. Unless otherwise noted, 'reasoning' is used in the same way, so that, for example, 'analogical/deductive/inductive reasoning' is interchangeable with 'analogical/deductive/inductive argument'.

context of legal justification shapes the structure of that reasoner's legal analogical argument by requiring him to construct and rely on a type of *deductively applicable* rule *within* the legal analogy.

Also noteworthy is the way in which context affects the best theoretical explanations of analogy. In focusing on analogies offered in the setting of justificatory argument, this Article examines only one part of the broad range of cognitive analogical phenomena that theorists from many diverse fields have explored. An increasing amount of important work has been done, for example, by cognitive psychologists, philosophers, and computer scientists seeking to model the role of analogical thinking in the processes of perception and conception.⁴ Much of this work is relevant to the narrower topic of analogies that are offered in the context of justificatory argument — the central focus of this Article — and some of these theorists have applied their analyses of the cognitive processes of analogical “computation” to the setting of normative arguments, legal and otherwise.⁵ But the principal goal and method of these theories is to provide a computational model (usually, a cognitive-psychological or computer-science model) of analogical reasoning, and not to focus on the way in which the special demands of the context of justification affect analogical arguments. One result of this different theoretical focus is that many, if not most, of these theories underemphasize critical features of justificatory analogical argument such as the vital role of *rules* in such arguments, a topic this Article explains in detail.

Another substantial theme in this Article is that many more forms of argument have the structure of analogical argument than has been recognized. I maintain that what is commonly referred to as “argument by analogy” has a logical structure whose defining feature is the focus and reliance on examples in the process of inferring conclusions from premises, and that familiar forms of argument exhibit this basic structure even though they are not generally thought of as “analogical” arguments at all. Perhaps the most important of these unrecognized analogical arguments is the argument that proceeds by effecting a “reflective equilibrium” between general norms and particular applica-

⁴ See, e.g., DOUGLAS HOFSTADTER & THE FLUID ANALOGIES RESEARCH GROUP, *FLUID CONCEPTS AND CREATIVE ANALOGIES: COMPUTER MODELS OF THE FUNDAMENTAL MECHANISMS OF THOUGHT* 62–63 (1995); KEITH J. HOLYOAK & PAUL THAGARD, *MENTAL LEAPS: ANALOGY IN CREATIVE THOUGHT* 16–17 (1995).

⁵ For example, Holyoak and Thagard discuss the role of analogy in moral, political, and legal decisionmaking. See HOLYOAK & THAGARD, *supra* note 4, at 139–65. There has also been a good deal of work in “artificial intelligence” that seeks to construct computational models of legal reasoning, including reasoning by analogy. See, e.g., KEVIN D. ASHLEY, *MODELING LEGAL ARGUMENT: REASONING WITH CASES AND HYPOTHETICALS* 1–8 (1990); ANNE VON DER LIETH GARDNER, *AN ARTIFICIAL INTELLIGENCE APPROACH TO LEGAL REASONING passim* (1987); Edwina L. Rissland, *Artificial Intelligence and Law: Stepping Stones to a Model of Legal Reasoning*, 99 *YALE L.J.* 1957, 1971–75 (1990). For further discussion of this computational work on analogical reasoning, see note 163 below.

tions of those norms. Other examples include argument by counterexample and various substantive and interpretive legal doctrines, such as equal protection and argument under the *eiusdem generis* canon of construction. To mark that underacknowledged broader scope of operation of analogical argument, I shall suggest that there is significant heuristic value in using the phrases ‘exemplary argument’ and ‘analogical argument’ more or less interchangeably,⁶ and I shall “speech-act” accordingly.

This Article pursues these broader themes by focusing on two features of analogical argument: its *logical form* — the relation between the truth of the argument’s premises and that of its conclusion (this relation is part of its “semantics,” as I shall explain)⁷ — and its *pragmatics* — those features of the context in which the argument occurs that shape and constrain the proper interpretive reconstruction of its logical form. Closely related to this explication of the semantics and pragmatics of analogical argument is an inquiry into its *rational force*. ‘Rational force’ will be defined in a narrow sense: the rational force of an argument is the degree to which the *form* of the argument yields a reliable judgment about the truth of its conclusion based on the assumed truth of its premises.⁸ Although this notion of rational force is narrow, its use as a measure of analogical arguments will provide valuable insights into the rational process that is surely the *élan vital* of legal reasoning.

A central methodological presupposition of this Article, as well as of a great deal of important current work in the theory of analogy, is that the subject cannot adequately be explicated with the tools of only one discipline.⁹ Accordingly, this Article draws on work not only in jurisprudence, but also in philosophy of language, philosophy of science, basic logic, and epistemology. In order that so many cooks not spoil the broth, their ingredients must be added slowly, carefully, deliberately. This Article attempts to do so by introducing new themes and tools in small and patient steps. Although the steps are many and well marked, the basic movement of the argument is, like Gaul, divided into three parts. The first part (Parts I through III) provides

⁶ Some other theorists of what I am calling ‘exemplary reasoning’ refer not to “reasoning by analogy,” but to “reasoning by example” or something similar. In his influential analysis of legal argument, Edward Levi refers not to “reasoning by analogy” but to “reasoning by example” and “reasoning from case to case.” See EDWARD H. LEVI, AN INTRODUCTION TO LEGAL REASONING 1 (1949). Similarly, the philosopher John Wisdom presents his analysis of exemplary reasoning as a discussion of reasoning “case-by-case.” See JOHN WISDOM, PROOF AND EXPLANATION 47 (Stephen F. Barker ed., 1991). I discuss both Levi’s and Wisdom’s theories below. For discussion of my use of the terms ‘exemplary argument’ and ‘analogy’ and its cognates, see notes 51–52 and accompanying text.

⁷ I discuss “logical form” at pp. 941–42 below and “semantics” in section VI.C below.

⁸ I explain what I mean by “rational force” at p. 951.

⁹ The value of interdisciplinary study of analogy is especially well demonstrated in the works referred to above in notes 4 and 5.

background explanation that includes discussion of the wide variety of analogical arguments this Article explains, the importance of analogy in legal theory, a survey of the different types of theories of analogy that legal theorists and philosophers have offered, and some reminders about basic logical forms. All of this material provides a foundation for the principal model of analogical argument this Article offers. The heart of that model is then presented in the second part of the overall argument (Parts IV and V). This model explains the role of analogy in a wide variety of argumentative contexts, including demonstrative science, empirical science, and normative argument (which itself includes moral and legal argument). Most of the remainder of the Article (Parts V through X) is devoted to explaining the ways in which the special context of legal argument shapes the structure of legal analogical argument.

Throughout the Article, I try to provide clear, accessible examples, frequently drawn from decided legal cases, to illustrate the general claims made. Although “few things are harder to put up with than the annoyance of a good example,”¹⁰ as Twain would have it, one of them is an abstract argument that is ungrounded by the discipline of application.

B. What Is at Stake for Legal Theory and Legal Practice in an Explication of Analogical (Exemplary) Reasoning?

By providing a model of analogical, exemplary legal reasoning, and by using the model to inquire into the rational force of that type of reasoning, this Article addresses questions and issues concerning the rational force of these arguments that are pressing for legal theorists and legal practitioners alike:

- The normative order constituted by the legal system, informed by “rule of law” principles as well as by many others, aspires to be rational in significant ways. Given that aspiration, what kind of rational force does legal exemplary reasoning have — including reasoning from precedent, the centerpiece of Anglo-American legal reasoning?
- How are we to understand the rational force of legal exemplary reasoning by comparison to other types of reasoning with which the law must increasingly interact,¹¹ such as reasoning in the deductive mathematical sciences (which, as I shall explain, has the highest degree of rational force) or in the “hard” empirical sciences (which also has a high degree of rational force by virtue of both its reliance on closely disci-

¹⁰ MARK TWAIN, PUDD'NHEAD WILSON 92 (Sidney E. Berger ed., 1980) (1894).

¹¹ See Scott Brewer, *Quelques Raisonnements théoriques sur des raisonnements pratiques à propos du raisonnement théorique*, in FONDAMENTS NATURELS DE L'ÉTHIQUE 267, 267–73 (Jacob Odile trans., 1993).

plined inductive inference and its use of deductive mathematical models¹²)? What might we learn about legal reasoning from the fact that, in important ways, the trademark forms of reasoning in the demonstrative and nondemonstrative sciences — deduction, induction, and abduction — are very often also ubiquitous and vital elements within legal exemplary reasoning?

- What might we learn about the logical “species” of *legal* exemplary reasoning from the fact that the logically broader “genus” of exemplary reasoning operates *within* both the demonstrative (mathematical and logical) and the nondemonstrative (empirical) sciences?
- Philosophers, logicians, and scientists have explained a great deal about what makes inductive, abductive, and deductive arguments good or bad, compelling or weak. What criteria might one offer the legal theorist or practitioner to assess the strength or weakness of an analogical or other legal exemplary argument? For, of course, not every exemplary argument is an exemplary argument.

There is an additional reason — a historical one — for which the issues and questions this Article addresses are important for legal theory, namely, that the Article’s two focal points — the explication of the structure of exemplary reasoning, and an assessment of its rational force — have long been central concerns of both legal theorists and reflective legal practitioners. It is worth pausing for a brief reminder of how this came to be so.

The issue of the logical form of legal arguments, exemplary and otherwise, has for centuries, if not millennia, been one of the fault lines of jurisprudential debate, and the question of the rational force of exemplary argument has been a centerpiece of Anglo-American jurisprudence for at least a century and arguably much longer. Following a jurisprudential tradition plausibly traceable to rationalist philosophers, both ancient (such as Plato) and modern (such as Leibniz), some legal theorists advanced what one might call a “deductivist” view of legal argument, according to which the basic argumentative method of justified legal reasoning consists of deduction of particular results from valid legal norms arranged into a Euclidean abstract axiomatic system.¹³ A sustained theme of many Legal Realists was that deductiv-

¹² Cf. Eugene P. Wigner, *The Unreasonable Effectiveness of Mathematics in the Natural Sciences*, 13 COMM. ON PURE & APPLIED MATHEMATICS 1, 8–9 (1960) (“[T]he mathematical formulation of the physicist’s often crude experience leads in an uncanny number of cases to an amazingly accurate description of a large class of phenomena.”).

¹³ This position is often attributed to Langdell (although evidence supporting the attribution is harder to find than one might think) and is often referred to, with derisive intent, as “formalism.” See, e.g., ANTHONY T. KRONMAN, *THE LOST LAWYER* 170–85 (1993); Thomas C. Grey, *Langdell’s Orthodoxy*, 45 U. PITT. L. REV. 1, 16 (1983); M.H. Hoefflich, *Law & Geometry: Legal Sci-*

ism was deeply misguided: where 'logic' was for the Realists a (somewhat misleading) metonym for 'deduction',¹⁴ the Realists' banner read: "The life of the law has not been logic; it has been experience."¹⁵

The Legal Realists closely connected their critique of deductivism to a contingent feature of Anglo-American legal decisionmaking, namely, its central reliance on legal exemplary reasoning, what Edward Levi called "reasoning from case to case" in what is still the *locus classicus* for the Realist explanation of legal reasoning.¹⁶ That is, in arguing against deductivism, many of the most important Realists claimed that legal decisions, instead of being *deductive*, are based on richly contextual examples. But perhaps this critique proved too much for those who wanted to believe that legal decisionmaking could still have rational force even if it was structured not deductively, but analogically — that is, if it proceeded not by applying rules of deductive inference in syllogisms, but rather by noting similarities and dissimilarities among examples. In denying deductivism and asserting that legal argument was exemplary instead of deductive, the Realists

ence from Leibniz to Langdell, 30 AM. J. LEGAL HIST. 95, 96, 120–21 (1986). The position in question is more usefully referred to as "conceptualism," the belief that, because the concepts in legal rules are never open-textured or vague, results in particular cases can always be deduced. See H.L.A. HART, *THE CONCEPT OF LAW* 129 (2d ed. 1994). (For discussion of open texture and vagueness, see below at note 200 and accompanying text.) 'Conceptualism' is more accurate than 'formalism', because the latter term is used by a great many scholars who do not agree about its precise meaning, if indeed they have a precise meaning in mind at all. For helpful discussion of the loose use of 'formalism', see Frederick Schauer, *Formalism*, 97 YALE L.J. 509, 510 (1988).

¹⁴ I shall follow the familiar philosophical convention of using single quotation marks to *name* words, that is, to *mention* them by name rather than to *use* them to refer to the things they name. Thus, whereas 'Yale' is a four-letter word, Yale is a university. This convention can be iterated following the rule for single quotes for the term 'Yale': one could say that Yale is a university, 'Yale' is the name of a university, and "Yale" is the name of 'Yale', and so on. I will not have occasion to use the rule in this iterated way and will use double quotes in the familiar way, to refer to a direct quotation or to refer to the way in which something is referred to in some linguistic community. For a discussion of the single-quotation convention for naming, see WILLARD V. QUINE, *METHODS OF LOGIC* 37–38 (rev. ed. 1959).

¹⁵ Grey, *supra* note 13, at 3 (quoting Book Notice, 14 AM. L. REV. 233, 234 (1880) (reviewing C.C. LANGDELL, *A SELECTION OF CASES ON THE LAW OF CONTRACTS*, cited above in note 1)). As Grey elaborates:

Just a decade after the year of their common debut, Langdell's most Langdellian book provoked Holmes, who was reviewing it, to formulate the central slogan of legal modernism: "The life of the law has not been logic; it has been experience." Thereafter, as Langdell's book stood to Holmes' aphorism, so stood classical orthodoxy to modern legal thought generally: the indispensable foil, the parental dogma that shapes the heretical growth of rebellious offspring.

Id. Examples of anti-"logical" Legal Realist writings come easily to mind. See, e.g., LEVI, *supra* note 6, at 1 ("It is important that the mechanism of legal reasoning should not be concealed by [the] pretense . . . that the law is a system of known rules applied by a judge; the pretense has long been under attack." (citation omitted)); Felix Cohen, *The Ethical Basis of Legal Criticism*, 41 YALE L.J. 201, 215 (1931) ("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 . . .").

¹⁶ LEVI, *supra* note 6, at 1.

highlighted, but did not answer, the question of what kind of rational force exemplary reasoning could have.

Today, accounts of exemplary reasoning tend to treat it either as a type of inductive argument (one that is distinct from other types of induction) or as some kind of *tertium quid* between induction and deduction. But regardless of the various ways in which accounts of analogy differ, they all tend to make “similarity” a pivotal concept in their explanations; yet without a good deal more, the concept of similarity does not explain how exemplary argument could be rationally compelling.

John Stuart Mill’s account of analogy is instructive in this regard. Mill went so far as to treat analogy as having no intrinsic difference from induction. Moreover, Mill seemed to believe that the rational force of both induction and analogy rests on the *number* of statistically significant items that are “induced” over or “analogized” — that is, that are referred to in the premises of an inductive-cum-analogical argument.¹⁷ But it is — today, at least — a trivially obvious commonplace in the analysis of rule-following that neither the presence of “similarities” nor the *number* of similarities between analogized items can be sufficient to make exemplary argument a rationally compelling process of *reasoning*,¹⁸ for everything is similar to everything else in an *infinite* number of ways, and everything is also *dissimilar* to everything else in an infinite number of ways.¹⁹ One needs to discern some

¹⁷ See JOHN S. MILL, AN EXAMINATION OF SIR WILLIAM HAMILTON’S PHILOSOPHY, AND OF THE PRINCIPAL PHILOSOPHICAL QUESTIONS DISCUSSED IN HIS WRITINGS 205 n.*, 369 n.* (J.M. Robson ed., 1979) (1865); see also L. JONATHAN COHEN, AN INTRODUCTION TO THE PHILOSOPHY OF INDUCTION AND PROBABILITY 36 (1989) (describing Mill’s claim that there exists “no intrinsic difference between inductive and analogical reasoning”).

¹⁸ See, e.g., Cohen, *supra* note 15, at 216. Cohen observes:

[E]lementary logic teaches us that every legal decision and every finite set of decisions can be subsumed under an infinite number of different general rules, just as an infinite number of different curves may be traced through any point or finite collection of points. Every decision is a choice between different rules which logically fit all past decisions but logically dictate conflicting results in the instant case. Logic provides the springboard but it does not guarantee the success of any particular dive.

Id.

¹⁹ Here are two trivial proofs of this nontrivial point. Consider any two items, *x* and *y*, where neither *x* nor *y* is a moose. However dissimilar they may be, they are “alike” in that both are not identical to one moose. But they are also alike in that they are both not identical to two moose, to three moose, and so on, ad infinitum. If *x* or *y* does happen to be a moose, then this proof will work, *mutatis mutandis*, for any predicate that ranges over numerable individuals and that neither *x* nor *y* happens to satisfy. (For every two items *x* and *y*, there is at least one such predicate that neither satisfies — for example, “is either non-self-identical or identical to *n* moose,” where *n* is a number of moose other than the number of moose to which *x* or *y* happens actually to be identical.)

By the same token, every two items are *unlike* in an infinite number of respects. Again consider two items, *x* and *y*, neither of which happens to be a moose: *x* is identical either to *x* or to one moose, but *x* is unlike *y* in that respect; *x* is also identical either to *x* or to two moose, whereas *y* is unlike *x* in that respect, ad infinitum.

additional constraint on this kind of argument if it is to be compelling at all.

Most accounts seek to supply that extra constraint in the form of "relevance." Such accounts maintain that analogical argument moves not by similarity alone, but by "relevant" similarity. But relevance, like similarity, has proven tenaciously resistant to conceptual explication as part of an explanation of the logical force of arguments, exemplary or otherwise,²⁰ and even accounts that make judgments of relevant similarity and difference central to analogical argument leave the role and operation of those judgments largely mysterious and unanalyzed.

We are left, then, with explanations of analogy that tend to fall into either of two roughly divided camps: in one camp are those who are deeply skeptical about the argumentative force of analogical argument; in the other camp are those who evince an almost mystical faith that, even though analogy does not have the rational force of either induction or deduction, it still has some ineffable quality that merits our entrusting it with deep and difficult matters of state.

I see myself writing against these two important traditions in the theory of exemplary reasoning. I argue that exemplary reasoning is more compelling than the skeptics recognize, and that its characteristic concepts of relevance and similarity can be more thoroughly explicated than the mystics acknowledge. I also suggest some ways in which answers to these questions about the rational force and logical form of exemplary reasoning affect and are affected by conceptions of the "rule of law ideal" and different conceptions of proper judicial role.

²⁰ It is well known that many valid inferences yield conclusions that are irrelevant to the apparent subject of the argument. For example, from 'if it is raining then I will go to the movies', one can validly infer 'either Nixon was five feet tall or he was not' (on the standard interpretation of "if . . . then" as the so-called material conditional). Logicians and philosophers of mind and language have pursued various strategies for placing relevance constraints on deductive argument — for example, changing the interpretation of such logical constants as "if . . . then" or placing some other kind of formal restriction on the logical system. *See, e.g.,* ALAN R. ANDERSON & NUEL D. BELNAP, JR., *ENTAILMENT: THE LOGIC OF RELEVANCE AND NECESSITY* 3–6 (1975). These efforts are quite controversial among philosophers and logicians, and many still doubt that formal logic can be structured to "rule out" irrelevant inferences. *See* SUSAN HAACK, *PHILOSOPHY OF LOGICS* 198–203 (1978). Another strategy is to treat relevance not as something that can be captured in formal inference systems, but rather as a matter of conversational context. This approach is closely associated with Grice's work on conversational implicature and receives extended treatment in DAN SPERBER & DEIRDRE WILSON, *RELEVANCE: COMMUNICATION AND COGNITION* 119–32 (1986). *Cf.* HAACK, *supra*, at 16–17 ("Conventionally, considerations of relevance are apt to be relegated to the rhetorical rather than the logical dimension of assessment of arguments."). I find the latter approach more promising. I also believe that, although the question deserves more discussion by theorists of analogy than it has received, one need not take a position on the question of whether and where to locate relevance constraints on deductive argument and conversation comprehension in order to discern the logical structure of argument by analogy.

In an important sense, my analysis of exemplary reasoning might be called modestly *rationalistic*. In explaining the structure of exemplary arguments, this analysis finds and emphasizes rule-guided structures that are amenable to rational explication and ratiocinative manipulation. Many theorists resist this “rationalization” of exemplary reasoning; the mystics certainly do. My explanatory effort steers a course between hyperrationalism and hyper-antirationalism. I shall argue that, although there are no simple logical or linguistic criteria that determine when two analogized examples are relevantly similar, there *are* both logical and linguistic criteria that the theorist of exemplary reasoning can use to discern the structure of exemplary argument, in both legal and nonlegal settings. And as this philosophical explication of argument by analogy will make clear, there are compelling reasons to believe that the process of exemplary argument lends itself to far more intellectual discipline — to a much higher degree of *rational force* — than generally has been recognized. One critical part of the process, as I shall explain, is the role that the distinct form of inference known as “abduction” plays in analogical, exemplary reasoning — a role that is virtually unrecognized both in discussions of legal analogy and of legal reasoning more broadly.

C. *The Reasoning “Data” to Be Explained: The Broad Family of Exemplary, Analogical Arguments*

I have suggested that the reasoning “phenomena” I want to explain include more than what is usually referred to as ‘reasoning by analogy’ — that they include a large family of arguments that proceed by using examples in the process of inferring a conclusion from a set of premises. The variety of reasoning phenomena that fit this description is surprisingly large — larger, certainly, than are the phenomena that are usually considered to be examples of reasoning by analogy. One of the virtues I shall claim for this theory is its broad explanatory power, its capacity to explain both what is traditionally thought of as reasoning by analogy *and* other quite familiar reasoning devices that have the same basic structure. Because the model of exemplary reasoning I shall provide aspires to explain these broader phenomena, we will do well to have several *examples* of these phenomena in mind as the account progresses. Again, the defining feature of “analogical,” “exemplary” reasoning is the use of examples in the process of moving from premises to conclusion in an argument.

1. *The Common Law Method of Reasoning from “Precedential” Analogies.*— The instances of exemplary reasoning that are probably most familiar to Anglo-American law-trained persons are common law cases in which the “examples” used in reasoning in a case under consideration are precedents. In his classic Legal Realist treatment of “case by case” reasoning, Edward Levi called attention to Cardozo’s

opinion in *MacPherson v. Buick Motor Co.*;²¹ under Levi's influence, this early twentieth-century case has for students of legal reasoning become a paradigm of common law precedential reasoning by analogy.²² In that case, Cardozo was faced with the question whether a defective wooden automobile wheel was sufficiently dangerous to come within the scope of an exception to the rule of privity — the rule that only a person “in privity of contract” with a manufacturer could sue for harm caused by a defective product. The injured party had purchased the car from a dealer and therefore was not in privity with the manufacturer.²³ If the wheel was “inherently dangerous,” then it would come within the scope of the exception, and the plaintiff could recover; if not, then he could not.²⁴ Cardozo's court had before it several precedents each of which considered the scope of the “inherently dangerous” exception; each precedent provided and offered an analysis of whether the object in question was inherently dangerous. Courts had denied recovery under the rule of privity for the negligent manufacture of a horse-drawn carriage, a circular saw, an oil lamp, a boiler, and a soldering lamp; they had allowed recovery under this rule for the negligent manufacture of a coffee urn, a bottle of hair wash, a bottle of aerated soda, a bottle of supposed medicine that was actually a poison, and some scaffolding.²⁵ In sifting through these examples, Cardozo's majority opinion articulated and applied a rule that became a milestone in consumer protection law, holding that a crumbling automobile can be “a dangerous thing” as a matter of law and that the manufacturer's liability extended beyond contractual privity.²⁶

Another example of this sort, one that I shall analyze in detail when I present my model of exemplary reasoning, is *Adams v. New Jersey Steamboat Co.*²⁷ In that case, goods were stolen from the cabin of a steamboat passenger even though the steamboat owner had not been negligent in providing security. The court had before it a precedent holding that an innkeeper had a strict liability duty to an inn

²¹ 111 N.E. 1050 (N.Y. 1916).

²² See LEVI, *supra* note 6, at 9–27; see also MELVIN A. EISENBERG, THE NATURE OF THE COMMON LAW 84–87 (1988) (discussing Levi's reading of *MacPherson* and criticizing his views on reasoning by example); KARL N. LLEWELLYN, THE COMMON LAW TRADITION 430–37 (1960) (discussing Cardozo's reasoning in *MacPherson*).

²³ See *MacPherson*, 111 N.E. at 1051.

²⁴ *Id.* at 1055.

²⁵ See *id.* at 1051–52.

²⁶ *Id.* at 1055. Cardozo elaborated:

If the nature of a thing is such that it is reasonably certain to place life and limb in peril when negligently made, it is then a thing of danger. Its nature gives warning of the consequences to be expected. If to the element of danger there is added knowledge that the thing will be used by persons other than the purchaser, and used without new tests, then, irrespective of contract, the manufacturer of this thing of danger is under a duty to make it carefully. That is as far as we are required to go for the decision of this case.

Id. at 1053.

²⁷ 45 N.E. 369 (N.Y. 1896); see *infra* pp. 1003–06.

guest,²⁸ and another precedent holding that a railroad sleeping-car owner did not have a strict liability duty to a sleeping-car passenger.²⁹ The *Adams* judge thus faced the task of using these examples in reaching a decision about whether the steamboat was, for purposes of assessing the possible strict liability duties of its owner, relevantly similar to the inn or instead to the railroad car. (I shall use this case to show how the process of “distinguishing” cases is also an instance of exemplary reasoning, the process of “reasoning by disanalogy.”)

Although this type of exemplary, analogical reasoning is quite familiar in common law, it is obviously also thoroughly familiar — in Anglo-American legal systems, anyway — in statutory and constitutional cases.³⁰ Thus, for example, in *California v. Carney*,³¹ the United States Supreme Court had to decide whether, for purposes of applying the warrant requirement of the Fourth Amendment, a motor home parked off the street was relevantly similar to a house, or instead relevantly similar to a car, because a warrant is (usually) required for the search of the former but not of the latter.³²

2. *Equal Protection “Doctrine” in Law and Morals.* — Another familiar zone of exemplary reasoning is that of applying “equal protection” norms. The principle of formal justice that informs most Western legal systems is sometimes framed as the requirement that “like cases are to be treated alike,” or as the Supreme Court framed the principle (making clear its connection to equal protection doctrine in American constitutional law):

It is unnecessary to say that the “equal protection of the laws” required by the Fourteenth Amendment does not prevent the states from resorting to classification for the purposes of legislation. Numerous and familiar decisions of this court establish that they have a wide range of discretion in that regard. But the classification must be reasonable, not arbitrary, and must rest upon some ground of difference having a fair and substantial relation to the object of the legislation, so that *all persons similarly circumstanced shall be treated alike*.³³

However firm a place this principle of formal justice has in Western legal theory, the principle is often too vague to resolve particular

²⁸ See *Adams*, 45 N.E. at 369.

²⁹ See *id.* at 370.

³⁰ Two senses of ‘common law’ are worth noting here. First, the term can refer to valid legal rules whose principal immediate source of authority is judicial. (I say ‘immediate’ because, of course, courts are created and sustained by other authoritative rules and institutions.) Second, it can refer to the *method* of legal decision a court uses, whatever the court takes as its principal source of authority for the decision. It is a familiar feature of the Anglo-American legal process that even in legal decisions whose principal source of authority is statutory, regulatory, or (in America) constitutional, the *method* of decision is the same exemplary process that courts use in decisions whose principal source of authority is “common law” in the first sense.

³¹ 471 U.S. 386 (1984).

³² See *id.* at 389.

³³ *F.S. Royster Guano Co. v. Virginia*, 253 U.S. 412, 415–16 (1920) (emphasis added).

cases. In a great many cases in which a question of justice has arisen and a reasoner looks to the maxim of formal justice for an answer, there are too many ways in which persons are "alike" and "unlike" — "similarly" and "dissimilarly" "circumstanced" — for this norm to guide the outcome of the case without a good deal of supplementary reasoning about what *kinds* of similarity and dissimilarity are to be decisive for the specific issue of justice at hand.³⁴ In both moral and legal reasoning, settings in which the same basic norm of formal justice applies, reasoners often resolve their doubts and disputes by sorting through examples, that is, by using exemplary reasoning in order to discern who is "similarly situated" and being treated "equally" by a given moral or legal rule.

3. *The "Ejusdem Generis" Canon of Construction.* — The "ejusdem generis" canon of construction of statutes, wills, contracts, and other formal legal texts also often calls upon the resources of exemplary reasoning. This interpretive norm instructs the interpreter of a series of terms that are either relatively more specific or more precise (or both) followed by a term that is either more general or more vague (or both) to read the last term in the series as being "of the same genus" as the previous, more specific terms.³⁵ Often, it is exemplary reasoning that an interpreter uses to discover the "genus," that is, the category, to which both the series of specific (or precise) terms and the general (or vague) term belong. As one judge tidily described the connection among generality, specificity, and exemplary reasoning in the application of "the rule of construction expressed in the maxim 'ejusdem generis': "when general words follow specific words, and the latter are not exhaustive of their class, *the comprehensive words are restricted to a sense analogous to that of the particular words.*"³⁶

³⁴ For discussion of the overabundance of similarities and differences, see above at note 19 and accompanying text.

³⁵ The phrase 'ejusdem generis' means "of the same genus." 'General' and 'specific' are antonyms that express a logical relation among terms, the relation of categorical subsumption. Thus 'animal' is more general than 'cat' (and, perforce, 'cat' more specific than 'animal') because everything that is in the category of cats is also in the category of animals. A term is neither general nor specific in isolation, but rather is one or the other only in relation to another term that can be measured within a common category. Thus, 'animal' cannot be said to be general in isolation, nor specific in isolation, for 'general' and 'specific' are relational terms; 'animal' is general when compared to 'cat' but specific when compared to 'living thing'.

Generality and specificity must be, but too often are not, kept distinct from vagueness and from the closely related concept of open texture — both of which I discuss and define below at note 200 and accompanying text. A vague term is one that occasions doubt in a language user about whether a particular object falls within the scope of the term. There is no necessary connection between vagueness (whose logical antonym is 'precision') and generality. As the text above suggests, either generality or vagueness, or both, can generate the interpretive questions addressed by the ejusdem generis rule.

³⁶ *Osborn v. Wilson & Co.*, 193 N.Y.S. 241, 242 (N.Y. Sup. Ct. 1922) (emphasis added).

*McBoyle v. United States*³⁷ is a well known example. In that 1931 case, the Supreme Court applied a criminal statute, the National Motor Vehicle Theft Act, which forbade the knowing interstate transport of a stolen “motor vehicle.” The statute stated that “[t]he term ‘motor vehicle’ shall include an automobile, automobile truck, automobile wagon, motor cycle, or any other self-propelled vehicle not designed for running on rails.”³⁸ At issue in the case was the knowing interstate transportation of a stolen airplane. Comparing the airplane to the other examples listed in the statute, Justice Holmes, writing for the Court, held that the airplane did not fall within the scope of the phrase “or any other self-propelled vehicle not designed for running on rails.”³⁹

4. *Reflective Equilibrium.* — Another very important source of exemplary arguments is the device of “reflective equilibrium,” made familiar by the work of Nelson Goodman and John Rawls.⁴⁰ In searching for acceptable general principles, whether in normative moral argument (Rawls’s focus) or in the process of discerning rules of induction or deduction (Goodman’s focus), a reasoner will sometimes confront a situation in which a principle that the reasoner has tentatively accepted meets a particular example that is in some way incompatible with that principle. Here is an illustration of example-driven reflective equilibrium. Consider the principle: ‘a government official should never knowingly execute an innocent person under color of law without due process of law having been provided’. Suppose the reasoner who has tentatively accepted this principle — for example, a sheriff in a small town — faces a situation in which she knows that, unless she immediately, without giving him due process of law, frames and executes some randomly chosen person under color of law for a crime that has just been committed, an angry mob will kill ten inno-

³⁷ 283 U.S. 25 (1931).

³⁸ *Id.* at 26 (quoting National Motor Vehicle Theft Act, ch. 89, 41 Stat. 324, 324 (1919)) (emphasis added).

³⁹ Relative to the terms in the series ‘automobile, truck, automobile wagon, and motor cycle’, the phrase ‘any self-propelled vehicle not designed for running on rails’ is more general. It was also vague when the court considered this case. In reaching his conclusion about the scope of that phrase, Holmes articulated what I shall call (when I present my model of analogical reasoning) an “analogy-warranting rule.” According to this rule, a necessary condition for being a “self-propelled vehicle not designed for running on rails,” for the purposes of this statute, is being a vehicle designed to operate on land. To discern and justify that “analogy-warranting rule,” Holmes relied both on the *ejusdem generis* rule and on the lenity norm of constitutional decision-making. See *id.* at 27. The lenity norm is itself an instance of the broader “rule of law” norm requiring a government to give clear notice of what conduct a legal rule requires before it can issue a sanction pursuant to that rule. For further discussion of this rule of law norm and the role it plays in legal exemplary reasoning, see below at pp. 990–97.

⁴⁰ See NELSON GOODMAN, *FACT, FICTION, AND FORECAST* 64–72 (4th ed. 1983); JOHN RAWLS, *A THEORY OF JUSTICE* 20, 48–50 (1971).

cent people no matter what she does to try to stop it.⁴¹ And let us say that the reasoner now feels doubt about the universal scope of the principle. It might very well be, it seems to her, that in such a case as this, it is acceptable for a government official knowingly to execute an innocent person under color of law without due process of law. That is, it seems that the following “exemplary proposition”⁴² might be true: ‘in this case, it is acceptable for me, as a government official, knowingly to execute an innocent person under color of law without due process of law’. (This proposition, in turn, entails that *sometimes* a government official may knowingly execute an innocent person under color of law without due process of law having been provided.) This exemplary proposition clearly clashes with her tentatively accepted principle in that the latter entails the negation of the former. (Logical inconsistency, as when the principle entails the negation of the exemplary proposition, or vice versa, is a paradigm case of the kinds of “clash” that occur in the process of reflective equilibrium, but it is not the only type.) At that point in her search for the proper principle to guide her conduct, the reasoner has several options. She might decide that, although she is troubled by the conclusion, she must stick to the principle in all its breadth, not execute the randomly chosen person, and in that sense allow ten innocent people to be killed. Or she might modify the principle by adding some condition to it, such as ‘unless doing so is necessary for the preservation of a significantly larger number of innocent lives’.⁴³ Or she might search for a wholly different principle. This process of reflective adjustment between specific examples (as expressed in exemplary propositions) and general normative principles⁴⁴ is a common and vitally important instance of example-based reasoning.⁴⁵

5. *Modus Tollens Counterexample Arguments.* — It is a familiar occurrence in debate that one debater advances a proposition of logically universal scope while the other debater adduces an example that shows that the universal proposition is false in that the example (the exemplary proposition⁴⁶) is both *true* and *logically inconsistent* with the universal proposition. Suppose, for example, that debater *A* asserts

⁴¹ I am adapting an example offered by J.J.C. Smart, as reported by Eric D’Arcy. See ERIC D’ARCY, *HUMAN ACTS: AN ESSAY IN THEIR MORAL EVALUATION* 2–3 (1963).

⁴² I will use the term ‘exemplary proposition’ to refer to a proposition that expresses an example. In order to play a logical role in arguments, “examples” must be framed as propositions.

⁴³ Adopting an exception to the principle in this way is a paradigm instance of “defeasibility.” “Defeating” judgments are a type of exemplary reasoning that are particularly important in Anglo-American legal reasoning. See *infra* pp. 1018–21.

⁴⁴ For an additional example of the process of reflective adjustment, see note 178 below.

⁴⁵ In the argument that follows, I shall maintain that reflective adjustment plays a vital role *within* exemplary reasoning. See *infra* pp. 1022–23. Here, I make the quite different point that reflective adjustment is a *type* of exemplary reasoning.

⁴⁶ See *supra* note 42 and accompanying text.

'one should never tell a lie', and that debater *B* adduces the example in which a wild-eyed friend, *C*, comes to *A* saying that he is going to kill so-and-so and asking whether *A* knows where the knife *C* has lent *A* is? If, on reflection, *A* finds this to be a case in which she should lie to *C*,⁴⁷ then *B* will have succeeded in producing a counterexample to *A*'s claim, *B* having shown that it is not always the case that one should not lie. Because the logical structure of *B*'s argument is what logicians call *modus tollens*, we may call these *modus tollens* counterexample arguments.⁴⁸ Exchanges of this sort are also common in "Socratic" law school classroom exchanges in which a teacher attempts to adduce an example that challenges the breadth of a broad proposition of law a student has advanced. They are a familiar staple, as well, in philosophical arguments in which one philosopher challenges another philosopher's explication of the necessary and sufficient conditions of concepts like knowledge or truth.⁴⁹ Still another clear instance of the *modus tollens* counterexample argument is found in so-called "refutation by logical analogy," which I discuss and illustrate below.⁵⁰

6. *A Note on the Use of the Phrases "Analogical Argument" and "Exemplary Argument."* — I have been suggesting that the theory presented in this Article explains a broader range of reasoning

⁴⁷ In making the judgment that, in this case, she should lie, *A* would be committed to the judgment that an exemplary proposition stating something like 'under some circumstances, one may lie', or 'one may lie when doing so is necessary for the protection of human life', was true.

⁴⁸ *Modus tollens* is a rule of logical inference that allows one validly to infer the proposition 'not-*P*' from the conjoined propositions 'if *P* then *Q*' and 'not-*Q*'. There is an obvious similarity between this process and the process of reflective adjustment, described immediately above. There is also an important difference. In argument by counterexample, the person who offers the exemplary proposition (in the example in the text above, the exemplary proposition might be 'one may lie when doing so is necessary for the protection of human life') as a challenge to the original principle takes that exemplary proposition to satisfy two conditions: the exemplary proposition is *logically inconsistent* with the principle it has been offered to challenge ('one should never tell a lie'), and that exemplary proposition is *true*. When both of those conditions are satisfied, logical consistency demands that the original principle be judged false. The process of reflective adjustment differs from counterexample in this way: although the exemplary proposition adduced is logically inconsistent (and perhaps in some other way incoherent) with the principle it has been adduced to test, the reasoner has not, at the outset of the full reflective adjustment process, decided that the exemplary proposition is *true*. As we saw in the example of the sheriff, the reasoner faces an active decision about whether to "hold on" to the prima facie judgment that the exemplary proposition is true, and thus make some change to the tentatively held principle with which it is inconsistent, or instead "hold on" to the prima facie judgment that the principle is true, and accordingly declare that the exemplary proposition is *false*. (There are other possibilities as well, such as giving up the requirement of logical consistency.)

⁴⁹ One of the best known counterexamples of this sort is Edmund Gettier's challenge to the claim that knowledge is "justified true belief" — that, for any person at all, a person "knows" a proposition if and only if: (1) the person believes it; (2) it is true; and (3) the person is justified in believing that it is true. Gettier and many other philosophers following him have provided counterexamples in which we would say that a person has justified true belief in a proposition, but nevertheless does not *know* it. See Edmund L. Gettier, *Is Justified True Belief Knowledge?*, 23 ANALYSIS 121, 122–23 (1963).

⁵⁰ See *infra* section IV.E.

processes than have traditionally been understood as “reasoning by analogy.” To mark that claim of broad explanatory scope, I introduce and use the phrase ‘exemplary reasoning’. However, lest my use of that phrase obscure what exactly I am arguing, I want to state clearly that the theory offered here *does* explain the reasoning processes that are usually referred to as “reasoning by analogy,” and that, as I use them, ‘analogical argument’ and ‘exemplary argument’ are but two names for the same underlying reasoning process.⁵¹

Why run the risk of obscuring my claim by using both phrases? Why not just call this a theory of “analogical argument” or instead call it a theory of “exemplary argument” and leave it at that? The reason is expository, rhetorical, and heuristic. An important goal of this Article is to show that what is often thought of and referred to as a unique and sui generis type of argument — argument by analogy — is actually the reasoning process that underlies a “family” of arguments whose common structure has not been recognized. I hope that by treating the phrases ‘analogical reasoning’ and ‘exemplary reasoning’ as logically interchangeable, the *style* of the Article can advance that substantive goal. By using the phrase ‘exemplary argument’ as well as ‘analogical argument’ (and other grammatical kin of these phrases, such as ‘argument by analogy’),⁵² the Article both calls attention to the broad family of example-based arguments *and* avoids entangling readers in the question whether all the members of that family should be called ‘argument by analogy’. A reader who might balk at calling reflective equilibrium or argument by counterexample a type of “analogical” argument might be more comfortable with calling them types of “exemplary” argument. If that terminological difference helps such a reader not to be distracted from the Article’s basic explication of this type of reasoning, so much the better. But whatever might be the rhetorical, expository, or heuristic attractions of the phrase ‘exemplary argument’, from my point of view, an ἀναλογία in its ancient meaning

⁵¹ The basic pattern I follow in using these phrases is as follows. I use ‘analogy’ and its cognates when defining and using stipulated terms that are elements of my theory. These terms include ‘analogy-warranting rule’, ‘analogy-warranting rationale’, ‘disanalogy-warranting rule’, and ‘disanalogy-warranting rationale’. I also, for the most part, use ‘analogy’ and its cognates when discussing other theorists’ analyses of this reasoning process because, with a few notable exceptions, *see supra* note 6, that is the term most theorists use to discuss the phenomenon. At many other points, when I am not using technical terms from my own theory or discussing the views of other theorists, I will use the phrase ‘exemplary argument’ and sometimes refer appositively to “exemplary, analogical argument.”

⁵² As I use them, the phrases ‘argument by analogy’ and ‘exemplary argument’ (and their grammatical kin — recall that ‘reasoning’ and ‘argument’ are also interchangeable in this discussion, *see supra* note 3) are coextensive: they denote all, and only the same, instances of argument. I also intend to *explicate* the “concept” of exemplary, analogical argument by discerning its three individually necessary and jointly sufficient conditions. For a summary of those conditions, see pp. 962–63.

(“analogy” as equality of ratios⁵³) describes the relation of these two phrases: ‘the Morning Star’ is to ‘the Evening Star’ as ‘Sir Walter Scott’ is to ‘the author of *Waverly*’ as ‘argument by analogy’ is to ‘exemplary argument’.

II. BRIEF REMINDERS ABOUT “LOGICAL FORM”: INDUCTION, DEDUCTION, ABDUCTION

In the discussion below, I use the concept of *logical form* both in my own explication and in my discussion of other theories of exemplary, analogical argument. Before I undertake that discussion, it will be helpful for me to make clear exactly what I mean by ‘logical form’ and to identify, for purposes of comparison and contrast with the logical form of exemplary arguments, the logical forms of deduction, induction, and abduction.

I will stipulate a distinction between an *argument type* and the *logical form* of an argument type. By ‘argument type’, I refer to the broadly recognized patterns of argument that are known under the headings ‘deduction’, ‘induction’, ‘abduction’, and ‘analogy’. By ‘logical form’, I refer to the relation between the truth of an argument’s premises and the truth of its conclusion. 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 cannot guarantee the truth of the conclusion, but when they are well chosen, their truth can warrant the conclusion’s probable truth.⁵⁴ In *abductive* argument — best known to philosophers of science, but not unknown to legal theorists⁵⁵ — the plausibility of a proposed hypothesis that would explain some event that is believed to have occurred (that is, the proposition describing the event is taken to be true) suggests, though it cannot come close to guaranteeing, the truth of the hypothesis itself.

We can put the stipulated distinction between argument type and logical form to work in the explanation of exemplary argument by asking what logical form arguments by analogy have. Before addressing that question and canvassing some of the standard answers offered by other theorists of analogy, I offer some brief reminders about details of the logical forms of deductive, inductive, and abductive arguments — details that will be important in later discussions.

⁵³ This meaning of ‘analogy’ is discussed below. See *infra* pp. 949–50.

⁵⁴ See *infra* note 67 and accompanying text.

⁵⁵ See, e.g., RICHARD A. POSNER, *THE PROBLEMS OF JURISPRUDENCE* 105 (1990) (noting “[t]he process by which scientists choose which hypotheses to test, the process Charles Sanders Peirce called ‘abduction’”); WILLIAM TWINING & DAVID MIERS, *HOW TO DO THINGS WITH RULES* 256 n.14 (3d ed. 1991); Martin P. Golding, *A Note on Discovery and Justification in Science and Law*, in *JUSTIFICATION: NOMOS XXVIII*, at 124, 132–34 (J. Roland Pennock & John W. Chapman eds., 1986). I return to a detailed discussion of abduction and its relation to analogy below. See *infra* section II.C.

A. Deduction

As just noted, in a valid deductive argument, the truth of the premises guarantees the truth of the conclusion.⁵⁶ Perhaps the most widely known paradigm of deductive argument is the syllogism, whose properties received their first major systematic treatment in the works of Aristotle.⁵⁷ Among legal theorists, the syllogism is probably also the model of deduction best known and relied upon by both deductivists and by Legal Realist anteductivists, such as Holmes, Levi, and Cardozo.⁵⁸ Some writers have assumed that the syllogism best represents the basic form of legal decisions that apply legal rules, while others assume without much discussion that “propositional” logic provides an adequate representation.⁵⁹

There is good reason to believe that neither syllogistic logic proper nor propositional logic is adequate to the task of representing the logic of legal argument.⁶⁰ The age-old debate over the deductive or nondeductive character of legal argument would be enriched by focused discussion of which type of deductive argument form is best suited to represent different types of legal argument.⁶¹ Detailed discus-

⁵⁶ Logicians have different ways of expressing in precise formal terms the kind of “guarantee” that a valid deductive argument provides. One fairly common way to express (semantic) validity is to say that, in a valid deductive argument, whenever the premises are true, the conclusion is also true. Put slightly differently, in a valid deductive argument, for all possible worlds, the conclusion is true whenever the premises are true. The terms ‘whenever’ and ‘all possible worlds’ in these definitions refer to all possible assignments of truth to the logically significant constituents of an argument.

⁵⁷ See MARJORIE GRENE, *A PORTRAIT OF ARISTOTLE* 67 (1963).

⁵⁸ Cf. POSNER, *supra* note 55, at 39–40 (“The overuse of the syllogism is the defining characteristic of the brand of legal formalism attacked by Holmes.”).

⁵⁹ See, e.g., RUGGERO J. ALDISERT, *LOGIC FOR LAWYERS: A GUIDE TO CLEAR LEGAL THINKING* 28–30, 43–51 (1989); NEIL MACCORMICK, *LEGAL REASONING AND LEGAL THEORY* 21 (1978); JOHN M. ZANE, *German Legal Philosophy*, 10 MICH. L. REV. 287, 338 (1918).

⁶⁰ Different systems of deductive logic explore different kinds of logical relations. The so-called “propositional calculus” or “sentential calculus” focuses entirely on the ways in which the presumed truth of simple propositions (such as ‘the moon is made of green cheese’) affects the truth of larger compound propositions of which the simple propositions are parts (such as ‘if the moon is made of green cheese, then cows can jump over the moon’). So-called “first-order predicate logic” reveals more of the details of logical structure than do both propositional logic and traditional Aristotelian syllogistic logic. By reaching down, as it were, into individual predicates to treat the logical relations between individuals and categories, predicate logic can capture all the valid inferences of propositional logic as well as some that propositional logic cannot capture. For example, propositional logic cannot reveal the validity of ‘all men are mortal; Socrates is a man; therefore, Socrates is mortal’. Moreover, by providing a framework for revealing the logical structure of *relations*, predicate logic also captures all the valid inferences that syllogistic logic captures as well as some additional ones that it does not. For example, unlike both Aristotelian syllogistic logic and the propositional calculus, predicate logic can explain why we can validly infer from ‘every horse is an animal’ the proposition ‘every head of a horse is a head of an animal’.

⁶¹ There are plausible candidates for the proper deductive representation of legal argument other than the ones noted in the text above. One is the various systems of “modal” logic, which are more akin to predicate than to propositional logic but which are also distinct from both; modal logical systems analyze the logic of the predicates *it is possible*, *it is necessary*, *it is impos-*

sion of that question is beyond my purview here, but this quick remark is in order. Given that so many legal disputes involve claims about individuals, their properties, and the relations between them, it would seem that first-order predicate logic, at the very least, is needed to represent these arguments adequately.⁶² For purposes of this article, I rely for the most part on that level of logical form.

B. Induction

Typical inductive inferences are of two types. *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. In *inductive analogy*, the conclusion states that some given individual will probably have the aggregation of characteristics noted in the premises.⁶³

Imagine a chicken that reasons inductively⁶⁴ (if a chicken could do such a thing⁶⁵) about a sequence of events: on each of 500 successive days, when the chicken hears a bell (characteristic *F*), she comes out of her coop and gets fed (characteristic *G*). Thus the reconstructed inductive inference on day 501 looks like this:

(1) x_1 is a hear-bell day and x_1 is a get-fed day.

(OR: x_1 is an *F* (hear-bell day) and x_1 is a *G* (get-fed day))

(2) x_2 is a hear-bell day and x_2 is a get-fed day.

(x_2 is an *F* and x_2 is a *G*)

(3) x_3 is a hear-bell day and x_3 is a get-fed day.

(x_3 is an *F* and x_3 is a *G*)

...

(500) x_{500} is a hear-bell day and x_{500} is a get-fed day.

sible, it is contingent. Another plausible candidate is deontic logic — the logic of the norms of obligation, permission, and prohibition — which is modeled on modal logical notions.

⁶² Admittedly, however, not every discussion of the logic of legal argument requires the most powerful of the plausibly available logical systems, and some prominent accounts and discussions of legal argument rely on only propositional logic. See, e.g., MACCORMICK, *supra* note 59, at 19–52; JOSEPH RAZ, *THE AUTHORITY OF LAW* 183–89 (1979).

⁶³ This distinction is standard in accounts of inductive inference. See, e.g., STEPHEN F. BARKER, *THE ELEMENTS OF LOGIC* 181–93 (1989); IRVING M. COPI & CARL COHEN, *INTRODUCTION TO LOGIC* 381–82 (8th ed. 1990). Some writers use the term ‘induction’ more broadly to refer to *any* argument in which the truth of the premises does not entail the truth of the conclusion but nevertheless provides good reason for the conclusion. I think that this is an analytically inferior definition, and adhere in this Article to the narrower one.

⁶⁴ This example is adapted from Bertrand Russell. See BERTRAND RUSSELL, *THE PROBLEMS OF PHILOSOPHY* 63 (1976).

⁶⁵ Russell claims that they can. See *id.* Sextus Empiricus offers an amusing argument about the ratiocinative powers of dogs that could easily be cooked up for chickens as well. See 1 SEXTUS EMPIRICUS, *OUTLINES OF PYRRHONISM* §§ 62–72, at 39–42 (T.E. Page ed. & R.G. Bury trans., 1933).

(x_{500} is an F and x_{500} is a G)

The two typical inductive conclusions to be drawn from these premises are as follows:

Inductive generalization: Therefore, [probably] all hear-bell days will be get-fed days. ([Probably] every x that is an F , is a G .)

Inductive analogy: Therefore, [probably] day 501 [or some other particular day], which is a hear-bell day, will [probably] be a get-fed day. (This particular x , which is an F , [probably] is a G .)⁶⁶

In inductive argument, the truth of the premises never guarantees the truth of the conclusion. Instead, the truth of the premises makes the truth of the conclusion more probable.⁶⁷ Thus on day 501, when the chicken hears the bell and reasons and acts according to the above inductive pattern, instead of getting fed, it may run around like a chicken with its head cut off. Induction is a centerpiece of scientific reasoning, and it looms large in the generalizations on which lawyers and judges rely in legal argument.⁶⁸

C. Abduction

Nearly a century ago, Charles Sanders Peirce identified an argument pattern he referred to as “abduction” in order to explain how it was possible for scientists to select from an indefinite number of logically possible explanations of a puzzling natural phenomenon a relatively small number of hypotheses for confirmation or

⁶⁶ It is not necessary to consider here the relation between these two types of inductive inference and the further type of statistical inductive inference. See CARL G. HEMPEL, ASPECTS OF SCIENTIFIC EXPLANATION 53–79 (1965); BRIAN SKYRMS, CHOICE AND CHANCE: AN INTRODUCTION TO INDUCTIVE LOGIC 13–14, 141–47 (1966). ‘Probably’ appears in the schema for induction (including inductive analogy) not as part of the conclusion, but as an indicator of the logical relation between the premises and the conclusion. See *infra* note 141.

⁶⁷ The degree of probability depends on certain constraints that have received extensive elaboration by philosophers, mathematicians, and scientists, see BARKER, *supra* note 63, at 181–215; SKYRMS, *supra* note 66, at 110–40, but which I need not discuss in this Article.

⁶⁸ To take one small example, the presumption that persons who render services expect to be paid therefor — a doctrinal rule of contract, see, e.g., *In re Estate of Steffes*, 290 N.W.2d 697, 700–01 (Wis. 1980) — seems to rest in part on an inductive generalization about commercial behavior and expectations. More generally, the whole class of goal-oriented legal arguments (regarding, for example, the judicial administrability or the incentive effects of legal rules), which pervade the scholarly and doctrinal legal literature, rely heavily on inductive arguments. Arguments marked by such metaphors as the “slippery slope,” “thin end of the wedge,” or “foot in the door,” which are quite frequently encountered in lawyers’ briefs and judges’ opinions, also rely on inductive generalizations. The basic structure of such arguments is that, although some action or decision taken now may be unobjectionable, it will (or at least very well might) lead by degrees to actions or decisions that are objectionable, perhaps deeply so. Such arguments rely on certain empirical assumptions about how an action or decision will be received and used in a given political, social, or legal setting, see Frederick Schauer, *Slippery Slopes*, 99 HARV. L. REV. 361, 381–83 (1985), and these empirical assumptions themselves depend significantly on inductive generalizations.

disconfirmation.⁶⁹ Since Peirce introduced the concept of abduction into philosophical debate, the question of the role of abductive inference and “scientific discovery” in the process of scientific theorizing has been of central importance in the philosophy of science.

Broadly speaking, two principal philosophical camps with sharply opposing views of the structure and significance of the process of abduction have since developed. One camp has argued that the processes of scientific discovery are not themselves subject to rational discipline, neither in the way that deduction is, nor even in the way that induction is. For these philosophers — Karl Popper’s ironically titled *Logic of Scientific Discovery* is the *locus classicus* of this view — the explication of scientific “discovery” belongs neither in the realm of logic nor in the rational reconstruction of scientific argument, but rather in the domain of psychology.⁷⁰

On the other side are philosophers who believe that there is substantial rational constraint on the process of the “discovery” of scientific hypotheses, both empirical and demonstrative; that rationally constrained inferences are involved in such discoveries; that this inferential process has a logical form, although, to be sure, not the same degree of rational force as deduction or induction; and that, as the mathematician George Polya puts it in his discussion of the role of this kind of discovery (which he refers to as ‘conjecture’) in mathematical proof, “[i]t would be foolish to regard the plausibility of such conjectures as certainty, but it would be just as foolish, or even more foolish, to disregard such plausible conjectures.”⁷¹ Peirce is still the leading figure among philosophers who defend the view that discovery, in both science and other realms of reasoning, is itself a disciplined inferential process. More recently, influential philosophers of science such as Norwood Hanson have emphasized the role of abduction in science, and some theorists have begun to explore its relevance to nonscientific reasoning.⁷²

⁶⁹ See CHARLES S. PEIRCE, *PHILOSOPHICAL WRITINGS OF PEIRCE* 150–56 (Justus Buchler ed., 1955).

⁷⁰ Popper argues:

The initial stage, the act of conceiving or inventing a theory, seems to me neither to call for logical analysis nor to be susceptible of it. The question how it happens that a new idea occurs to a man . . . may be of great interest to empirical psychology; but it is irrelevant to the logical analysis of scientific knowledge.

KARL R. POPPER, *THE LOGIC OF SCIENTIFIC DISCOVERY* 31 (1959).

⁷¹ GEORGE POLYA, *HOW TO SOLVE IT* 43 (2d ed. 1985) (discussing the role of discovery in mathematical proof).

⁷² Not all philosophers agree that abduction, as Peirce first defined it, is precisely the process that takes place in scientific explanation. The leading contemporary theorists who *do* believe this are Norwood Hanson and Holland, Holyoak, Nisbett, and Thagard. See NORWOOD R. HANSON, *PATTERNS OF DISCOVERY* 85–89 (1961); JOHN H. HOLLAND, KEITH J. HOLYOAK, RICHARD E. NISBETT & PAUL R. THAGARD, *INDUCTION: PROCESSES OF INFERENCE, LEARNING, AND DISCOVERY* 89, 136–38 (1986). But it is fair to say that, even among those who do not refer to the reasoning process as “abduction,” it is quite widely accepted that something like abduction is

I believe, with Peirce, Hanson, and others, that abduction is a disciplined (albeit, in contrast to deduction, not a rigidly guided) form of inference; that it has a substantial degree of rational force; and that it plays a vital role in exemplary, analogical reasoning, just as it does in explanatory and justificatory reasoning in science and other fields of inquiry. At this point in my argument, I want only to present the basic form of abductive inference and will leave for later discussion the question of its ratiocinative merits and limitations.

A typical abductive inference has three steps. I will first present these steps discursively, then more schematically.

Step 1. — The abductive reasoner notices some phenomenon that calls for explanation. Take for example my noticing a pain in my toe or the smell of smoke inside my car. The proposition that describes such phenomena, or the set of propositions that does so, is the *explanandum* (the “thing to be explained”). Let us call it proposition ‘P’. Notice that even the apparently simple act of regarding a phenomenon as being in need of an explanation is the result of complex judgments about what requires explanation, and such judgments depend heavily upon context and the purposes of one’s inquiry.

Step 2. — The reasoner notices that the existence of some other factor or set of factors could explain the given phenomenon. That is, one notices that there is an *explanatory hypothesis* (the *explanans*) that could explain the phenomenon *P* as a matter of course. Let us call that hypothesis, which is either a proposition, or more usually a set of propositions, ‘H’. Thus, the hypothesis that ‘these are new leather shoes that have not been stretched out enough to give my toes the room they need’ could explain the pain in my toe, and ‘there is a short circuit in the car’s stereo system’ could explain the smoke I smell. From a logical point of view, the hypothesis I notice is a *conditional* proposition. Where proposition *P* is the *explanandum* (that there is a pain in my toe, or that there is the smell of smoke in my car), and

required to generate plausible explanatory hypotheses that are then tested for confirmation or disconfirmation. See, e.g., BARKER, *supra* note 63, at 209–15 (discussing how to reason to an explanatory hypothesis). I believe that the Peircean formulation is basically correct, and that much of the recent literature on “inference to the best explanation” basically constitutes further explication of Peirce’s insight. See PETER LIPTON, *INFERENCE TO THE BEST EXPLANATION* 56–66 (1991); sources cited *supra* note 55.

There is, however, an important difference between Peirce’s original concept of abduction and the more recent literature on “inference to the best explanation,” namely that, for Peirce, the conclusion of an abductive inference was a *new*, hitherto unknown explanation of a phenomenon, see PEIRCE, *supra* note 69, at 150–51, whereas the idea of inference to the best explanation embraces both the discovery of new explanations and the process of settling on the best explanation of a given phenomenon, even if the explanatory mechanisms are already well known. I frame this below as the distinction between “abduction *to* a theory” (Peirce’s original idea) and “abduction *within* a theory.” (Inference to the best explanation embraces both the “to” and “within” versions of abduction.) Both occur in legal exemplary reasoning, although the more common, I hazard to say, is abduction within an existing explanatory and justificatory framework.

proposition *H* is the *explanans* (that I am wearing new leather shoes; that there is a short in my car stereo), I notice a conditional proposition of the form: “if such and such [*H*] were the case, *then* so-and-so [*P*] would be explicable as a matter of course.” The conditional proposition provides a *hypothesis* that could explain the noticed phenomenon.

Step 3. — The reasoner settles on the hypothesis [*H*] as the *tentatively* correct explanation of the phenomenon [*P*]. She may then proceed to test the hypothesis to confirm or disconfirm it. (We might say that, had Russell’s ill-fated chicken been reasoning *abductively*, on day 501 she reached the wrong abductive explanation of the characteristics she had found to be constantly conjoined in experience.)

More schematically, we may reconstruct the basic pattern of abductive inference as follows:

- (1) *P* — a reasoner identifies some *explanandum*, an item that has been noticed and, according to the reasoner’s interests, calls for explanation;
- (2) If *H* then *P* — the reasoner further observes that if hypothesis *H* were correct, it would be an adequate *explanans* for *P*;
- (3) Therefore, *H* — the reasoner settles on *H* for the purpose of confirming or disconfirming it.

One can reconstruct abduction from at least two different points of view, one “epistemic” and the other “logical.” From the epistemic point of view, one is generally concerned with the way in which human beings can generate justified claims to knowledge even though the putative knowledge may in some significant sense exceed (that is, be underdetermined by) the evidence available to support it. Norwood Hanson offers an epistemic version of the abductive argument:

- (1) Some surprising phenomenon *P* is observed.
- (2) *P* would be explicable as a matter of course if *H* [an explanatory hypothesis] were true.
- (3) Hence, there is reason to think that *H* is true.⁷³

Also important for an understanding of abduction, as Hanson further explains, is that:

Perceiving the pattern in phenomena is central to their being ‘explicable as a matter of course’. Thus the significance of any blob or line in [a picture, such as the duck-rabbit picture made famous by Gestalt psychology] eludes one until the organization of the whole is grasped; then this spot, or that patch, becomes understood as a matter of course.⁷⁴

From this epistemic point of view, the conclusion of an abduction — “*H*” in the schema above — is an explanatory hypothesis. In the context of an abductive inference, the reasoner settles on *H* not as an accepted truth, but rather as a *tentatively held hypothesis that is suffi-*

⁷³ See HANSON, *supra* note 72, at 86.

⁷⁴ *Id.* at 87.

ciently likely to be the correct explanation of *P* that it is worth trying to confirm it. From a logical point of view, in which we are concerned with the relation between the assumed truth of an argument's premises and the truth of its conclusion, the conclusion of an abduction is a proposition whose truth appears to be inferred by a deductively *invalid* rule⁷⁵ rather than by a cogent inductive generalization or valid deduction.

Despite its formal invalidity, abduction plays a critical role in exemplary argument, as I explain below. There, I note that some prominent theories of legal analogy, such as Edward Levi's, go astray by correctly recognizing that something resembling abduction takes place in legal reasoning while failing to see that it is only one part of a multistep reasoning process.

III. THEORIES OF EXEMPLARY, ANALOGICAL ARGUMENT: A TAXONOMY

Analogy has been a contested concept in the history of philosophy and legal theory, and many theorists have offered competing accounts of its structure and significance. To understand any one of these accounts it is helpful to see how they differ from — and are similar to — other, competing theories. In assessing a given theory of analogy, it is also useful to understand something about the evolved meaning of the term 'analogy', for its etymology yields insights into the reasoning phenomena competing theories work to explain.

In what follows, I set the stage for my own theory of exemplary, analogical argument by briefly discussing the etymology of 'analogy' and by comparing my theory along a few significant dimensions to several of the best known philosophical and legal theories.

A. A Note on the Etymology of 'Analogy'

The meaning of 'analogy' has varied considerably since the term entered the lexicon of Western philosophy in ancient Greece. The Greek noun *ἀναλογία* (*analogia*) referred to the mathematical concept of proportion. Any four numbers whose ratios are equal were "proportionate" (*ἀνάλογος* (*analogos*)). For example, the four numbers 8, 2, 4, and 1 might have been called *ἀνάλογος* (*analogos*) because the ratio of 8 and 2 — namely, 4 — equals the ratio of 4 and 1.⁷⁶ Although the

⁷⁵ From a logical point of view, the inference is the familiar invalid pattern of affirming the consequent: (i) *Q*; (ii) if *P* then *Q*; (iii) therefore, *P*. It is important to keep in mind that the proposition "P" that is "abduced" is typically a complex proposition, itself composed of the conjunction of smaller propositional units. From a logical point of view, for example, Darwin's whole theory of evolution might be thought of as *one* very complex proposition.

⁷⁶ This may be expressed either in the form of a ratio 8:2::4:1 ("8 is to 2 as 4 is to 1") or in the form of a fraction, $8/2 = 4/1$. For an ancient Greek use of *ἀναλογία* in this mathematical sense, see PLATO, *TIMAEUS* 31C–32A (Benjamin Jowett trans., 1949).

term ἀναλογία originally stood for the mathematical concept of proportion, Plato and Aristotle extended the term — by analogy, as we might say today — to include relations other than the merely mathematical. Aristotle used it, for example, to explicate the concept of justice (τὸ δίκαιον) as “a kind of *analogon*” (ἔστιν ἄρα τὸ δίκαιον ἀνάλογόν τι),⁷⁷ a conceptual connection that is reflected in the close relation present today between exemplary reasoning and equal protection doctrine.⁷⁸

As Western philosophy developed, the term ‘analogy’ came to be expanded from the narrow mathematical concept of proportion of ratios to encompass the broader concept of *relevant similarity* — of which proportionality is sometimes one instance.⁷⁹ It is the concept of relevant similarity that animates most contemporary uses of ‘analogy’ and its cognates.

Today, the ‘analogy’ cognate terms are sometimes used simply to make an assertion, implicit or explicit, of relevant similarity; let us call such a use an *analogical assertion*. A simple example is an assertion by a court that some provisions of the Uniform Commercial Code apply “by analogy” to transactions that are not within the scope of the Code’s explicit terms.⁸⁰ For my purposes, a more important use of the analogy-cognates is to refer to a type of argument that *relies on* judgments of relevant similarity in the process of inferring a conclusion from a set of premises. There is a fair amount of agreement among theorists of exemplary argument about the basic structure of this type

⁷⁷ ARISTOTLE, NICOMACHEAN ETHICS 1131A (author’s translation). The whole passage reads: “Thus justice is a type of proportion, for proportion (τὸ ἀνάλογον) is not only a characteristic of abstract numerical quantities, but of quantity generally. Proportion (ἡ ἀναλογία) is equality of ratios (ἰσότης λόγων) and is in four terms at least.” *Id.*

⁷⁸ See *supra* p. 936. John Finnis offers a theory of equality that seems to rely on this earliest sense of *analogia* as proportion:

The third element in the relevant concept of justice can be called *equality*. But . . . this must be taken in an analogical sense: that is to say, it can be present in quite various ways. There is, for example, the ‘arithmetical’ equality of $2 = 2$, and there is also the ‘geometrical’ equality of $1:1 = 2:2$, or of $3:2 = 6:4$; to feed a large man the same rations as a small child both is and is not to treat the two ‘equally’. To avoid misunderstandings and over-simplifications, therefore, it may be better to think of *proportionality*, or even of *equilibrium* or balance.

JOHN FINNIS, NATURAL LAW AND NATURAL RIGHTS 162–63 (1980) (citations omitted).

⁷⁹ A judgment of the proportionality of ratios is sometimes an instance of exemplary reasoning. In a mathematical proportion involving four terms (for example, 5, 10, 15, 30), the middle terms (10 and 15) are called the “means” and the outer terms (5 and 30) are called “extremes.” To extend the analogy of *analogia*, we might say that Finnis’s use of ‘analogy’ as “proportionate equality,” see *supra* note 78, is a semantic mean between the semantic extremes of the Greek ἀναλογία and the contemporary, broader understanding of analogy as relevant similarity.

⁸⁰ See, e.g., *Sawyer v. Pioneer Leasing Corp.*, 428 S.W.2d 46, 54 (Ark. 1968) (“We are holding that Section 85-2-316(2) is applicable to leases *where the provisions of the lease are analogous to a sale.*” (emphasis added)). See generally Daniel E. Murray, *Under the Spreading Analogy of Article 2 of the Uniform Commercial Code*, 39 FORDHAM L. REV. 447, 480 (1971) (arguing that concepts from Article 2 of the Uniform Commercial Code would, within the next decade, “infiltrat[e]” much of the common law of contracts).

of argument; it is widely agreed that such arguments proceed by asserting that, because two (or more) “analogized” items share some characteristics, one may infer that the lesser-known item shares some additional characteristic with the better-known one.⁸¹

Despite that basic agreement, there remains a great deal of discord concerning how one should further explicate exemplary, analogical argument. Two types of disagreement in theories of this kind of argument are worth attending to here — one blunter, the other sharper. The blunter type of disagreement distinguishes theories of exemplary argument according to the degree of confidence the theory has about the *rational force* of exemplary argument. The sharper, more precise disagreement (certainly related to the first) concerns the proper way to understand the *logical or semantic form* of exemplary arguments. I describe these disagreements in turn.

B. *Mystics, Skeptics, and Rational Force*

Arguments consist of inferences to conclusions from sets of premises. The degree of reliability of an argument is the extent to which one may rely on the truth of the conclusion based on the assumed truth of the premises. In these terms, “rational force” means the degree of reliability the argument form has at its most reliable. By this definition, *valid* deductive arguments — the most reliable type of deductive argument — have the highest degree of rational force. Well framed (and thus highly probable) inductive arguments probably have the next highest degree;⁸² well framed abductive arguments, though they are deductively invalid, may have as much rational force as well framed inductive arguments.

Theories of analogy differ from each other in the degree of rational force they attribute to analogical argument. In one group are the “mystics,” who place a high degree of confidence in analogical argument even though they neither have nor feel the need for an explanation of its characteristic concepts of “relevance” and “similarity.” In the other group are the “skeptics,” who have rather less confidence in the rational force of analogical argument. On this spectrum, my own theory sails a boring course and bores a sailing course between Sicily and Charisma [sic].

⁸¹ See *infra* p. 955. The better lexicons define argument by analogy in this way. See, e.g., AMERICAN HERITAGE DICTIONARY 66 (3d ed. 1992) (definition of ‘analogy’) (“A form of logical inference or an instance of it, based on the assumption that if two things are known to be alike in some respects, then they must be alike in other respects.”); 1 OXFORD ENGLISH DICTIONARY 432 (2d ed. 1989) (definition of ‘analogy’) (“The process of reasoning from parallel cases; presumptive reasoning based upon the assumption that if things have some similar attributes, their other attributes will be similar.”).

⁸² For a clear discussion of the criteria that determine the probability of inductive inferences, see BARKER, cited above in note 63, at 181–215, and SKVRMS, cited above in note 66, at 110–40.

1. *The Mystics.* — Leading philosophical theorists of analogy in this group are Wittgenstein's student and sometime Cambridge colleague John Wisdom and Wisdom's student, Stephen Barker. Sounding the theme of explanatory ineffability, Wisdom says of what he calls "case-by-case" reasoning of the sort courts routinely use:

It has its own sort of logic and its own sort of end — the solution of the question at issue [for instance, "whether Mr. A who admittedly handed his long-trusted clerk signed blank cheques did or did not exercise reasonable care"] is a decision, a ruling by the judge. But it is not an arbitrary decision though the rational connections are neither quite like those in vertical deductions nor like those in inductions in which from many signs we guess at what is to come; and though the decision manifests itself in the application of a name it is no more merely the application of a name than is the pinning of a medal merely the pinning on of a bit of metal.⁸³

Similarly, Barker explains that, "[a]lthough there are no formal rules about when arguments of this sort are good and when they are bad," analogical reasoning nevertheless "is not just a matter of taste — some analogies really are better than others."⁸⁴

Analogical "mystics" come in varieties. The Wittgensteinian analogists are joined by Young Turk neo-Aristotelian analogical mystics, whose leading figure among legal theorists is Cass Sunstein.⁸⁵ And there is still another group of mystics, characterized by a traditionalist nostalgia for the days when the lawyer's craft and reasoning were respected as a distinctive, complex, prudence-ennobled intellectual pursuit that was the special province of lawyer-experts-cum-lawyer-statesmen. I refer of course to Dean Kronman's work on the lost traditions of prudential lawyering,⁸⁶ but I know of no better succinct statement of the traditionalist-mystical view of analogy than that of Charles Fried:

So what is it that lawyers and judges know that philosophers and economists do not? The answer is simple: the law. They are the masters of "the artificial Reason of the law." There really is a distinct and special subject matter for our profession. And there is a distinct method It is the method of analogy and precedent. Analogy and precedent are the stuff of the law because they are the only form of reasoning left to the law when general philosophical structures and deductive reasoning give out, overwhelmed by the mass of particular details. Analogy is the application of a trained, disciplined intuition where the manifold of particu-

⁸³ JOHN WISDOM, *Gods, in PHILOSOPHY AND PSYCHO-ANALYSIS* 149, 158 (1969). Although Wisdom does not explicitly use the terms "case-by-case" procedure or "analogy" in the passage quoted above, it is clear from quite similar discussions in other writings in which he does use these terms that he is referring to this phenomenon. See, e.g., WISDOM, *supra* note 6, at 45-47.

⁸⁴ BARKER, *supra* note 63, at 227.

⁸⁵ I point to one of the principal "mystical" features of Sunstein's theory of analogy in note 180 below.

⁸⁶ See KRONMAN, *supra* note 13, at 174-80.

lars is too extensive to allow our minds to work on it deductively. This is not a denial of reason; on the contrary, it is a civilized attempt to stretch reason as far as it will go.⁸⁷

2. *The Skeptics.* — The skeptics about analogy stand in sharp contrast to the mystics. Although the skeptics may not “deny the importance of analogy in the workings of the intellect” and may “recognize[] it as an essential factor in imaginative thinking,” they nevertheless view analogical argument “with distrust when used as a means of proof.”⁸⁸ Prominent among the skeptical legal theorists is Judge Posner. He offers a deflationary characterization of reasoning by analogy according to which it has “no definite content or integrity” and “denotes an unstable class of disparate reasoning methods.”⁸⁹ Ironically, Posner, like Fried, links the special intellectual integrity of lawyering to reasoning by analogy, but with an exact *reversal* of valuation. Whereas Fried thinks that legal reasoning by analogy is “not a denial of reason” and is instead “a civilized attempt to stretch reason as far as it will go,”⁹⁰ Posner avers that, although “[l]egal training and experience equip lawyers with a set of essentially casuistic tools and a feel for legal doctrines,” and while “[l]egal doctrinalists believe that they practice a distinct art, that of ‘legal reasoning,’” the bad news is that “legal reasoning is, essentially, debaters’ reasoning; and debaters’ reasoning will not solve fundamental clashes of value or difficult empirical questions” because it does not “equip [lawyers] with the tools they need to understand the social consequences of law.”⁹¹ Similarly, Posner asserts that analogy “is inevitable in fields where theory is weak,” such as “military science, . . . advertising, . . . [and] law,” and he questions “whether reasoning by analogy, when distinguished from logical deduction and scientific induction on the one hand and stare decisis on the other, deserves the hoopla and reverence that members of the legal profession have bestowed on it.”⁹²

Another group of legal theorists who seem to belong in the group of “skeptics” about analogical argument are those who believe that analogical arguments have rational integrity only insofar as they are reducible to *rules*.⁹³ This is a skeptical view of analogical argument in that it finds rational force in putatively analogical arguments only in-

⁸⁷ Charles Fried, *The Artificial Reason of the Law or: What Lawyers Know*, 60 TEX. L. REV. 35, 57 (1981) (citation omitted).

⁸⁸ CHAIM PERELMAN & LUCIE OLBRECHTS-TYTECA, *THE NEW RHETORIC: A TREATISE ON ARGUMENTATION* 371–72 (John Wilkinson & Purcell Weaver trans., 1969).

⁸⁹ POSNER, *supra* note 55, at 86 (citation omitted).

⁹⁰ See *supra* note 87 and accompanying text.

⁹¹ Richard A. Posner, *Legal Scholarship Today*, 45 STAN. L. REV. 1647, 1654 (1993).

⁹² POSNER, *supra* note 55, at 90.

⁹³ Frederick Schauer is a prominent example. See FREDERICK SCHAUER, *PLAYING BY THE RULES* 183–87 (1991). Members of this group overlap substantially with those whom I shall identify as offering “propositionalist” accounts of analogical argument. See *infra* pp. 958–59.

sofar as those arguments are unpacked into rule-based deductive arguments.

3. *The Modest-Proposal Rationalist.* — The varieties of mystical and skeptical theories are the dominant treatments of exemplary reasoning. In contrast to these approaches, I might describe myself as a “Modest-Proposal Rationalist.” Both the mystics and the skeptics are correct in some ways and incorrect in others. The mystics are correct that there is inevitably an uncodifiable imaginative moment in exemplary, analogical reasoning. I will argue that this imaginative moment is not unfamiliar in other areas of reasoning in whose rational force our intellectual culture has placed great confidence — namely, both the empirical and the demonstrative sciences;⁹⁴ Peirce and other philosophers have identified ineradicable imaginative moments in science as the process of *abductive discovery*. The mystics’ account of analogy is philosophically inadequate, though, insofar as they seek to explain analogical argument without explicating how judgments of similarity, dissimilarity, and relevance operate in the inference of conclusions from premises. And the mystics are wrong if they think that it is not possible to explicate these judgments.

Skeptics like Schauer are right to recognize the ways in which exemplary reasoning is governed by rules, but they are perhaps too quick in thinking that such reasoning is reducible to rule-governed reasoning. A better model of analogy, I argue, makes a greater concession to “mysticism” by recognizing the vital moment of disciplined imagination that is a fundamental part of exemplary argument.

Skeptics like Posner are right to think that analogical argument does not have the same degree of rational force as induction or deduction. But they perhaps overlook the significant constraints on analogical arguments by failing to see that, as I argue, induction (in some contexts) and deduction (in other contexts) actually play a vital role *in* analogical argument. I argue that reasoning by analogy is properly understood as a patterned sequence of distinct reasoning processes, including abduction and either induction or deduction. I also explain

⁹⁴ See *supra* pp. 945–49 (discussing abduction). Testimony of flashes of theoretical insight are common among scientists and mathematicians. One recent description puts it thus:

Dr. Mullis’s journey toward the Nobel Prize began in 1983 while he was working as a chemist for the Cetus Corporation of Emeryville, California]. One April evening he was driving along a moonlit mountain road into Northern California’s redwood country. The highway was empty. His driving companion was asleep. His mind began wandering, and suddenly the muse struck. In that brief moment he conceived of a way to amplify DNA from a few cells to vatfuls in a few hours, a discovery that would have an extraordinary impact on both science and society.

Of that epiphany, The London Observer once wrote: “Not since James Watt walked across Glasgow Green in 1765 and realized that a secondary steam condenser would transform steam power, an inspiration that set loose the Industrial Revolution, has a single, momentous idea been so well recorded in time and place.”

Kenneth B. Noble, *Unorthodox Expert with a Nobel Prize Prepares for the Simpson Spotlight*, N.Y. TIMES, Apr. 5, 1995, at A18.

that this class of processes is not “disparate” but coherent; that although it is admittedly far from determinate, it is nevertheless not quite “unstable” either; and that its processes *do* have sufficient “content,” when well executed and properly understood, to give it serious rational force.

C. *Reductivist and Propositionalist Theories of Analogy*

Related to, but distinct from, disagreements among analogical theorists about the rational force and explicability of analogical argument are controversies concerning the relation between analogical arguments and other argument types — principally, induction and deduction — and about the logical and semantic character of analogical argument.

1. *“Reductivist” and “Antireductivist”/Sui Generis Theories.* — Theories of analogical argument differ according to whether they assert or deny that analogical arguments are *reducible*, either to some other argument form (such as induction) or to some type of proposition (such as a principle).⁹⁵ Some theories resist or flatly deny the reducibility of analogical argument to any other argument type, treating it instead as a *sui generis* argument form, a *tertium quid* between induction and deduction.

2. *“Propositionalist” and “Argumentive” Theories.* — Theories of analogy also differ according to whether they treat analogy as a distinct type of *argument* at all. Among those “argumentive” theories that do, there is widespread agreement over that argument’s basic form, notwithstanding the disagreement about other characteristics of analogy. As Hospers frames the widely agreed form:

An analogy is simply a comparison, and argument from analogy is an argument from comparison. An argument from analogy begins with a comparison between two things, X and Y. It then proceeds to argue that these two things are alike in certain respects, A, B, C, and concludes that therefore they are also alike in another respect, D, in which they have not been observed to resemble one another.⁹⁶

I think it is fair to say that many theories, including the one I present, treat analogy as a distinct type of argument. But some accounts of analogy may be better understood as treating analogies as a type of *proposition* rather than as a distinct type of *argument*. Of course, even these theorists recognize that analogical propositions play an im-

⁹⁵ A theory claiming that analogical argument is reducible to deduction is “deductivist”; reducible to induction, “inductivist”; not reducible to deduction, “nondeductivist”; not reducible to induction, “noninductivist.” A *sui generis* type of argument that is reducible to neither deduction nor induction (nor to some type of proposition), is “nonreductionist.”

⁹⁶ JOHN HOSPERS, AN INTRODUCTION TO PHILOSOPHICAL ANALYSIS 476 (2d ed. 1967). Others adopting this same basic scheme are COPI & COHEN, cited above in note 63, at 360; MARTIN P. GOLDING, LEGAL REASONING 45, 107–11 (1984); TWINING & MIERS, cited above in note 55, at 259–63; and Cass R. Sunstein, *On Analogical Reasoning*, 106 HARV. L. REV. 741, 745 (1993). See also *supra* note 81 (discussing dictionary definitions of ‘analogy’).

portant role *in* arguments; thus, perhaps it is more a matter of emphasis than a distinct view of analogical argument. Still, it does seem to my interpretive judgment that the theories that emphasize the propositional nature of analogy are significantly different from those that reconstruct it as a distinct type of argument.

3. *"Pluralist" Theories.* — Some accounts mix and match these features of analogical argument; we may call these "pluralistic" accounts. For example, some accounts allow that analogical arguments might have different logical forms in different settings; the account I propose below is one such account.

4. *The Taxonomist's Disclaimer.* — Before attaching names of theorists to the theoretical labels presented above, I note what any good taxonomist should when labeling "open-textured" phenomena: the boundaries of these categories are not sharp, and this taxonomy is not exhaustive, though I do think it captures most types of theory of analogy.

5. *The Taxonomist's Claimer: Why Does Taxonomy Matter?* — Given the disclaimer, one might wonder why it is worth trying to assess theories of analogy along these lines at all. A good question, to which the following seems to me a good answer. However we explain its rational mechanics, analogy clearly plays a large role in many disciplines, especially in casuistic moral and legal reasoning. When one tries to assess the rational force (as defined above⁹⁷) of analogical argument, as philosophers have for centuries assessed the rational force of deduction and induction, one must discern whether analogy is actually just one species of another type of argument (as the reductivists claim), is its own nonreducible type (as the *sui generis* theorists maintain), or is both (as the pluralists contend). If analogical argument really is one species of another generic type of argument (as, say, the inductivists believe), then one might answer the question of the rational force of *analogy* by piggybacking on the account of the rational force of the other argument type.⁹⁸ Perhaps this is precisely what motivates inductivist accounts of analogy. But if analogy is, at least in some settings, *sui generis*, then the analogical theorist cannot benefit from this explanatory piggybacking. This uniqueness is especially important for our subject because, as discussed above, it is very difficult to explicate the argumentative role of "relevance" and "similarity," which in turn leads some theories (those of the "mystics") to affirm that the rational force of analogy, though substantial, is an ineffable mystery. Let us turn then to the task of attaching some theorists' names to these labels.

⁹⁷ See *supra* p. 951.

⁹⁸ I get the impression, for example, that Copi and Cohen are pursuing this explicative strategy in their discussion of "Analogy and Probable Inference." See COPPI & COHEN, *supra* note 63, at 357–66.

“Inductivist” theories of analogy — reductivist theories that treat analogy as reducible to induction — have been fairly common among both philosophers and legal theorists. Such are the accounts of philosophers Carnap, Copi and Cohen; of cognitive theorists Holland, Holyoak, and others; and of Judge Aldisert, to name just a few.⁹⁹ Edward Levi’s famous account of legal exemplary argument is probably also inductivist.¹⁰⁰ In the “pluralistic” category belong the theories of analogy offered by Stephen Barker, Martin Golding, and William Brenner. These accounts explain that some analogical arguments are types of — that is, are reducible to — induction, while some others are *sui generis* — reducible neither to deduction nor to induction.¹⁰¹

Over the past several decades, a growing number of theorists have defended *sui generis* accounts of analogy. These theorists tend to be the “mystics” discussed above, such as Wisdom and Barker; some suggestive remarks on analogy by Friedrich Waismann indicate that he too may belong to this group.¹⁰² Some of these *sui generis* theorists, such as Barker, embed the account of *sui generis* analogies in a larger pluralistic account that also recognizes an inductive form of analogy, but not all of the *sui generis* theorists do. It is interesting for my purposes in this Article to note that Wisdom, Waismann, and Barker all take judicial or quasi-judicial examples as paradigms of the *sui generis* form of analogical argument.¹⁰³ Perhaps they do so in the belief, which I share and for which I shall argue below, that the special setting of legal argument has a shaping influence on the form of analogical legal arguments.

⁹⁹ See ALDISERT, *supra* note 59, at 89–92; COPI & COHEN, *supra* note 63, at 357; HOLLAND, HOLYOAK, NISBETT & THAGARD, *supra* note 72, at 95–96; Rudolf Carnap, *On Inductive Logic*, in READINGS IN THE PHILOSOPHY OF SCIENCE 288, 299 (Baruch A. Brody & Richard E. Grandy eds., 2d ed. 1989); Rudolf Carnap, *Psychology in Physical Language*, in LOGICAL POSITIVISM 165, 176–77 (A.J. Ayer ed., 1959). These writers treat analogy as reducible to induction in the narrower, more common sense of ‘induction’ as probabilistic inference. See *supra* note 63.

¹⁰⁰ Levi writes:

The basic pattern of legal reasoning is reasoning by example. It is reasoning from case to case. It is a three-step process described by the doctrine of precedent in which a proposition descriptive of the first case is made into a rule of law and then applied to a next similar situation. The steps are these: similarity is seen between the cases; next the rule of law inherent in the first case is announced; then the rule of law is made applicable to the second case. This is a method of reasoning necessary for the law, but it has characteristics which under other circumstances might be considered imperfections.

LEVI, *supra* note 6, at 1–2 (citation omitted). Levi’s is probably an inductivist account, but he was not entirely clear regarding the relation between reasoning by example and other argument forms — except to deny strongly that it could be *deductive*, see *infra* note 120 — and he might have thought that analogy was *sui generis*.

¹⁰¹ See BARKER, *supra* note 63, at 191–93, 225–28; WILLIAM H. BRENNER, LOGIC AND PHILOSOPHY: AN INTEGRATED INTRODUCTION 72–73 (1993); GOLDING, *supra* note 96, at 44, 111.

¹⁰² See Friedrich Waismann, *How I See Philosophy*, in LOGICAL POSITIVISM 345, 372–74 (A.J. Ayer ed., 1959).

¹⁰³ See BARKER, *supra* note 63, at 225–28; BRENNER, *supra* note 101, at 72–75; WISDOM, *supra* note 6, at 45–47; Waismann, *supra* note 102, at 372–74.

The view that legal (and other practical) institutions have a special shaping influence on the form of legal (and other practical) analogies is widely shared among theorists — principally legal theorists — who defend *propositionalist* accounts of analogy. These accounts see analogical argument as reducible (or very nearly so) to “principles” or to some other type of justificatory *proposition*, rather than to some type of argument. John Finnis, for example, asserts that there is a “broad concept of ‘analogy’ and ‘analogical,’ introduced by the medievals and more or less retained in philosophical usage thereafter,” according to which “a term is analogical when its meaning shifts systematically (i.e. according to some principle or rationale) as one shifts from one context or use to another.”¹⁰⁴ Neil MacCormick explains that “no clear line of distinction can be drawn between argument from legal principle and argument from analogy. Analogies only make sense if there are reasons of principle underlying them.”¹⁰⁵ Other propositionalist accounts are those of Kent Greenawalt, Melvin Eisenberg, Peter Westen, and Frederick Schauer. Greenawalt argues that “reasoning by analogy is not sharply divided from reasoning in terms of general propositions,” which he calls “propositions of relevance.”¹⁰⁶ Similarly, in his analysis of exemplary reasoning from precedents, Schauer emphasizes that “only the intervention of organizing theory, in the form of *rules of relevance*, allows us to distinguish the precedential from the irrelevant,” and that rules of relevance “inhere[] in any assertion of similarity.”¹⁰⁷ Likewise, Eisenberg explains that “[r]easoning by analogy differs from reasoning from precedent and principle only in form,”¹⁰⁸ and Westen, in advancing his controversial and interesting ideas about the “emptiness” of the idea of equality, offers a statement of the propositionalist view, in which he argues against one of the central claims in Edward Levi’s analysis of legal reasoning:

Levi assume[s] that in reasoning by analogy a person first identifies legally relevant similarities and then formulates a legal rule to explain the similarities. In reality the process of reasoning is precisely the opposite. One can never declare A to be legally similar to B without first formulat-

¹⁰⁴ FINNIS, *supra* note 78, at 20. As I have suggested, Finnis uses the term ‘analogy’ in a way that bridges the gap between its original use in ancient Greek mathematics (in which ‘analogy’ referred to equality of mathematical proportions) and its modern use (to refer to judgments of relevant similarity). See *supra* note 79.

¹⁰⁵ MACCORMICK, *supra* note 59, at 186; see *id.* at 152–94.

¹⁰⁶ KENT GREENAWALT, *LAW AND OBJECTIVITY* 200 (1992). Works in cognitive-psychological accounts of exemplary argument sometimes also sound this theme:

When analogies are used in arguing very difficult ethical issues, . . . it is crucial to get beyond the mere swapping of alternative analogs. . . . The key question to ask is: what is it about the analog that makes you intuitively reach a certain conclusion? This question should help to bring out the *higher-order relations that help to determine relevance to the case*.

HOLYOAK & THAGARD, *supra* note 4, at 151 (emphasis added).

¹⁰⁷ Frederick Schauer, *Precedent*, 39 STAN. L. REV. 571, 578, 579 (1987).

¹⁰⁸ EISENBERG, *supra* note 22, at 83.

ing the legal rule of treatment by which they are rendered relevantly identical. Why? *Because that is what the terms legally similar, equal, the same, and alike mean. They mean that A and B are prescriptively identical by reference to a given prescriptive rule of treatment.*¹⁰⁹

Some theories of exemplary argument contain elements of both argumentative and propositionalist accounts (and in so doing call into question perhaps more than other theories do whether there is a clear distinction between the two types of accounts). In this category, it seems to me, are the theories of Joseph Raz and Cass Sunstein. Raz's theory treats analogies as justificatory propositions that play an argumentative role in a special justificatory setting. Raz argues that analogical legal arguments are used to justify the adoption of a particular new legal rule when there is a gap in the law: "Argument by analogy is essentially an argument to the effect that if a certain reason is good enough to justify one rule then it is equally good to justify another which similarly follows from it."¹¹⁰ According to Raz, courts do not rely on analogical reasoning when they interpret precedents as having binding force;¹¹¹ instead, analogical argument is a kind of ratiocinative public relations. When judges have decided that there is no source of law directly — that is, deductively — on point, they must exercise discretion in articulating a rule that is to apply (deductively) to a case. At that point, they use analogy to show that, even though they are exercising discretion, they are still "conserving" the policies and principles of existing law and, in that sense, are being bound by them.¹¹² Sunstein's theory, like Raz's, recognizes analogy as an argument type,¹¹³ but it also emphasizes the propositions that enter analogical arguments and maintains that these propositions, *as principles*, satisfy several constraints.¹¹⁴

Finally, in the category of pluralist theories are those of Stephen Barker¹¹⁵ and Martin Golding. Golding offers a pluralistic account that recognizes an inductive form of analogy, and a *sui generis* form in

¹⁰⁹ Peter Westen, *On "Confusing Ideas": Reply*, 91 YALE L.J. 1153, 1163 (1982) (emphasis added and omitted). Westen goes on to cite, in support of this argument, the portion of MacCormick that I discussed just above. See *id.* at 1163 n.40.

¹¹⁰ RAZ, *supra* note 62, at 204.

¹¹¹ See *id.* at 202 ("[A]rgument by analogy is not a method of discovering which rules are legally binding because of the doctrine of precedent. That discovery requires nothing more than an interpretation of the precedent to establish its *ratio*.").

¹¹² See *id.* at 204 ("Argument by analogy shows that the new rule is a conservative one, that it does not introduce new discordant and conflicting purposes or value into the law, that its purpose and the values it promotes are already served by existing rules.").

¹¹³ See Sunstein, *supra* note 96, at 745. Sunstein endorses the argument pattern that most "argumentative" theorists accept. See *supra* p. 955.

¹¹⁴ See *id.* at 784 ("[T]he analogical judge [is] especially concerned to develop principles that organize cases."); *id.* at 746 ("In law, analogical reasoning has four different but overlapping features: *principled consistency*; *a focus on particulars*; *incompletely theorized judgments*; and *principles operating at a low or intermediate level of abstraction*.").

¹¹⁵ See *supra* p. 952.

the specific setting of legal argument, while also treating legal analogies as being closely tied to, if not reducible to, principle-propositions.¹¹⁶

Overlooking the prevalence of propositional-reductionist accounts of analogy may lead one to misjudge the scope or completeness of a theory of adjudication. Sunstein, for example, complains that the subject of analogy “receives little attention in the most influential works in Anglo-American jurisprudence and legal theory” — Dworkin and Hart are the examples Sunstein proffers — and that, “[a]s a result, the legal culture lacks a sympathetic depiction of its own most characteristic way of proceeding.”¹¹⁷ But theorists who favor a strong propositionalist account of analogy may see no need, when advancing a theory of adjudication, to provide any extended discussion of “analogy” per se. Believing that legal analogies are reducible to principles or some other type of justificatory proposition, these theorists may only give an account of the role of that proposition-type in adjudication, rather than also discussing “analogy.” It is likely that Ronald Dworkin’s “principle-” and “integrity-” based accounts of adjudication contain very little discussion of “analogy” for precisely this reason (and surely such an understanding of Dworkin is what leads Raz to say that “Professor Dworkin’s theory of adjudication is the most extreme case of total faith in analogical arguments”¹¹⁸). Thus, if Dworkin does believe that legal analogies are reducible to propositions of “principle,” and if he is right about the prevalence of integrious principles in adjudication, then his “influential works in Anglo-American jurisprudence

¹¹⁶ For the pluralist and sui generis elements of his account, see GOLDING, cited above in note 96, in which he argues that analogical argument is a “close relative[] of induction by enumeration,” and that “an argument by analogy, like induction by enumeration, at most establishes its conclusions as *more likely to be true than false*.” *Id.* at 44–45, 103. Also, pointing to the distinctive normative nature of legal argument, Golding suggests that “legal arguments by analogy are not merely established as being more likely to be true or correct than false or incorrect” and “[t]here appears thus to be at least one kind of good legal non-deductive argument that can conclusively establish its conclusion as true (or correct).” *Id.* at 111. The “propositionalist” element of Golding’s account sees a very (perhaps asymptotically) close connection between legal argument by analogy and argument from legal principles:

Judges who give an argument by analogy of precedent surely will want their premises to add up to a good reason for accepting their conclusion [T]he truth or correctness of the premises is insufficient in this kind of argument for them to add up to a good reason; they must also be *relevant* to the conclusion. The relevance of the premises . . . is established through the relevance premise [T]he truth or correctness of [the relevance premise] will rest . . . on underlying considerations of policy or principle. That is to say, the premise will generally rest on . . . goal-oriented or rights-oriented arguments.

Id. at 109.

¹¹⁷ Sunstein, *supra* note 96, at 741; see also *id.* at 784 (“[I]t is notable that Dworkin says little about the role of analogical reasoning, which lies at the heart of how lawyers actually think.”).

¹¹⁸ RAZ, *supra* note 62, at 205 n.19.

and legal theory" certainly do provide "a sympathetic depiction of [legal culture's] most characteristic way of proceeding."¹¹⁹

I close this taxonomic survey by noting that, despite the very significant differences noted above, one striking feature that all of these accounts share is *nondeductivism*: the view that, whatever else analogical argument may be reduced to, it is *not* reducible to *deduction*. On this judgment, there are no dissenters.¹²⁰ While agreeing that analogical argument is not *reducible to* deduction, I contend that, in some contexts, including the context of argument within legal institutions, deduction plays a far more important role in argument by analogy than other theorists have recognized. In the taxonomic terms just canvassed, the account I present below is neither reductionist nor propositionalist. It sees analogical argument as reducible neither to inductive nor to deductive arguments, nor to some type of proposition; in this way it offers a *sui generis* account of analogical argument, although it also aspires to have some of (what I take to be) the virtues of broad explanatory scope that pluralist accounts, like Barker's, tend to have. (Barker's theoretical vice is not pluralism, but mysticism.)¹²¹

While the account presented below is not exactly reductionist, it is what one might call *analytical*, in a sense common to philosophical accounts that provide conceptual explication. I argue that, from a philosophical point of view (the main contrast I have in mind here is the kind of explanation a cognitive psychologist might offer), analogical argument, both legal and nonlegal, is best explicated as — that is,

¹¹⁹ Sunstein, *supra* note 96, at 741 (citing RONALD DWORKIN, *LAW'S EMPIRE* (1986) and RONALD DWORKIN, *TAKING RIGHTS SERIOUSLY* (1977)). Sunstein speculates that there might be a connection in Dworkin's theory between analogy and principle, but concludes that if "analogical reasoning is . . . part of Dworkin's account," it is so "only as an early step toward something both wider and deeper." *Id.* at 786. This conclusion is likely a misreading of Dworkin that stems from overlooking propositionalist accounts of analogy. Sunstein does not draw the full implications from the fact that a propositionalist account, such as Dworkin probably favors, is *reductionist* such that, from the point of view of the propositionalist, analogy might be wholly and deeply accounted for simply by accounting for the propositions to which analogies are reducible.

¹²⁰ Of course, every inductivist or *sui generis* account (as defined above) rejects the claim that analogy can be deductive. Such are the accounts of Carnap, Copi and Cohen; Holland, Holyoak, and company; and Aldisert, Barker, and Wisdom. (Indeed, far from allowing that analogy is reducible to deduction, Wisdom offers an intriguing argument that *deduction is reducible to the case-by-case procedure*. See WISDOM, *supra* note 6, at 43–50.) After stating the basic schema of analogical argument, see p. 955, Hospers asserts that "[i]t will be apparent at once that an argument from analogy is never conclusive." HOSPERS, *supra* note 96, at 476. Twining and Miers quote and endorse this passage. See TWINING & MIERS, *supra* note 55, at 260. Golding asserts that there is no such thing as deductive legal reasoning from precedents, but that if there were, it would be "strictly speaking, no argument by analogy at all." GOLDING, *supra* note 96, at 103. In accord with his view that analogies are reducible to principles, MacCormick emphasizes that analogies do not have the kind of compelling force that a deductively applicable rule would. See, e.g., MACCORMICK, *supra* note 59, at 181–82. And Levi expressly argues that all legal reasoning is "reasoning by example" (that is, by analogy), and that its pattern *always* commits the deductive fallacy of affirming the consequent. See LEVI, *supra* note 6, at 3 & n.5.

¹²¹ See BARKER, *supra* note 63, at 282 n.46.

analyzed into — a sequence of reasoning steps, involving a stage of abductive discovery, a stage of confirmation or disconfirmation, and a stage of application. Perhaps a good analog here is the way in which some philosophers of science analyze scientific argument into a sequence of reasoning steps often referred to as the “hypothetico-deductive method”¹²² — although I am not endorsing that method as the correct model of scientific explanation. The next section begins this account.

IV. ANALOGY-WARRANTING RULES AND ANALOGY-WARRANTING RATIONALES

A. *Summary of the Model of Exemplary Reasoning*

Although my framework of analysis and many of its terms have yet to be carefully explicated, it may be helpful here to indicate in summary fashion the principal argument and conclusions the Article reaches. I argue that exemplary reasoning is best reconstructed as a patterned sequence of reasoning steps that have three analytically distinct components. These are to be understood as three individually necessary and jointly sufficient conditions.¹²³

First, there is *abduction* in a *context of doubt* about the extension of some predicate or the meaning of some text; probably the most typical “contexts of doubt” in legal arguments are instances in which a legal concept or term is actively vague — that is, instances in which a judge or lawyer is undecided about whether to apply the concept to a given object or event. Having found or been confronted with several examples, the reasoner (say, a judge) seeks to “discover” a rule-like sorting of these examples; I refer to the rule thus discovered as the “analogy-warranting rule.” (Hereinafter, I sometimes use ‘AWR’ as an abbreviated reference to this rule.) ‘Abduction’ is the term some philosophers use to describe that process of discovery.¹²⁴

Second, there is a *confirmation* or *disconfirmation* of the AWR that the reasoner has “discovered” in the first step. This step involves the testing of the “abducted” AWR for its ability to satisfy several requirements, testing of a sort that I shall describe in detail. The AWR is what the exemplary reasoner ultimately settles on, after it passes the test of confirmation, in the belief that the AWR effects an *acceptable sorting* of the examples that the reasoner is considering. To determine whether the AWR *does* effect an acceptable sorting, the reasoner must measure the AWR against a separate set of explanatory and justificatory propositions; these I refer to as “analogy-warranting rationales.” (Hereinafter, I sometimes use ‘AWRa’ as an abbreviated reference to

¹²² See HEMPEL, *supra* note 66, *passim*.

¹²³ See *supra* p. 941 (discussing the phrases ‘analogical argument’ and ‘exemplary argument’).

¹²⁴ See *supra* pp. 945–49 (discussing abduction).

these explanatory and justificatory rationales.) The reasoning device used for confirmation or disconfirmation is “reflective adjustment” in which three distinct types of “holistic” adjustment are possible. One is between the AWR and the chosen examples (exemplary propositions) the AWR sorts; another is between the AWR and the analogy-warranting rationales that explain and justify it; a third is between the analogy-warranting rationales and the chosen examples.

Third, in the final step of exemplary reasoning, the reasoner applies the AWR discovered in the first step and confirmed in the second step to the particular example or examples (exemplary propositions) that originally triggered the exemplary reasoning process — the example sub *judice*, as it were.

Although it may help to have the overall scheme in mind, that summary is only a check to be cashed at the bank of detailed exposition. Accordingly, the following discussion is rich in the explanatory details of this scheme.

B. *The Basic Model for Exemplary, Analogical Argument*

In its simplest form, an analogy (more precisely, an analogical assertion) is a comparison of two or more items. “Life is like a pencil — death, like a pencil sharpener” offers two analogical assertions. “A word processor is like a pencil” offers one. An analogical assertion is not by itself an *analogical argument*,¹²⁵ although such assertions are prominent components of such arguments. For the assertion to be part of an analogical argument, it must be one of the premises relied upon in inferring the conclusion.

Imagine, for example, a student, having carried his word-processing notebook computer to the exam room, making the following argument to the proctor about why he should be allowed to use the computer during the exam: “Students are permitted to bring pens to the exam, and the word processor is like a pen, in that both are used for writing; therefore, students are permitted to bring word processors to the exam.” This is an exemplary argument, an argument by analogy, in which the analogical assertion (‘the word processor is like a pen’) is relied upon to infer the conclusion of the argument (students are permitted to bring word processors to the exam). Framed by the familiar argument pattern noted above,¹²⁶ the student has sought to infer, from the fact that word-processing computers and pens are alike in being used for writing, the conclusion that they are also alike in being permitted for use during an exam. (Obviously, there are ready objections the proctor might raise in a counterargument; such an argument is reasoning by disanalogy and is treated in discussion below.)

¹²⁵ Recall this Article’s narrow (but not uncommon) sense of ‘argument’. See *supra* note 3.

¹²⁶ See *supra* note 81 and p. 955.

There is an art to making apt, instructive, compelling analogies — as there is to making apt, instructive, compelling metaphors. Indeed, although disputed, the better view is that metaphor is a condensed form of analogy — ‘life is a pencil that death sharpens’ is well drawn,¹²⁷ ‘a word processor is an electric pen’ less so.¹²⁸

While there is an art to analogy, there is also a logic to it, even as there is an art to logical proof itself. The best way to make interpretive sense of what reasoners do when using analogies in arguments is to recognize a regular inferential pattern that guides them in making judgments about the truth of conclusions of analogical arguments on the basis of the truth of their premises.¹²⁹

Adopting the widely agreed view noted above, I believe that argument by analogy works by comparing two items and by inferring from the fact that these items share some properties that they share some further property.¹³⁰ In legal analogical arguments, the types of items compared vary widely; they might be cases (whether actual, as when

¹²⁷ Kenneth Burke’s is still among the most interesting discussions (*pace* Davidson, who has argued that there is no such thing as either metaphorical meaning or metaphorical truth, *see* DONALD DAVIDSON, *What Metaphors Mean*, in *INQUIRIES INTO TRUTH AND INTERPRETATION* 245 *passim* (1984)), of how one should assess the *truth* in metaphorical assertions: “*let each say all he can* by way of giving body to the perspective inherent in his choice [of metaphor]. Let each show the scope, range, relevancy, accuracy, applicability of the perspective, or metaphor, he would advocate.” KENNETH BURKE, *THE PHILOSOPHY OF LITERARY FORM* 145 (3d ed. 1973).

¹²⁸ Discussions of the relation between metaphor and analogy abound. *See* HOLYOAK & THAGARD, *supra* note 4, at 235 (“Metaphor is not the same as analogy, but metaphorical thinking is based on the same mental processes as analogy and therefore can in part be understood in terms of the constraints of similarity, structure and purpose.”); PERELMAN & OLBRECHTS-TYTECA, *supra* note 88, at 399 (“In the context of argumentation, at least, we cannot better describe a metaphor than by conceiving it as a condensed analogy”); *cf.* HOLLAND, HOLYOAK, NISBETT & THAGARD, *supra* note 72, at 95 (“Analogy, particularly in the guise of metaphor, is a subtle, powerful inductive process, often viewed as a mysterious fount of creativity.”); POSNER, *supra* note 55, at 92 (“The mere assertion of an analogy may . . . have persuasive force in a psychological sense. Metaphors are often persuasive in that sense, and they are a form of analogy.”). Cass Sunstein offers an interesting and admittedly tentative argument that metaphor is not a type of analogy because metaphors are believed by speakers and hearers to be *literally false*, while analogical assertions are (at least sometimes) believed to be literally true. *See* Sunstein, *supra* note 96, at 748 n.26. This distinction will not do; it is clear that there is a class of metaphors that are believed (or would on quick reflection be believed) to be *both* literally true and metaphorically true (so-called “twice-true” metaphors) — ‘no man is an island’, ‘alcohol is not my cup of tea’, ‘Hitler is an animal’, and ‘Washington, D.C., is a few square miles surrounded by reality’ are a few examples. (Sunstein is here discussing only analogical *assertion* — his example is ‘Abortion is murder’ — not full analogical arguments, but my objection to his argument still applies.) Some scholars have suggested — rather promisingly, in my view — that the best way to explain the role of both analogy and metaphor in *argument* is to recognize the strong analytical connection of analogy and metaphor. *See, e.g.,* PERELMAN & OLBRECHTS-TYTECA, *supra* note 88, at 399 (“[N]o conception [of metaphor] can be fully satisfactory which does not cast light on the importance of metaphor in argumentation. In our view, the role of metaphor will appear most clearly when seen in the context of the argumentative theory of analogy.”).

¹²⁹ *Cf. infra* pp. 984–86 (discussing “structural” and “practical” enthymemicity). This section’s goal is to clarify the logic of “structural enthymemes.”

¹³⁰ *See supra* p. 955 (quoting HOSPERS, *supra* note 96, at 476).

the items compared are authoritative precedents, or hypothetical), events, persons, judgments, or many other things. Similarly, the characteristics used to compare these items also vary widely. But however different may be the types of items compared or the characteristics by which they are compared, the structure of argument by analogy is invariant.

Perhaps the single most important feature of argument by analogy is this: in order for an argument by analogy to be compelling — to have what I have called rational force¹³¹ — there must be sufficient warrant to believe that the presence in an “analogized” item of some particular characteristic or characteristics allows one to infer the presence in that item of some particular other characteristic. It is this sufficient warrant that I have labeled ‘analogy-warranting rule’. An analogy-warranting rule states the *logical relation* between those characteristics of compared items that are known to be shared and those that are inferred. Another important component in a compelling argument by analogy is what I have called the ‘analogy-warranting rationale’. Without undue linguistic legislation, one may distinguish rules from rationales in this way: rationales stand to rules in the two closely associated relations of explanation and justification — that is, rationales explain and justify rules. Accordingly, AWRs stand in these relations to AWRAs. An analogy-warranting *rule* states the logical relation that obtains between the shared characteristics, on the one hand, and the inferred characteristics, on the other. An analogy-warranting *rationale* explains why, in the “eyes of the law” (when the analogical argument is legal), or for the purposes of the argument (when the analogical argument is nonlegal), the logical relation among the characteristics articulated by the analogy-warranting rule either does obtain or *should* obtain.¹³² Reasoners by analogy, including legal reasoners, are concerned not only with the formal cogency of their arguments, but also with the *truth* of the conclusions and the premises of those arguments. In ways that I explore later in greater detail, analogy-warrant-

¹³¹ See *supra* p. 951.

¹³² A further word about how I use the terms ‘rule’ and ‘rationale’ is in order. A *rule* is a *guide to thought or conduct* that, first, is *prescriptive*, not descriptive (although when the rule is a generalization about the world, such as in a scientific formula, the distinction between descriptive and prescriptive breaks down: one formulates a descriptive rule, like “force equals mass times acceleration,” because one thinks that it accurately describes certain phenomena in the world, but at the same time because one thinks that rule is one that *should* be adopted as a guide to thought and to conduct related to that thought). Second, a rule has a logical structure, the most abstract form of which is reflected in the standard conditional proposition, either propositional (“if *P* then *Q*”) or predicate (“for all *x*, if *x* is an *F* then *x* is a *G*”). A “rationale” is a theory composed of several propositions. Its most important defining feature, as noted in the text above, is that it is a complex proposition that serves as a *justification* and *explanation* for rules, as for example “principles” of classical contract theory — autonomy, efficiency, fairness — might be offered to justify and explain the “duty to read” rule. Rationales justify and explain rules and thereby function as *reasons* for those rules — either as reasons for adopting or as reasons for adhering to those rules.

ing rationales play the vital role of guiding reasoners' judgments of truth in the course of reasoning analogically.¹³³

I return to the relation of AWRs and AWRAs below, but here is a first pass at an abstract interpretive schema for the logical form of analogical argument:¹³⁴

Where x, y, z are individuals and F, G, H , are predicates of individuals:¹³⁵

Step 1: z has characteristics F, G, \dots

Step 2: x, y, \dots have characteristics F, G, \dots

Step 3: x, y, \dots also have characteristic H .

Step 4: The presence in an individual of characteristics F, G, \dots provides sufficient warrant for inferring that H is also present in that individual.

Step 5: Therefore, there is sufficient warrant to conclude that H is present in z .

C. "Source" and "Target," "Shared" and "Inferred" Characteristics

Some stipulated definitions will help us navigate this schema for exemplary argument. Borrowing terminology that is standard in the literature of cognitive psychology,¹³⁶ let us call an item (or items) that is (or are) the basis of an analogical argument the "source" (or sources) of the analogy; the schema above represents the sources as 'x' and 'y'. The source is the better known item to which a less well known item is analogically compared. Let us call an item (or items) whose characteristics are analogically investigated and inferred the "target" of the analogy; the schema above represents the target as 'z'. The target is the lesser-known item that will become better known by virtue of analogical comparison to the source item(s).¹³⁷ Further, let us call the

¹³³ See *infra* Part IX.

¹³⁴ This model will be modified slightly to broaden its explanatory scope. See *infra* p. 1008.

¹³⁵ The starting point for the interpretive schema of analogy presented here is a schema offered by several philosophers and legal theorists. See *supra* note 96. I have found Golding's detailed analysis the most helpful for my own thinking. See GOLDING, *supra* note 96, at 44-49, 102-11; *supra* note 116 and accompanying text. The account presented in the following pages differs from those of Golding and others in several respects, including this account's emphasis on the deductive character of analogy-warranting rules in the reasoning of many legal interpreters, the possibility of extending the basic pattern to explain argument by disanalogy as well as by analogy, and the role of abduction in analogical reasoning.

¹³⁶ See, e.g., HOLLAND, HOLYOAK, NISBETT & THAGARD, *supra* note 72, at 307.

¹³⁷ From a logical point of view, there is no reason to list the source premises (that is, steps 2 and 3) after the target premise (that is, step 1), or vice versa. I do so only to model the order in which the premises seem most likely to come to a reasoner's attention; that is, usually the reasoner is *first* presented with some puzzling or doubtful "item," doubts about which occasion the search for, and subsequent analogical comparison to, relevantly similar items. See *infra* pp. 979-80 (discussing the "context of doubt"). Some accounts of analogical argument suggest that this order does indeed matter beyond ease of presentation. See, e.g., LEVI, *supra* note 6, at 2

characteristics that the source and the target are known to share “shared characteristics” (represented as ‘F’ and ‘G’ above), and let us call the additional characteristic that the source is known to possess and that the target is inferred to possess (represented as ‘H’ above) the “inferred characteristic.” According to this interpretive schema, analogical argument works this way: on the basis of one or more shared characteristics in a target and a source, a reasoner infers that the target possesses an inferred characteristic that the source is known to possess.

D. Inductive Analogy-Warranting Rules

There can be different kinds of “sufficient warrant” for inferring the presence in a target of one characteristic on the basis of others. The sufficient warrant might be inductive, as in this reconstructed pattern of argument by a person — let us imagine a befuddled Zeuxis standing in Parrhasius’s studio¹³⁸ — who is in doubt about whether something before him will behave like a curtain:

- (1) Other (source) items I have seen and used appeared to be made of cloth or similar material, to be suspended at the top so as to admit of being withdrawn sideways, and to serve as a screen or hanging, etc.
- (2) This (target) item in front of me appears to be made of cloth or similar material, to be suspended at the top so as to admit of being withdrawn sideways, and to serve as a screen or hanging, etc.
- (3) Those (source) items had an additional feature — namely, they behaved as curtains do (they parted or moved sideways on their suspension mount when pulled either by cord or directly by hand, etc.).
- (4) That an item appears to be made of cloth or similar material, is suspended at the top so as to admit of being withdrawn sideways, and serves as a screen or hanging, etc., makes it sufficiently likely that it will behave as curtains do.
- (5) Therefore, [probably] this (target) item in front of me is like those things in that additional respect as well — that is, it too will behave as curtains do.¹³⁹

(presenting analogical reasoning in the same order in which I have presented it). Other accounts present no specific order. See HOSPERS, *supra* note 96, at 476.

¹³⁸ According to Pliny, Parrhasius was a Greek painter reputed to have a stunning capacity to paint realistic — *trompe l’œil*-ish, we might say — paintings. Zeuxis — an envious rival of Parrhasius, and himself proud of the verisimilitude of his own work (birds pecked at the grapes in Zeuxis’s paintings) — went to Parrhasius’s studio. Unimpressed (we may imagine) with what he saw, Zeuxis asked what was behind a curtain in the studio. The curtain was one of Parrhasius’s paintings. See PLINY, *THE ELDER PLINY’S CHAPTERS ON THE HISTORY OF ART* 108–10 (K. Jex-Blake trans., 2d Am. ed. 1976).

¹³⁹ Does inductive analogy (in similar contexts of doubt) suffuse everyday experience? Some philosophers have thought so. See, e.g., Carnap, *Psychology in Physical Language*, *supra* note 99, at 176. Copi and Cohen, who treat analogical argument as reducible to induction, see *supra* p. 956, also think so. See COPI & COHEN, *supra* note 63, at 358 (“Most of our own everyday inferences are by analogy. Thus I infer that a new pair of shoes will wear well on the grounds that I

In this pattern of analogical argument, the sufficient warrant for inferring curtain-ness (actually, behave-as-curtain-ness) from the appearance of hanging cloth, etc., is inductive — that is, in this case, the analogy-warranting rule (as explained and justified by its AWRa) is inductive. Familiar patterns of causal inference sometimes rely on inductive analogy-warranting rules and rationales. For example, imagine that a target item about some of whose properties one is unsure is like a source item in that it displays smoke. Imagine further that we know that in the source item the smoke was caused by fire (steps 1, 2, and 3); thus we may infer that, in the case of the target item, the smoke was also (probably) caused by fire (step 5), because the causal statement “smoke is often caused by fire” gives us sufficient reason for the inference (step 4, with an inductive analogy-warranting rule and supporting rationale).¹⁴⁰

When the analogy-warranting rule and supporting rationale are underwritten by inductive generalization, so that the rule itself yields only probabilistic conclusions, steps 4 and 5 are to be represented as follows:

- (4i) The presence in an item of *F* and *G* makes it (sufficiently) probable that *H* is also present (inductive analogy-warranting rule).
 (5i) Therefore, it is (sufficiently) probable that *H* is present in *y*.¹⁴¹

E. Deductive Analogy-Warranting Rules and the Entailment Requirement

Now contrast analogical inferences whose analogy-warranting rules and rationales are inductive to patterns like the following, in which

got good wear from other shoes previously purchased from the same store.”). To such views Boltzmann offered a delightfully enigmatic counterpoint:

[M]any problems are like the question once put to the painter, what picture he was hiding behind the curtain, to which he replied, ‘the curtain *is* the picture’. For when requested to deceive experts by his art, he had painted a picture representing a curtain. Is not perhaps the veil that conceals the nature of things from us just like that painted curtain?

LUDWIG BOLTZMANN, *THEORETICAL PHYSICS AND PHILOSOPHICAL PROBLEMS* 15 (Brian McGuinness ed. & Paul Faulkes trans., 1974), *quoted in* G.P. BAKER & P.M.S. HACKER, *WITTGENSTEIN: UNDERSTANDING AND MEANING* 483 (1980).

¹⁴⁰ This is only a partial description of the reasoning process, a necessary part of which is *abduction*. See *infra* Part V.

¹⁴¹ When one reconstructs an actual inductive argument, one understands that the ‘probably’ qualifier is presupposed, rather than being part of the conclusion per se. However, when presenting the schema for inductive analogy in a metalanguage, ‘probably’ appears in order to mark the silent role that it plays in an object-language inductive analogical argument. That is, ‘probably’ (or ‘it is probable that . . .’) appears in the schema, as Barker aptly puts it, “not as part[] of the conclusion[] but as [an] indicator[] of the degree of connection claimed to hold between premises and conclusions.” BARKER, *supra* note 63, at 13; see also HEMPEL, *supra* note 66, at 57–63 (arguing that probability is a relation between the premises and conclusion of an inductive argument, and not a modal qualifier of the conclusion itself). “Sufficiently” marks the fact that different degrees of probability are required in different settings of practical or theoretical judgment. See Brewer, *supra* note 11, at 289.

the “items” being compared (source and target) are not concrete material objects (like curtains), but rather are more abstract entities — namely, arguments.¹⁴²

(1) One argument I am considering claims: “My senses sometimes deceive me; therefore, it might be the case that they always deceive me.” Another argument claims: “God sometimes permits me to be mistaken; therefore, it could be the case that God always permits me to be mistaken.”¹⁴³ [These are “target” items.]

(2) One might argue: “Some paintings are forgeries; therefore, it could be the case that all paintings are forgeries.” [This is the “source” for the analogy.]

(3) The argument in (2) — “Some paintings are forgeries, therefore; it could be the case that all paintings are forgeries” — is invalid [since at least one painting must be an original in order for there to be a forgery].

(4) Any argument that has the structure “Some things have some specified property; therefore, it could be the case that all things have that property” is an invalid argument [since the premises could be true and the conclusion false].

(5) Therefore, the arguments I am considering (“My senses . . .” and “God sometimes . . .”) are not valid.¹⁴⁴

Here the analogy-warranting rule (as explained and justified by its AWRa) is deductive, based, as it is, on principles of (modal predicate) logic.¹⁴⁵

¹⁴² I borrow this example from Jay Rosenberg’s treatment of two passages in Descartes. See JAY F. ROSENBERG, *THE PRACTICE OF PHILOSOPHY: A HANDBOOK FOR BEGINNERS* 15–17 (2d ed. 1984).

¹⁴³ These arguments are borrowed from two passages in Descartes’s first *Meditation*:
Everything which I have thus far accepted as entirely true and assured has been acquired from the senses or by means of the senses. But I have learned by experience that these senses sometimes mislead me, and it is prudent never to trust wholly those things which have once deceived us.

. . . .
. . . . But perhaps God did not wish me to be deceived in that fashion, since he is said to be supremely good. But if it was repugnant to his goodness to have made me so that I was always mistaken, it would seem also to be inconsistent for him to permit me to be sometimes mistaken, and nevertheless I cannot doubt that he does permit it.

RENE DESCARTES, *MEDITATIONS ON FIRST PHILOSOPHY* 18–20 (Laurence J. Lafleur trans., 2d ed. 1960). Although, as discussed above in note 142, I borrow this example of “source” and “target” analogical arguments from Rosenberg, I offer no opinion about whether this is an accurate *interpretation* of Descartes.

¹⁴⁴ As I hope is clear, the arguments that are the source and the target of this analogy (regarding my senses, God’s deceiving me, and forged paintings) are distinct from the argument by analogy itself (steps 1 through 5), which is an analogical argument about deductive arguments.

¹⁴⁵ Both the source and the target arguments rely on an invalid inference from ‘there exists an x such that x is an F ’ to ‘it is possible that every x is an F ’. Other counterexample inferences that reveal the invalidity of this inference are not hard to construct. For example, it is clear (is it not?) that one cannot validly infer from ‘some positive integers are less-than 6’ that ‘it is possible that every positive integer is less-than 6’. (This use of ‘possible’ as part of the modal predicate ‘it is possible’ is distinct from, but related to, the use of ‘possible’ in the following common definition of validity: in all possible worlds, whenever the premises are true, the conclusion is also true.)

Below, I entertain some objections to calling this ‘argument by analogy’ at all.¹⁴⁶ Let me first observe that the argument just rehearsed above — called by some writers “refutation by logical analogy”¹⁴⁷ — is of a type that is familiar in many different argumentative settings, including legal argument. For example, in a well known case from the law of contracts,¹⁴⁸ Judge Friendly was faced with two parties arguing about the meaning of the term ‘chicken’ in their sales contracts. Younger, tastier chicken came in two weights, while older, less tasty chicken came only at the heavier of those weights; the younger chicken — at either weight — was more expensive than the older chicken. The disputed contracts used the term ‘chicken’ without further specifying whether younger or older chicken was intended. Instead, the parties used only the underdeterminative proxies of weight and price: each of the two contracts called for a certain quantity of heavier “chicken” (at a lower price per pound) and a certain quantity of lighter “chicken” (at a higher price per pound). When the seller shipped both younger chicken and older chicken, the disappointed buyer sued, claiming that the contract was for the sale of *only* the younger chicken. To defeat the buyer’s argument on this point, Judge Friendly deployed a tidy refutation by logical analogy:

Plaintiff says the [lighter] birds necessarily had to be younger chicken since the older birds do not come in that size, hence the [heavier] birds must likewise be young. This is unpersuasive — a contract for “apples” of two different sizes could be filled with different kinds of apples even though only one species came in both sizes.¹⁴⁹

Copi and Cohen offer an example of this kind of analogical argument — “refutation by logical analogy,” *see infra* note 147 — using only propositional logic (as opposed to predicate modal logic, used in the example above). Suppose one is offered argument 1 and is unsure about whether it is valid or not.

Argument 1: (1) If Bacon wrote the plays attributed to Shakespeare, then Bacon was a great writer; and (2) Bacon was a great writer; therefore (3) Bacon wrote the plays attributed to Shakespeare.

Were one unsure about the invalidity of argument 1, one might adduce this argument to test it:

Argument 2: (1) If Washington was assassinated, then Washington is dead; and (2) Washington is dead; therefore (3) Washington was assassinated.

As noted above, an argument is valid if and only if there is no possible world in which its premises are true and its conclusion false. Regarding argument 2 (the “source” for the analogy), there is one possible world in which both premises are true and yet the conclusion is false, namely, our actual world. And since arguments 1 and 2 have the same logical form, argument 1 is also invalid. *See* COPI & COHEN, *supra* note 63, at 275.

¹⁴⁶ *See infra* pp. 976–78.

¹⁴⁷ COPI & COHEN, *supra* note 63, at 277. “[I]f a syllogism is invalid, *any other syllogism of the same form will also be invalid*. The common recognition of this fact is attested by the frequent use of ‘logical analogies’ in argumentation.” *Id.* at 195 (citation omitted); *see id.* at 194–96 (discussing logical analogies in predicate logic); *id.* at 277–79 (discussing logical analogies in propositional logic); *supra* note 145.

¹⁴⁸ *Frigalment v. B.N.S. Int’l Sales Corp.*, 190 F. Supp. 116 (S.D.N.Y. 1960).

¹⁴⁹ *Id.* at 128.

When analogy-warranting rules have a deductive logical structure, as they do in these “refutations by logical analogy,” steps 4 and 5 must satisfy what I shall call the *entailment requirement*, namely, the requirement that the AWR can serve as a premise (step 4 above) that, taken together with the “target premise” (step 1 above), deductively entails the conclusion (step 5 above). Thus:

(1d) y has F and G .

. . . .

(4d) All items that have F and G also have H .

(5d) Therefore, y has H .

(As I explain below, AWRs that satisfy the entailment requirement may have a slightly different form in different argumentative settings.¹⁵⁰)

Understanding the role of AWRs is of critical importance to understanding exemplary reasoning, but it is no less important to understand the role of the analogy-warranting *rationales* that explain and justify those AWRs. I say more about the relation of AWRs and AWRas below, but two observations about AWRas are useful here. First, although what an AWRa explains and justifies is an AWR that yields either an inductive or a deductive inference, the AWRa itself does not necessarily satisfy the same conditions as the AWR that it explains and justifies. In my subsequent discussion of AWRs that satisfy the entailment requirement, I want to be particularly clear that the AWRas that explain and justify those AWRs need not also satisfy that requirement. It is a familiar point regarding deductive rules that, on pain of infinite regress, they cannot be deductively justified “all the way up.”¹⁵¹ Second, even when a reasoner seeks to construct and deploy analogy-warranting rules that satisfy the entailment requirement, the reasoner is concerned with more than the *deductive validity* of the argument she ultimately offers in the final step of her exemplary argument (namely, the argument consisting of the inferential move from steps 1d to 5d in the example above); she is also concerned with the *truth* of both the premises and the conclusion of the argument. The primary guides for her judgment of truth are the analogy-warranting *rationales* that explain and justify the analogy-warranting rules.

F. Why Analogy-Warranting Rules at All?

There is an ongoing debate among theorists of exemplary reasoning about the role that rules play in that reasoning process. Some vigor-

¹⁵⁰ See *infra* section VI.D.

¹⁵¹ Hempel’s version of the “covering-law” model of scientific laws provides an example of deductively applicable universal propositions that are not themselves justified by deductive principles. See HEMPEL, *supra* note 66, at 345–47; see also *infra* note 178 (discussing deductive rules that yield acceptable inferences).

ously assert, while others firmly deny, that exemplary reasoning *must* ultimately be a rule-governed process. Theorists in the former group, such as MacCormick, Westen, Greenawalt, Eisenberg, and Schauer, tend to espouse “propositionalist” theories of exemplary argument.¹⁵² As noted above, some of those propositionalists are also “skeptics” about exemplary argument, inasmuch as they believe that exemplary arguments have rational force *only* insofar as they are reducible to rules.

1. *A Note on the Meaning of ‘Rule’.* — Contemporary legal theory is much concerned with the extent to which law and legal reasoning is a matter of following rules, and scholars commonly draw a distinction between “rules” and “standards.” According to this basic distinction (one that is drawn slightly differently by the many writers who use it), rules and standards are on what we might call a continuum of discretion, with the least discretionary norms occupying the rule end and the most discretionary norms occupying the standards end.¹⁵³ Such a distinction conflates logical and other semantic phenomena that it is both useful and important to keep distinct;¹⁵⁴ accordingly, I do not rely on it in this Article. Instead, I define “rule” in a more logically spare manner, as a prescriptive proposition that has a logical structure the most abstract form of which is reflected in the standard conditional proposition, either propositional (“if *P* then *Q*”) or predicate (“for all *x*, if *x* is an *F* then *x* is a *G*”).

2. *Two Examples of Exemplary Rules.* — Without further ado, I offer two examples to illustrate both the position this Article takes on

¹⁵² See *supra* notes 104–109 and accompanying text.

¹⁵³ See, e.g., Kathleen Sullivan, *The Supreme Court, 1991 Term — Foreword: The Justices of Rules and Standards*, 106 HARV. L. REV. 22, 58 (1992) (“A legal directive is ‘rule’-like when it binds a decisionmaker to respond in a determinate way to the presence of delimited triggering facts. Rules aim to confine the decisionmaker to facts, leaving irreducibly arbitrary and subjective value choices to be worked out elsewhere. . . . A legal directive is ‘standard’-like when it tends to collapse decisionmaking back into the direct application of the background principle or policy to a fact situation.” (citations omitted)); see also Louis Kaplow, *Rules Versus Standards: An Economic Analysis*, 42 DUKE L.J. 557, 560 (1992) (“This Article will adopt . . . a definition, in which the only distinction between rules and standards is the extent to which efforts to give content to the law are undertaken before or after individuals act.”).

¹⁵⁴ Consider a directive that says, ‘do all and only what the Pope says’ — a directive adopted because the decisionmakers believed that the Pope has infallible judgment on all matters of conduct. (I do not claim that anyone believes this — the example could be adjusted to fit any person whose word is treated as absolute authority.) Is this a rule or a standard? Under the typical discretion-based distinction, it seems rule-like, since it “binds a decisionmaker to respond in a determinate way,” and attempts to guide conduct *ex ante*, Sullivan, *supra* note 153, at 58, namely, by directing the decisionmaker to consult the Pope. But it also seems to be a “standard” on this definition insofar as it “collapse[s] decisionmaking back into the direct application of the background principle or policy to a fact situation,” *id.*, namely, the Pope’s alleged infallibility. The discretion-based distinction collapses at least two importantly distinct phenomena: the directive nature of a norm (achieved by the use of a logical conditional) and the degree of open texture of that directive. For discussion of open texture, see p. 993 below. My definition of rule (and the related definition of ‘rationale’, see *supra* note 132) keeps these ideas distinct.

the question noted above, namely, whether exemplary arguments have rational force *only* insofar as they are reducible to rules, and the reason for which it takes that position. The first example comes from the history of the philosophical study of semantics; the second is borrowed (and paraphrased) from the comedian Steven Wright.

Example 1: According to what has been called the “picture theory of meaning” or “idea theory of meaning,” the meaning of the term ‘leaf’ is the picture (the pictorial idea) of the leaf that comes to mind when one hears or utters the term.¹⁵⁵

Example 2: “When I became two years old, I became very alarmed because I realized that I had doubled my age in a year. I thought, if this keeps up, by the time I’m seven I’ll be sixty-four.”¹⁵⁶

By themselves, these two examples, comprised of the two foregoing bits of text (the brief statement of a failed theory of meaning and the joke), explain perfectly the point I wish to make about the role of rules in exemplary argument. *Not.* They cannot serve as *examples* of the point I wish to make unless I give the reader some indication of — or at least, unless the reader somehow discerns or supplies a judgment about — *which* of their indefinite features I am attempting to call to the reader’s attention in offering them *as* examples. Is it that they are both written in the English language? That they both might be thought laughable? That each contains a double quotation mark? That each contains at least ten words? That each contains vowels? In order for them to serve as examples, I must give (or the reader must get or supply) some *patterned direction of attention* to selected features of each bit of text, a patterned direction that advances my discussion of the role of rules in exemplary reasoning.¹⁵⁷ And that patterned direction of attention is effected by a *rule*; neither text can serve as an example until some *rule* is used to pick out the features of the text that make it *exemplary*.¹⁵⁸

¹⁵⁵ This theory is often attributed to John Locke, but it serves my purposes as an example even if the theory is not properly attributed to him. There is, however, some reason to believe that Locke held a theory of meaning like this one. See, e.g., JOHN LOCKE, AN ESSAY CONCERNING HUMAN UNDERSTANDING 405 (Peter H. Nidditch ed., 1975) (1689) (“The use then of Words, is to be sensible Marks of *Ideas*; and the *Ideas* they stand for, are their proper and immediate Signification.”).

¹⁵⁶ As told by Steven Wright, the joke goes as follows: “I remember when I turned from one year old to two years old, I got all freaked out because I realized, in one year, my age doubled. I thought to myself, if this keeps up, by the time I’m six, I’ll be ninety.” STEVEN WRIGHT, I HAVE A PONY (Warner Bros. 1986).

¹⁵⁷ There is an intimate connection between abduction and the rule-guided nature of analogical judgment. To borrow from Hanson’s description of abduction, see *supra* p. 948, perceiving the pattern in examples is central to their being explicable as examples.

¹⁵⁸ Recall that a “rule” is a prescriptive guide to thought or conduct that also has the logical form of a conditional proposition. See *supra* note 132. Thus, one can use the definition of ‘leaf’ as a *rule* to guide one’s behavior in picking out all and only the leaves from a set of objects found in a dell. One can use a mathematical rule for guiding one’s behavior in assigning a number to the age of a child. One can also use a rule to guide one’s behavior in determining

Thus, here is *how* examples 1 and 2 exemplify the point I wish to make. Each example illustrates *precisely this feature of examples*, namely, that no example can serve as an example without a rule to specify what about it is exemplary.¹⁵⁹ For example, the picture theory of meaning raises the question of how a given individual picture of a leaf that comes to mind when one speaks or hears the term could supply the *meaning* of the term 'leaf'. The theory is fatally flawed because, when one hears or speaks the term 'leaf', an indefinite number of characteristics of a leaf-picture come to mind that are not part of that term's *meaning*. Suppose the picture that does come to mind is of a green maple leaf. Does this same picture come to mind for 'leaf' whenever one hears or speaks the term? Is being green part of the *meaning* of 'leaf'? No. Is having the shape of a maple leaf part of that meaning? No. But how do we *know* that these are not part of the meaning of 'leaf'? In order to use any picture as a guide to the meaning of that term, one would *already* have to have some definitional rule and use it to sort through the features possessed by the example by picking out the relevant and disregarding the irrelevant characteristics.¹⁶⁰

Example 2 also exemplifies the rule-governed nature of exemplification. The joke plays on the fact that the passage of an additional year in the life of a one-year-old child has two distinct characteristics (actually, it has many more, but the joke plays on two), each of which could instantiate a very different *rule* for assigning a number to the child's age. One characteristic of the passage of that second year in the life of the child is that it is an instance of an additional 365 days having elapsed in that life. One rule for assigning a number to the age of the child — a rule that finds favor with many people as a way of measuring and reporting their age — is "add 1 for every additional 365-day period that elapses" in that life. But the passage of that second year in the life of the child has another characteristic, namely, that it doubles the age of that child. According to one of the rules of which *that* characteristic is an instance, the number one assigns to the age of the child is determined by this formula: "where *n* is the number

what it is about a pair of examples of exemplariness that makes them exemplary, and that is the kind of rule I am articulating in the text above.

¹⁵⁹ There is a bit of recursion here — since they are examples of the rule-bound nature of exemplification itself, one might call them metaexamples.

¹⁶⁰ This is now a familiar point in contemporary philosophy. See, e.g., NELSON GOODMAN, *WAYS OF WORLDMAKING* 63–65 (1978) (discussing how "a sample is a sample of some of its properties but not others"); LUDWIG WITTGENSTEIN, *PHILOSOPHICAL INVESTIGATIONS* §§ 73–74, at 34e–35e (G.E.M. Anscombe & R. Rhees eds., G.E.M. Anscombe trans., 1972); Cohen, *supra* note 15, at 215.

of 365-day periods that have elapsed in the life of the child, the number to be assigned to the age is $2n-1$.¹⁶¹

The joke consists in simultaneously¹⁶² focusing on these significantly different characteristics of the passage from the child's first to second year (that it is both an adding-one, in which 365 days = 1 year, and a doubling). It plays on the fact that the *instance* of passing from the first to the second year does not *inherently* exemplify any particular rule for assigning numbers to the age but rather becomes an *example* of one rule or the other only by virtue of the rule itself.

Thus, as these two examples of exemplification exemplify, an example cannot be an example without a rule to specify in what its exemplariness consists. "Propositionalist" theorists of analogy like Westen and Schauer agree with this judgment. However, the theory of exemplary argument I am developing here rejects the propositionals' belief that exemplary arguments are *reducible* to rule-based arguments. Rules play a vital role in exemplary argument, but they do not comprise the whole process. Two other critical elements in the process are the *discovery* (what I have been referring to as "abduction") of proposed analogy-warranting rules, and the confirmation or disconfirmation of those rules. I shall discuss these additional elements after pausing to consider two important objections to the model of exemplary argument that I have presented so far.

G. Two Objections to the Model of "Analogy-Warranting Rules"

The foregoing schema for exemplary argument emphasizes, more than do many other accounts, the role of rules in exemplary argument — inductive analogy-warranting rules in some arguments, and deduc-

¹⁶¹ Of course, an indefinite number of other rules for assigning a number to the child's age — in addition to "add 1 for each additional 365-day period elapsed" and " $2n-1$ " — could be "drawn through" the data point that consists of the passage from the first to the second year of the child. The rule might, for example, be that the age doubles in the passage from 1 to 2, *triples* (rather than again doubling, as it does with "assign $2n-1$ ") in the passage from 2 to 3, quadruples in the passage from 3 to 4, and so on. This point about the indefinite number of rules that might explain a set of data points is what Felix Cohen observes in the quotation in note 15 above.

¹⁶² It achieves this effect in a way similar to that in which Proudhon's anarchist dictum 'property is theft' does. Were one less adequately post-deconstructionist, one might say that such assertions as 'property is theft' and 'by the time I was seven I'd be sixty-four' simultaneously valorize a subject of discourse and place it *sous rature*. Cf. Sidney W. DeLong, *Jacques of All Trades: Derrida, Lacan, and the Commercial Lawyer*, 45 J. LEGAL EDUC. 131 *passim* (1995) (deconstructing deconstruction). (Jack Balkin explains the practice of erasure this way: "Derrida demonstrates the precarious position of the deconstructionist by placing certain concepts *sous rature* ('under erasure'). For example, he uses the word 'is' with a line through it to show that the word is logocentrically based ('being' is the ultimate expression of presence) yet necessary for expression." J.M. Balkin, *Deconstructive Practice and Legal Theory*, 96 YALE L.J. 743, 760 n.54 (1987); see also Jacques Derrida, *For the Love of Lacan*, 16 CARDOZO L. REV. 699, 707 (1995) (discussing "formalized legibility under erasure [*sous rature*] and the logic of the event as a graphematic event [that] only arrives in erasing itself [*n'arrive qu'à s'effacer*]" (some insertions in original)).

tive analogy-warranting rules in others.¹⁶³ But in emphasizing the rule-ness of exemplary argument in this way, this account of analogical argument might well seem to miss what is *distinctive* about exemplary argument. It is, after all, an ancient, Aristotelian claim that reasoning by analogy is reasoning “from particular to particular,” in contrast to deductive reasoning from general to particular, and inductive reasoning from particular to general. There are two closely related ways of expressing this important basic objection. I turn to these related objections now, since answering them will help to fill out my explanation of the role that *abduction* plays in exemplary argument.

Look again at the example offered above of an exemplary argument with an AWR that satisfies the entailment requirement,¹⁶⁴ and consider this objection from an easily imagined interlocutor:

You say that there is a *deductively applicable* AWR that does the crucial analogical work in this argument. But the very presence of that rule suggests that this argument is not really analogical at all. Is not the example above of so-called “refutation by logical analogy” better understood as a deduction, which applies a “major premise” (actually, a couple of them) to a particular case, just as a major premise is conjoined to a minor premise to yield a conclusion in the argument ‘all men are mortal; Socrates is a man; therefore, Socrates is mortal’? Your argument above is best reconstructed this way, as a deduction:

- (1) An argument is valid if and only if there is no possible world in which the premises are true and the conclusion is false.
- (2) For the argument of the form, “some things are *F*, therefore all things could be *F*,” there are some possible worlds¹⁶⁵ in which some things are *F* but it is not the case that all things could be *F* [for example, possible worlds in which ‘*F*’ stands for “is a forgery”]; thus, by the definition in (1), such arguments are not valid.

¹⁶³ Studies of analogy in other fields support the claim that analogy can be represented by a rule-based model. That claim is a fundamental methodological assumption of studies of analogy in the field of artificial intelligence, *see, e.g.*, Rissland, *supra* note 5, at 1959 (“What distinguishes the AI approach from other studies of cognition and knowledge . . . is its insistence on grounding the analysis in computational terms — preferably in a successfully running computer program that embodies the analysis.”), since any computer *program* that could simulate analogy is perforce constructed from rules. Kevin Ashley has developed just such a rule-guided computer program, a program called ‘Hypo’, which embodies an analysis of analogical legal argument. *See* ASHLEY, *supra* note 5, at 4–8. Detailed discussion of this kind of work in artificial intelligence is beyond the scope of this Article, but two quick observations are worth making. First, it is true that such work is “a giant step toward the goal of understanding legal argumentation.” Rissland, *supra*, at 1973. But the severe constraints on these models — constraints imposed precisely so that the subject matter is amenable to computational simulation — often make them too idealized to explain the subtleties of interpretation and context in actual legal exemplary reasoning. *See, e.g., id.* at 1972 (“HYPO does not in any way attempt to bring in policy-level concerns or argumentation; rather, it sticks to arguing with cases, on their facts, in a technical way. HYPO also does not include other aspects of legal reasoning, such as reasoning with rules.”).

¹⁶⁴ *See supra* pp. 969–71.

¹⁶⁵ I offer some discussion of what logicians mean by “possible worlds” with reference to semantic validity in notes 56 and 145 above.

(3) The argument “my senses sometimes deceive me, therefore, it might be the case that they always deceive me” has the form “some things are *F*, therefore all things could be *F*.”

(4) Therefore, this argument is not valid.

“That is,” the objector might continue,

Why should this be treated as *analogical* argument at all? Is it not, rather, a straightforward example of *deductive* argument? The reasoner takes a definitive feature (a necessary and sufficient condition) of logical validity (namely, that whenever the premises are true, the conclusion is true) and uses it to see whether the object in front of him — call it a “target” if that pleases you — satisfies its definitive condition. To be sure, some comparison of *characteristics* is involved in this deductive process — for example, both the “target” argument about my senses and the “source” argument about the forgeries share this characteristic: there is at least one “possible world” in which the argument’s premises are true but its conclusion is false — but if *every* instance of argument that involves this kind of comparison of characteristics is to be taken as “argument by analogy,” then you have eliminated the distinction between analogy and deduction. You may even have eliminated the distinction between analogy and *any* other type of argument, deductive or inductive, for *all* inferential reasoning works by determining whether characteristics (that is, necessary and/or sufficient conditions) are satisfied in a particular case. Thus, your account loses substantial explanatory power, for we have now lost something valuable that we had before: a way to capture the differences between analogical inference and other types.

Another objection to the rule-oriented model of analogy (actually, it may be but another form of the previous objection) is this:

When it is properly unpacked, your model of AWRs that satisfy the “entailment requirement” has the consequence of making the “source” example (the item described in the source premise) *irrelevant* to the argumentative conclusion; that is, the example to which the less well known item is compared actually does no work in the actual argument — surely an unacceptable way to explain argument *by analogy*.¹⁶⁶ You seem to be maintaining that, because everything is like (and unlike) everything else in an infinite number of ways, one needs some *rule* to sort out relevant similarities and differences — what you call an “analogy-warranting” rule. What it is to reason from a “source” *example*, on your account, is actually to reason from some rule that subsumes both the source example and the “target” example under consideration. Thus, in light of your discussion of the failure of the picture theory of meaning, consider what one does in reasoning *by analogy* about whether something before one is a “leaf.” Imagine that I am initially doubtful about whether something in front of me is a leaf and that, to resolve the question, I

¹⁶⁶ My hypothesized objector is not, of course, without real world spokesmen. See, e.g., Steven J. Burton, *Comment on “Empty Ideas”: Logical Positivist Analyses of Equality and Rules*, 91 YALE L.J. 1136, 1141 (1982) (“[A]nalogical reasoning essentially involves comparisons to determine similarity and difference according to an unspecified rule, and would be analytically superfluous if the rule were known in advance.”).

consult other examples of things that I know are leaves. This does indeed seem like argument by analogy, since I might well infer from the facts that the compared items share some characteristics and that the source has the additional characteristic of being a leaf, that the target is also a leaf. But it seems that, on your *rule-oriented* account of analogical argument, I can discern whether the *source* item is a leaf *only if* I have an analogy-warranting rule in hand, one that gives some sufficient or necessary (or probabilistic)¹⁶⁷ conditions for an inference from possessed characteristics to leafness. But then the source example cannot really be a source of analogical judgment at all, for in order to use it *as* an example of “leaf,” one would *already* have to have the *rule* for ‘leaf’.

Taken together, the two foregoing challenges amount to the following. In claiming that exemplary argument is to be understood as a matter of applying *rules*, whether inductive or deductive, my theory seems to make for itself a dilemma: without the AWR, no example can serve *as an example* of a given concept, but *with* the AWR, it seems that one does not need to make inferences *from the example* at all. Surely this cannot be an adequate account of *exemplary* argument, of argument *by analogy*.

To answer these apparently compelling objections, I will now explain how what is usually understood as exemplary, analogical argument is actually better understood as a sequence of distinct but coherent stages of reasoning that involve *abduction* as well as the application of analogy-warranting rules.

V. ABDUCTION AND “CONTEXTS OF DOUBT” IN EXEMPLARY ARGUMENT

My immediate task is to show how I can defend a rule-based model of exemplary argument without making the category of exemplary argument either so broad as to be explanatorily useless, or so strong that it is no longer really reasoning from *examples* at all. To do that, I now maintain that argument by analogy consists not just of a narrow argumentative process of inferring the truth or probable truth of some propositions from the truth or probable truth of others. It involves also the abductive step of *discovering* the rules to be applied, of making sense of *patterns* of characteristics, and of putting characteristics into rule-like patterns.

Kent Greenawalt provides an example that nicely illustrates the role of abduction. Greenawalt imagines a young corporate lawyer whose doctor tells him that he faces a serious threat to his long-term health unless he gets some rest immediately. The lawyer happens to be working on an important business transaction that will be consummated at a meeting the next day. He is working with a partner who

¹⁶⁷ For the empirical concept “leaf,” the analogy-warranting rule is probably best treated as inductive.

does not know the case nearly as well as he, so that the client will be significantly less well represented at the meeting if he stays home in accord with his doctor's firm warning.

The young lawyer is torn. He is eager to do well in the firm, prides himself on his effective service to his clients, and, like many other young people, is inclined to discount health concerns. This part of him pushes him toward attending the meeting and seriously risking his long-term health. But he is also worried about his doctor's dire pronouncement. To help sort out his views about whether to attend the meeting:

[H]e reflects on what advice he would give a friend in a similar situation, what he thinks he would expect if he desperately needed his personal secretary to do some work and she reported the same risk, [and] what he thinks he would expect of a young lawyer if he were the senior partner. He discovers that in each hypothetical setting, despite the disadvantage to the client, he would advise the ill person to stay home. This leads to deeper examination of his own values and he finds that he believes that one should not risk serious injury to one's long-term health unless one's failure to work is likely to risk someone else's life or health. He concludes that his initial inclination to go to work was not really consistent with fundamental principles to which he subscribes.¹⁶⁸

Several features of Greenawalt's example illustrate splendidly the process of abduction *within* reasoning by analogy.¹⁶⁹

First, in sifting through *examples* (hypothetical, in this instance) that seem instructively similar to his own case, the young lawyer is seeking to discover a norm that will resolve his question about what to do. Greenawalt calls this norm a "principle"; in my scheme, it is the *analogy-warranting rule*.¹⁷⁰

Second, obviously some ingenuity is required even to devise instructive examples, and certainly some kind of creative insight is needed to be able to sort through the examples in such a way as to produce the needed action-guiding norm. As some philosophers of science have noted, flashes of insight — even relatively undisciplined ones (like dreams) — are a necessary part of the "pattern of discovery" of the most scientific of natural laws.¹⁷¹

¹⁶⁸ Kent Greenawalt, *The Enduring Significance of Neutral Principles*, 78 COLUM. L. REV. 982, 996 (1978).

¹⁶⁹ See *id.* Greenawalt offers this hypothetical as an example of the process of discovering principles that might guide one's personal conduct. Although he does not use the term 'abduction', it is clear that abduction is the process his example describes.

¹⁷⁰ See *supra* note 132 (defining 'rule').

¹⁷¹ See HANSON, *supra* note 72, at 85–90. In this observation, they follow the leading theorist of abduction, C.S. Peirce:

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 dreamed of putting together which flashes the new suggestion before our contemplation.

Third, it is significant that the young lawyer resorted to this process of reasoning because he was in doubt about a feature of his own particular situation. Recalling the first challenge from the imagined objector,¹⁷² we are now in a position to see why it is that, when we recognize the abductive stage in argument by analogy, despite its emphasis on rules (AWRs), this account does *not* make argument by analogy a vacuously broad, and so explanatorily unsatisfactory, category.

The abductive search for AWRs is called for *not* in every case in which one needs to apply some concept, but rather *only in a context of doubt* about the application of a concept that is amenable to analogical investigation. (Exemplary reasoning presents another example of the way in which, as I shall explain, “pragmatic” features of context — here, the context of doubt — shape the logical form of an argument.¹⁷³) Reasoners are often faced with questions about the scope and applicability of a norm or set of norms, whether it be texts written in canonical form (as are many legal texts) or norms not tied to any particular form of words. Typically, but not always, these questions arise because of *vagueness* in some of the terms or central concepts used to express the norms — “equal protection,” “due process,” and “unreasonable search and seizure” are famous examples.¹⁷⁴ Greenawalt’s example of the young lawyer is not best understood as one in which the “context of doubt” that triggered exemplary abduction was created by vagueness in a canonical term. In that example, there was no canonical text that the lawyer was interpreting (though one could easily imagine contexts in which such a decision would be guided by some such canonical term, as for example if the decisionmaker felt himself bound to follow the dictates of a religious text); rather, his indecision concerned the scope and requirements of a practical (probably moral), non-text-bound norm that he should follow to balance the competing demands of work and health. Whether the context of doubt is occasioned by the vagueness of a term, or instead by some indecision regarding the scope of a noncanonical norm, reasoners use the resources of exemplary abduction to discover the rule-like pattern that makes sense of exemplary data, as Greenawalt’s young lawyer used well chosen examples to discover for himself the principle that “one should not risk serious injury to one’s long-term health unless one’s failure to work is likely to risk someone else’s life or health.”

Fourth, with regard to contexts of doubt involving vagueness of a canonical term and other contexts of doubt, it is also worth mention-

PEIRCE, *supra* note 69, at 304. (I am grateful to John Finnis for calling this passage to my attention.) See also *supra* note 94 (describing a flash of insight reported by a Nobel Prize-winning scientist).

¹⁷² See *supra* p. 976.

¹⁷³ See *infra* notes 215, 263.

¹⁷⁴ By ‘vagueness’, I mean some active uncertainty about the scope of a term or concept. See *infra* p. 993.

ing another of Greenawalt's observations about his young lawyer: "If the lawyer sought to justify a decision to stay home along these lines, he would be able to state a principle of decision of considerable generality and definiteness, one that despite its uncertainty at the edges, would yield clear answers to many related situations."¹⁷⁵ One of the most common and most important functions of argument by analogy in contexts of doubt is to "precisify" the norm so as to provide guidance in relevantly similar cases. What one needs to "abduce" in such contexts is a relatively precise norm. The theory of analogy developed here preserves the useful distinction between exemplary reasoning and other types of reasoning by explaining that the resources of analogy are not called upon save in a context of doubt — often, but not always, doubt about the application of a concept or a rule in which a vague concept is embedded. This point is one to which I shall return.

Fifth, in moving slightly away from Greenawalt's example, notice that vagueness-related doubts can be the catalyst for deploying the resources of exemplary argument even in cases in which it is not legal, moral, or prudential norms that are actively vague. Such doubts can arise even from indecision about logical or mathematical arguments and concepts for which the analogy-warranting rule eventually settled upon satisfies the entailment requirement. Return for a moment to the example above: "My senses sometimes deceive me; therefore, it might be the case that they always deceive me."¹⁷⁶ It is quite common for reasoners to encounter arguments like this that rely on a deductive form but also seem "fishy" in a way that is not entirely clear. It is also common for reasoners to look for some kind of "short cut" way to test this intuition of fishiness — to *discover* another argument that has the same form but that might make clearer the fishiness of all *relevantly similar* arguments. The examples of refutation by logical analogy offered above¹⁷⁷ illustrate how abductive analogy works in a setting of demonstrative argument. Indeed, we may speculate that exemplary reasoning processes that abduce deductively applicable principles operate not just at the level of testing arguments *for* validity, but also at the deeper level of discerning the very rules of deductive inference that help to *define* the concept of validity itself. Nelson Goodman's fertile analysis of the way in which *deductive inference rules themselves* are justified suggests that such justification relies in crucial part on an *abductive* process leading to deductive application.¹⁷⁸ Adducing simi-

¹⁷⁵ Greenawalt, *supra* note 168, at 996.

¹⁷⁶ See *supra* p. 969.

¹⁷⁷ See *supra* pp. 969–71.

¹⁷⁸ As Goodman puts it: "A [deductive] rule is amended if it yields an inference we are unwilling to accept; an inference is rejected if it violates a rule we are unwilling to amend." GOODMAN, *supra* note 40, at 64. An example of this process might be the following. It seems intuitively plausible that, from the proposition 'everything is green', we may deductively infer 'something is green'. But an inference rule that would allow this inference creates trouble for the

lar considerations, John Wisdom argues that deduction itself is actually an *instance* of the “case-by-case” procedure of analogy.¹⁷⁹ Similarly, the process of “reflective equilibrium” at play in the discovery of (at least some) deductively applicable moral principles, as well as in law students’ maieutic discoveries in well executed bouts of “Socratic” law teaching, are probably best understood as abduction-cum-deduction.¹⁸⁰ Moreover, logicians, mathematicians, and philosophers of science commonly deploy “analogies,” using that term and its cognate terms.¹⁸¹ There is little compelling reason to legislate these uses out of the category of exemplary, analogical argument, and if they are left in, they must be recognized as involving the abduction of deductively applicable rules.

logical system to which it belongs; thus, logicians have rejected it as a plausible inference rule. In this case, the deductive rule is amended because it “yields an inference we are unwilling to accept.” *Id.*; see also HOLYOAK & THAGARD, *supra* note 4, at 184 (“The development of theories in logic has also employed analogy: George Boole explicitly modeled his early work in propositional logic on algebra, and so did Charles Peirce.”).

¹⁷⁹ See WISDOM, *supra* note 6, at 49.

¹⁸⁰ For further analysis, see the discussion of reflective equilibrium as exemplary reasoning at pp. 938–39. Cass Sunstein’s theory of analogy asserts that analogical argument is distinct from the disciplined process of reflective equilibrium. See Sunstein, *supra* note 96, at 781–83. (That denial is much of what makes Sunstein’s theory “mystical.” See *supra* p. 952. In insisting that analogical arguments are neither reflectively equilibrated nor the tools of “high level” or “top-down” theories, Sunstein mistakes the features of some analogical arguments for necessary features of all analogical arguments. As I argue in the text above and in the next footnote, some uses of analogy are as “high level” and “top-down” as they can be.

¹⁸¹ Hempel uses both ‘analogy’ and its cognates in what must be understood to be a reference to deductively applicable AWRs. See, e.g., HEMPEL, *supra* note 66, at 13 (“An analogous transformation is, of course, applicable to any other sentence of universal conditional form.”); *id.* at 56 (“To construct an analogous example for the schema . . .”). Hempel also provides an extended discussion of a common process in scientific argument — a process he refers to as ‘nomic isomorphism’ — in which *universal* scientific laws applicable in one domain are discovered to be applicable in another domain:

Analogies and models based on nomic isomorphisms may also facilitate one’s grasp of a set of explanatory laws or theoretical principles for a new domain of inquiry by exhibiting a parallel with explanatory principles for a more familiar domain: in this manner, they can contribute to the *pragmatic effectiveness of an explanation*.

More important, *well-chosen analogies or models may prove useful “in the context of discovery,” i.e., they may provide effective heuristic guidance in the search for new explanatory principles.*

Id. at 441 (emphasis added). Peter Strawson offers an equally clear example of the use of “analogy” in a discussion of deductive logic:

[I]n noticing such formal analogies, what do we notice? We notice *resemblances* between valid inferences. And these are not resemblances in style or theme but verbal resemblances; resemblances between groups of words with a recurring verbal pattern. . . .

. . . .

The existence of a framework of separate words (or other devices) suitable for quotation in a logician’s rules is not quite, however, though it is almost, a *sine qua non* of our noticing a formal analogy.

PETER F. STRAWSON, INTRODUCTION TO LOGICAL THEORY 45 (1952). Holyoak and Thagard provide extensive discussion of the role of analogical argument in scientific theorizing. See HOLYOAK & THAGARD, *supra* note 4, at 185–209.

We are now in a good position to understand Levi's somewhat striking claim that the most *typical* pattern of legal argument always commits a deductive fallacy.¹⁸² Levi, I think, understood that abductive reasoning plays a role in legal reasoning by analogy; it seems no accident that he claimed that *all* legal analogy committed the fallacy of affirming the consequent, which, as noted above, is precisely the logical form of abductive inference.¹⁸³ What Levi, like other legal realists, did not see is that exemplary reasoning is comprised of a multistage process that includes abduction, confirmation or disconfirmation and, finally, deductive application.

Below, I shall explain the function of abduction in exemplary argument. Specifically, I shall address the crucial role of analogy-warranting *rationales* in the process of confirming and disconfirming the hypothesized analogy-warranting rules that exemplary arguers "abduce." But before I return to abductive analogy, I shall first discuss some of the specific features of exemplary argument in legal settings. This discussion will help to make clear important aspects of the way abduction works in exemplary argument. It will include an explanation of the ways in which the *context* of legal argument does and should affect an interpreter's decision about the argument's best interpretive reconstruction. The discussion will also explain how this model of exemplary reasoning (including its abductive component) can be used to explain both *disanalogical* reasoning — the principal form of reasoning used in legal argument to distinguish cases — and the reasoning phenomena of *defeasibility*.

VI. SEMANTICS, PRAGMATICS, AND THE LOGICAL FORM OF LEGAL EXEMPLARY ARGUMENTS

Thus far, I have attempted to reconstruct and present a model of the proper form of exemplary, analogical argument. Against other accounts of analogy, mine emphasizes the rules that are central to the rational force of analogy *as argument*; however, pointing to the role of abduction, this theory also rejects the view that argument by analogy is *reducible* to argument from rules. In the section just concluded, I maintained that *abduction in a context of doubt* and *analogy-warranting rules* are critical components of exemplary argument. The question I want to consider now is, what are the criteria for assessing a claim about the structure of exemplary argument? That is, what *kind* of argument is an argument about the structure of exemplary argument, and what are the appropriate criteria by which to assess the

¹⁸² See LEVI, *supra* note 6, at 3 & n.5; see also *supra* p. 961 (noting agreement that analogical argument is not reducible to deduction).

¹⁸³ See *supra* note 75.

success or failure of such a claim? It is to that question that I now turn.

A. *The Enthymeme in Legal Argument*

Like most informal arguments, legal arguments seldom, if ever, wear their logical forms on their sleeves; disfiguratively, legal and other informal arguments are enthymematic. This section explains two distinct but related types of “enthymematicity” in legal argument, related to two distinct interpretive tasks one might perform in analyzing a legal or other type of argument.

The meaning of ‘enthymeme’ has changed over its millennial history.¹⁸⁴ Consistent with the broader usage that many philosophers and logicians now favor,¹⁸⁵ I will use the term to refer to any argument — valid or invalid, deductive or nondeductive — the logical form of which is not perspicuous from its original manner of presentation. Judicial opinions and other legal arguments are usually enthymematic in this sense.

In these terms, this Article argues that a particular interpretive reconstruction of enthymematic legal arguments by analogy is superior to some other interpretive reconstructions. To understand what *kind* of argument this Article is making for the interpretive reconstruction it offers, it will be useful for us to distinguish two types of interpretive tasks — one more theoretical, one more practical — related to two types of “enthymematicity” in legal and other informal arguments.

¹⁸⁴ Aristotle used ‘ἐνθύμημα’ (*enthymema*) to refer to merely probable, and not demonstrative, arguments — what we understand today as inductive generalizations — that are typically used and introduced in civic discourse by such grammatical particles as ‘for’, ‘because’, ‘since’, or ‘if . . . then’. See, e.g., ARISTOTLE, *RHETORIC* 1355a, 1395b–1397a (author’s translation); ARISTOTLE, *ON RHETORIC* 315 (George A. Kennedy trans., 1991). In the early medieval period, logicians mistakenly came to believe that what Aristotle was referring to as an “enthymeme” was a *defective syllogism* (rather than a probabilistic inference) in which one of the premises was suppressed; thus, in an argument like ‘Protagoras is a lawyer, so Protagoras is a sophist’, these medievals thought ‘all lawyers are sophists’ was intended but suppressed (suppressed in the θυμός (*thumos*), the seat of thought). This history has escaped the notice of some contemporary logicians and philosophers. In their popular logic text, for example, Copi and Cohen apparently do not recognize the difference between the meanings Aristotle and later logicians assigned to the term. See, e.g., COPI & COHEN, *supra* note 63, at 231 (“An incompletely stated argument is characterized as *enthymematic*. . . . As Aristotle wrote in his *Rhetoric*, ‘Speeches that . . . rely on Enthymemes excite the louder applause.’”). In fairness, one should note that, although Aristotle believed the enthymeme to be “the very body and substance of persuasion,” ARISTOTLE, *supra*, at 1354a, his many discussions of it in the *Rhetoric* leave his exact understanding of the term somewhat obscure.

¹⁸⁵ Contemporary logicians have given the term ‘enthymeme’ a broader scope to refer not only to syllogistic deductive arguments in which premises are suppressed, but also to other types of deductive argument and to some nondeductive arguments as well. See, e.g., BARKER, *supra* note 63, at 221–23; COPI & COHEN, *supra* note 63, at 231–32; GOLDING, *supra* note 96, at 40–41.

B. *Structural and Practical Enthymemicity*

The theorist of informal (including legal) argument must reconstruct enthymematic arguments in order to explain, from a theoretical point of view, what logical form they have in general — deductive, inductive, analogical (exemplary), or abductive. That is, what is not perspicuous in the manner of presentation of an informal argument, and what therefore calls for theoretical explication, is its logical type (inductive, deductive, etc.). We may call this type of nonperspicuity ‘structural enthymemicity’. The practical legal interpreter (the judge, the lawyer, etc.) must also engage in interpretive reconstruction of legal arguments, but from a point of view different from that of the theorist, and with different aims and criteria of success. The practical legal interpreter reconstructs judicial enthymemes in order to be guided in various ways (for example, to conform conduct to rules that may emerge from those arguments, or to apply rules to instant cases) by enthymematic legal arguments in particular circumstances. From the point of view of this practical interpreter, what is nonperspicuous in an argument (say, a precedential judicial opinion) is the guidance it provides in the case sub judice. I will refer to this kind of nonperspicuity as ‘practical enthymemicity’.

Practical and structural enthymemicity present different kinds of problems for different types of interpreters. Because discerning the logical form of distinct types of argument is a theoretical enterprise, structural enthymemicity is a problem primarily for the theorist of legal argument. Practical enthymemicity is a problem primarily for the practical legal interpreter, especially when the structure of a particular enthymematic argument that must be interpreted is particularly unclear. The problems that practical enthymemicity creates — argumentative unclarity in judicial opinions, for example — are, with care, eminently avoidable. This is not to say that judges should go so far in trying to make the structure of their arguments clear, for example, as to write out formal argument schemas in their opinions. For several acceptable reasons — economy of time, comprehensibility of presentation, and many others — practical legal arguers in practical settings (such settings were what Aristotle originally envisaged as the setting for the “enthymeme” as he understood it, a nonformal argument setting) quite justifiably choose not to do so. On the other hand, at least *prima facie*, judges who write practically enthymematic opinions that cannot without a good deal of interpretive uncertainty be reconstructed in such a way as to make their logical form clear, run afoul of vitally important rule of law norms, such as notice, clarity, and accountability (about which I shall have more to say soon).¹⁸⁶ They run this presumptive risk by proffering all-too-common practical enthy-

¹⁸⁶ See *infra* notes 197–198 and accompanying text.

memes in which it is not clear 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 conclusion.¹⁸⁷

Despite the very different problems that structural and practical enthymemes present, there are important similarities between the task of the theorist in reconstructing structural enthymemes and the task of the practical interpreter in reconstructing practical enthymemes. For both, the work of moving from a judicial (or other type of) argument's enthymematic form to a form in which its logical form is perspicuous is *interpretive* work. Among the *prima facie* interpretive options for both theorist and practitioner faced with the task of reconstructing an enthymematic legal argument are the different types of logical form: deductive, inductive, abductive, and exemplary. Their common interpretive task is to select from among these *prima facie* interpretive options the one that offers the best explanatory interpretation, all things considered.¹⁸⁸

Yet despite these overlapping interpretive tasks, the theorist's interpretive task differs in significant ways from the practitioner's. The theorist seeks to explicate the *types* of arguments that legal reasoners present, just as the philosopher of science seeks to explicate the types of arguments that scientists construct, and just as the metaphysician seeks to explicate the types of things that exist and the types of relations in which they stand to one another. A practitioner's goals are not primarily theoretical. She wants, at least implicitly, to know what kind of argument a particular argument before her is so that she can be guided by it or guide others by it in the proper way. To follow the analogies suggested above: just as a biologist wants to know what the theory of punctuated equilibrium says so that he may challenge it or rely upon its findings in his own research, so too a judge must interpret the argument in a relevant enthymematic precedent case in order to decide what rule (*ratio*) it establishes and whether that rule should affect her own decision. Unlike the theorist, she is not seeking to discern the *general form* of the type of argument she is interpreting; she seeks to reconstruct a particular argument so that she may understand

¹⁸⁷ A distinct problem is posed by judicial decisions that rely heavily on very abstract concepts in their AWRs — what are called “standards” in much of the legal literature. I return to this problem below. See *infra* pp. 991–96.

¹⁸⁸ Notice that “all things considered” judgments occur in both “practical reasoning” (reasoning about what one should *do*) and “theoretical reasoning” (reasoning about the way the world *is*). See, e.g., DONALD DAVIDSON, *ESSAYS ON ACTIONS AND EVENTS* 41 (1980) (comparing the “requirement of total evidence for inductive reasoning” and the “principle of continence” (emphasis omitted)). It is not clear whether interpretive judgments made within a normative setting like that of legal institutions are to be treated as instances of practical reasoning, theoretical reasoning, or perhaps some hybrid thereof. This is an important issue in the theory of interpretation, one that receives too little discussion. Some useful analysis is found in Neil MacCormick, *Argumentation and Interpretation in Law*, 6 *RATIO JURIS* 16 *passim* (1993).

and be guided by that particular argument's passage from premises to conclusion.

In the terms developed above, this Article's principal task is to interpret *structurally enthymematic* exemplary arguments, both in general and in the setting of legal institutions specifically.

C. *Semantics, Pragmatics, and Logical Form*

Having identified this Article's principal interpretive task, we are in a position to consider the criteria for success or failure in such a task — how might one ascertain whether the interpretation of a structural enthymeme is a good interpretation? To what kinds of considerations does the interpreter of logical form point in claiming that a particular interpretation is correct?

Two basic types of considerations are relevant to judging the success of an interpretation of logical form. These considerations are usually grouped under the headings 'semantic' and 'pragmatic'. Semantic considerations are those that pertain to the literal, logical, and relatively acontextual meanings of sentences. Consider a question one might hear at a dinner table: "can you pass the salt?" What exactly is that question about? From a semantic point of view, in which one is concerned only with literal meaning, 'can you pass the salt?' is a question that asks about the physical capacity of the person to whom it is addressed. It asks — *literally* — whether the hearer is able to pass the salt. But in the context of a conversation at a dinner table, with salt nearby and perhaps with the questioner's hand extended in the direction of the salt shaker and so on, the sentence that is literally an inquiry about physical capacity is *used* to make a request to pass the salt (thus in this context the questioner is really a requester).

Although there are different traditions and emphases within the discipline of semantics, a dominant theme in the field has been the effort to explicate meaning in general by isolating and investigating the semantic (literal, logical) properties of sentences apart from the things that those sentences are *used* to do in particular settings. That is, the project of semantics is to articulate the conditions under which utterances will have a particular "literal" meaning apart from special features of the context of use.¹⁸⁹ The intuition behind this project is that, although language is obviously always being used in some context, an explanation of how it is that 'can you pass the salt?' is a request, rather than a question about physical capacity, requires one to distinguish its relatively acontextual meaning (as a question) from its

¹⁸⁹ See DONALD DAVIDSON, *Semantics for Natural Languages*, in INQUIRIES INTO TRUTH AND INTERPRETATION, *supra* note 127, at 55 *passim*; DAVIDSON, *What Metaphors Mean*, *supra* note 127, at 245, 247 ("Literal meaning and literal truth conditions can be assigned to words and sentences apart from particular contexts of use. This is why adverting to them has genuine explanatory power.").

special meaning in that context of use at the table, the domain of pragmatics.

The study of *pragmatics* (not to be confused with the *pragmatism* of James, Dewey, Peirce, and others), on the other hand, focuses on the ways in which contextual judgments by speakers and interpreters affect the interpretation of language. He says to Her, 'you're the cream in my coffee'. Literally, an odd thing to say. But in that context of use, She believes that He does not have, and is not now revealing, strange trans-substantialist views about metaphysics or woefully mistaken ideas about the physical world. She is able to make some judgments about how this sentence, *given its literal meaning*, is being *used* in this context to say something other than what it literally means. Philosophers and linguists treat the residue of meaning — those features of meaning that they cannot explain by reference to relatively acontextual semantic and logical features of language — as part of a distinct subject matter within the theory of meaning.¹⁹⁰ The boundaries between the disciplines of pragmatics and semantics are by no means universally agreed upon, and philosophers of language continue vigorously to debate the details of the particular program of semantics briefly described above. There is much greater agreement, though, that however one draws up the details, any viable theory of meaning must be able to account for the distinct linguistic phenomena of *relatively* use-independent "literal meaning" and thoroughly use-dependent contextual meaning.

Semantic and pragmatic considerations interact in important ways when an interpreter reconstructs an enthymeme, and they interact whether the enthymeme is practical or structural. Although the logical form of an argument is for the most part governed by semantic rules (rules that help one discern the literal meaning and logical structure of the argument),¹⁹¹ pragmatic concerns with the effect of context on interpretive judgment also play a vital role in the interpretation of the logical form of a structurally enthymematic argument. For example, many natural languages contain a term for disjunction that is, from a logical (semantic) point of view, ambiguous. Logicians and semanticians can tell us precisely what the two logically distinct meanings of the term 'or' are: one meaning has an *inclusive* sense, in which a sen-

¹⁹⁰ John Searle, Paul Grice, and J.L. Austin have done the seminal work in this branch of the theory of meaning. For a good general discussion of their work and other work in the area, see STEPHEN C. LEVINSON, *PRAGMATICS* 5–35 (1983).

¹⁹¹ Logic is concerned with rules of inference that preserve truth (or confer probability) in the inference of conclusions from premises. Semantics complements logic by focusing on the conditions under which sentences (including premises and conclusions) are true or false, and by using those truth conditions as an index to the meaning of sentences. See JERROLD J. KATZ, *PROPOSITIONAL STRUCTURE AND ILLOCUTIONARY FORCE* 227 (1980) (describing the "orthodox" view of logic "which restricts the domain of logic to deductive relations among statements, taking logic to be about truth-preserving inferences between sentences that express them").

tence using 'or' is true when at least one disjunct is, and possibly both disjuncts are, true (a sign in a store window that read 'customers who are teachers or students receive a 10% discount' would probably be interpreted as containing an inclusive 'or'); the other meaning has an *exclusive* sense, in which a sentence using 'or' is true when at least one disjunct is true, *but not both* (as in, 'you can choose door #1, door #2, or door #3').

Although logic and semantics can tell us the possible different literal meanings of 'or', they alone can tell us neither which option is the more usual option in actual contexts of language use, nor which is the correct interpretive option on a particular occasion of use. By contrast, recent work in pragmatics does have a testable (and, as far as I know, fairly well confirmed) model that predicts that 'or' is usually used in natural language in the exclusive sense.¹⁹²

Let us pause to recall how we embarked on the journey through structural and practical enthymemes up to this distinction of semantic and pragmatic approaches to interpretation. At this stage of the overall argument, my project is to discern what constrains the interpretation of the logical form of exemplary argument. The theorist of analogy is in the position of an interpreter who needs to take into account both semantic and pragmatic information about exemplary arguments *as interpreted texts*, in order to settle on an interpretation of these texts. This task is a special interpretive one; it is not the kind of practical task that a lawyer or judge needs to perform in interpreting an exemplary argument in a judicial opinion — the task with which *practical* enthymemicity presents her. Rather, it is the task of interpreting the logical structure of exemplary arguments in general — the task with which *structural* enthymemicity presents the theorist of exemplary argument. Returning for a moment to the example of the pragmatics-based interpretation of 'or' in natural language, a good classical analogy of proportion¹⁹³ will help make the point: the analogical theorist is to the interpretation of an analogical structural enthymeme as the philosopher of language is to the interpretation of 'or' in natural language.

D. *Pragmatic Constraints on the Reconstruction of Legal Enthymemes*

Not all exemplary arguments are created equal. In some argumentative contexts — that is, for some contextually dictated, pragmatic purposes — the analogy-warranting rules that are the centerpiece of exemplary reasoning must satisfy particular constraints that they

¹⁹² The model extends Grice's claim that speakers obey the maxim of "Quantity" to show how 'or' may be arrayed on a scale with 'and' to make the prediction about the natural language use of 'or'. See LEVINSON, *supra* note 190, at 132–40.

¹⁹³ See FINNIS, *supra* note 78, at 162–63.

would not have to satisfy in other contexts. In some argumentative contexts, for example, AWRs are expected to satisfy the entailment requirement in order to achieve a chosen contextual goal. Such is the case with the exemplary arguments that comprise “refutations by logical analogy,” as well as with other exemplary arguments offered in settings of logical or mathematical argument.¹⁹⁴ In other contexts in which exemplary arguments are offered, the AWRs need not satisfy the entailment requirement and are instead inductive.

In this section, I shall argue that pragmatic concerns shape the proper interpretive reconstruction of structurally enthymematic *legal analogies*. I shall construe pragmatics somewhat more broadly than the narrower studies of linguists and philosophers of language do, but remain well within the realm of pragmatics as the study of the effects of contextual judgments on the interpretation of texts. In light of the foregoing discussions of structural enthymematicity, semantics, and pragmatics, I maintain:

- (1) The special institutional setting in which legal exemplary argument takes place should affect the theorist’s interpretation of the logical form of the exemplary arguments that legal reasoners (especially judges) offer.
- (2) The feature of the institutional setting that is relevant to pragmatics-based interpretation is the presumptively shared goal of legal exemplary arguers to provide for their decisions argumentative justifications that satisfy the “rule of law” ideals of both predictability for those subject to the law, and accountability for legal officials who promulgate and interpret the law, including judges.
- (3) The way the theorist of *legal* exemplary argument can best reflect this pragmatics-based information about the presumptive goal of legal exemplary reasoners is by interpreting their structurally enthymematic exemplary arguments as *constructing AWRs that satisfy the entailment requirement*.

1. *The Rule of Law Norms as “Context” for Legal Analogies.* — In his pathbreaking work in pragmatics on the effect of contextual judgments on the interpretation of texts, Grice provided a powerful explanation of how an interpreter’s judgment that a speaker is consciously seeking to obey certain norms of conversational cooperation could help that interpreter interpret the speaker’s words.¹⁹⁵ In other

¹⁹⁴ See *supra* notes 178–181 and accompanying text.

¹⁹⁵ For example, according to Grice, interpreters assume that speakers are consciously following the “Cooperative Principle”: “Make your conversational 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.” PAUL GRICE, *STUDIES IN THE WAY OF WORDS* 26 (1989). Application of Gricean analysis of conversational cooperation to explain a variety of legal interpretive doctrines and issues is a growing industry. Grice’s framework has been used to explain, for example, the interpretation of statutes, see, e.g., Geoffrey P. Miller, *Pragmatics and the Maxims of Interpretation*, 1990 WIS. L. REV. 1179 *passim*; M.B.W. Sinclair, *Law and Language: The Role of Pragmatics in Statutory Interpretation*, 46 U. PITT. L. REV. 373 *passim* (1985); the regulation of advertising, see, e.g., Richard Craswell, *Interpreting Deceptive Advertising*, 65 B.U. L. REV. 658,

words, an interpreter's judgment that a speaker was following these conversational norms is a crucial bit of contextual information that helps the interpreter to interpret the speaker's words.

I suggest that, with a slight expansion of the type of norms we understand to be guiding interpreters of legal arguments, the theorist of legal exemplary argument is in the same position as the Gricean interpreter. Like that interpreter, the theorist may rely on the judgment that the judges whose exemplary arguments the theorist is interpreting may be presumed to be following certain norms. Also, as with the Gricean interpreter, making that judgment about the judicial "speakers" whose analogical "speech" text we are interpreting (the structurally enthymematic arguments they offer) helps the theorist of exemplary argument to interpret that "speech."

The norms I have in mind are those that animate the ideals of the rule of law and guide judges when they seek to provide interpretations of legal texts that are justified according to law. Legal interpreters read legal texts — judicial opinions, statutes, regulations, constitutions, contracts, deeds, wills, etc. — seeking to discern what actions by individuals or government agents, including courts, are in accord with law; these interpreters often use exemplary argument as an integral part of that interpretive effort. The criteria that comprise the ideal of the rule of law forge links between the correct interpretation of legal texts¹⁹⁶ and two of the basic requirements of that ideal, *predictability*

716–19 (1985); the treatment of perjury in criminal law, *see, e.g.*, Peter M. Tiersma, *The Language of Perjury: "Literal Truth," Ambiguity, and the False Statement Requirement*, 63 S. CAL. L. REV. 373, 381–83 (1990); and the law of defamation, *see, e.g.*, Martin F. Hansen, *Fact, Opinion, and Consensus: The Verifiability of Allegedly Defamatory Speech*, 62 GEO. WASH. L. REV. 43, 71–72 (1993).

¹⁹⁶ Of course, the criteria of "correctness" may be thought to establish a range of correct readings so that, in the view of some reasoners, while there may not be one and only one correct reading, there are nevertheless readings that are clearly incorrect. The "reasonableness" predicates that are familiar in a variety of legal rules have this structure. For example, according to a commonly expressed rule for the standard of review that a judge applies to factual findings in jury verdicts, the judge is not to reject the findings unless "reasonable minds" *could not disagree* about those findings based on the evidence. *See, e.g.*, *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 250–51 (1986). When reasonable people can disagree, then either finding is "correct," because both are within the bounds of reasonable disagreement. *Cf.* Paul Brest, *Interpretation and Interest*, 34 STAN. L. REV. 765, 770 (1982) ("Sometimes indeterminacy is reason enough to leave the matter for decision by others — legislatures, officials, or citizens. Whatever judgment the court renders, however, is a definitive resolution of the issue. Even a finding of indeterminacy is, in effect, a final judgment delineating the bounds of what is and is not (legally) known."). When reasonable people cannot disagree, then by this reasonableness criterion, one of the answers is *incorrect*. Of course, the criteria of reasonableness and the bounds of disagreement are deeply context-dependent and often hotly contested. The Pyrrhonian skeptic might well explain the availability of such contests by saying that regress is always possible and that reasonableness "goes all the way down": reasonable people can disagree about whether reasonable people can disagree about

and *notice*, on the one hand,¹⁹⁷ and *governmental accountability* (restraint on arbitrary governmental power, including judicial power), on the other.¹⁹⁸ These two ideals are also mutually reinforcing; the related requirements that laws are to be prospective, relatively stable, capable of being followed, and clear enough to provide reasonable notice, etc., foster and are in turn reinforced by the imposition of constraints on the arbitrary power of government actors, including judges.¹⁹⁹ My claim here is that when the *theorist* of legal exemplary argument interprets the logical form of legal exemplary arguments, one of the crucial pragmatic, contextual judgments she must make will rely on a *pragmatic presumption* about the judicial “speaker” who offers an exemplary argument — namely, the presumption that in offering the argument, the speaker aspires to satisfy the aforementioned rule of law ideals.

But even if this claim is correct, it still does not yet make clear how *deduction* is related to analogy — that is, how the presumption that judicial speakers aspire to satisfy rule of law ideals might lead the theorist to interpret the analogy-warranting rules in legal analogies so as to satisfy the *entailment requirement*. To make that connection, we need to recall some basic semantic facts about ways in which legal arguments can be so unclear that they fail to satisfy these coordinate rule of law values. In the discussion below, I shall suggest this connection: the rule of law ideal norms of clarity, notice, and accountabil-

¹⁹⁷ See LON L. FULLER, *THE MORALITY OF LAW* 63–81 (1964) (discussing the rule of law ideal’s prescription of clarity in promulgated laws; proscription of contradiction among laws; proscription of laws that would command citizens to do impossible things; and prescription of constancy and stability of laws). As observed above, Justice Holmes’s decision in *McBoyle v. United States*, 28 U.S. 25 (1931), contains a very clear statement of the notice component of the rule of law ideal. See *supra* note 39.

¹⁹⁸ See FULLER, *supra* note 197, at 81 (asserting that the rule of law requires that there be congruence between official action and declared rule, a congruence threatened by “mistaken interpretation, inaccessibility of the law, lack of insight into what is required to maintain the integrity of a legal system, bribery, prejudice, indifference, stupidity, and the drive toward personal power”); *infra* note 217; see also RONALD DWORKIN, *LAW’S EMPIRE* 93 (1986) (discussing the way in which the “most abstract and fundamental point of legal practice is to guide and constrain the power of government”); FINNIS, *supra* note 78, at 270–71 (stating, *inter alia*, that the rule of law ideal requires that “those people who have authority to make, administer, and apply the rules in an official capacity (a) are accountable for their compliance with rules applicable to their performance and (b) do actually administer the law consistently and in accordance with its tenor”); RAZ, *supra* note 62, at 219 (“The one area where the rule of law excludes all forms of arbitrary power is in the law-applying function of the judiciary where the courts are required to be subject only to the law and to conform to fairly strict procedures.”).

¹⁹⁹ Edmond Cahn captures precisely the connection noted here:

To dispense an improvised justice undisciplined by rules seems like a dangerously irresponsible power. Adjudication without articulable standards has always been condemned as tantamount to arbitrary caprice. Justice is supposed to influence the content of the legal rule and its use in particular cases, but a rule there must be.

Edmond N. Cahn, *Authority and Responsibility*, 51 COLUM. L. REV. 838, 840 (1951) (citations omitted).

ity *presuppose* that legal commands — including those embedded in legal analogies — are deductively applicable, and that vague norms — of the sort with which one is left if legal commands are not deductively applicable — are inconsistent with those basic values.

2. *Deduction, Vagueness, and Rule of Law Values.* — A *vague* term is one about whose criteria of application, regarding a given object or set of objects, at a specific time, a language user or group of language users has some doubt. ‘Criteria of application’ refers to the bundle of necessary and sufficient conditions for the term. A *precise* term is one about whose application to a given object or set of objects, at a specific time, a given language user (or group) has no doubt. Because there are degrees of doubt, measurable in different ways, both for an individual language user and among a group of language users (such as a panel of judges), vagueness and precision might be thought of as ends of a spectrum. Understood this way, vagueness is one of the principal *contexts of doubt* in which — as I have argued above — legal interpreters call upon the resources of legal analogy.

An *open-textured* term is one that has the *possibility of vagueness* at some time, even if it is not vague on some particular occasion of use. This conception of open texture suggests that vagueness is relative to term, language user(s), time of application of term, and “application group” (the set of objects to which the term might be applied). Thus, even a term that is not vague relative to some particular time, some particular language user(s), and some particular application group, might become vague when one of the variables is changed. It is the *possibility* of becoming vague that is named by the term ‘open texture’.²⁰⁰ (One might also distinguish unidimensional vagueness from multidimensional vagueness — the latter is the semantic phenomenon Wittgenstein famously referred to in his discussions of “family resemblance.”²⁰¹)

Still another source of doubt about the meaning of a concept arises from something that is probably best understood as another distinct

²⁰⁰ For an excellent treatment of vagueness and open texture, see ISRAEL SCHEFFLER, *BEYOND THE LETTER: A PHILOSOPHICAL INQUIRY INTO AMBIGUITY, VAGUENESS AND METAPHOR IN LANGUAGE* 49–78 (1979). Scheffler’s account of vagueness coheres well with my treatment of analogy in a “context of doubt” and of the role of pragmatic considerations in interpreting legal analogies. *See id.* at 65 (“We have so far been construing vagueness pragmatically, as having to do with a subject’s indecision in applying a term to elements of some domain.”). I follow Scheffler’s treatment of vagueness in several, but not all, respects. I do not follow, for example, his argument that vagueness and precision do *not* vary inversely. *See id.* at 41–42.

²⁰¹ Unidimensional vagueness arises regarding a single concept, like ‘heap’ or ‘tall’ — the sort of term that occasions the classical *sorites* paradoxes (for example, “because any man who is one millimeter shorter than a tall man is tall, every man is tall”). Multidimensional vagueness arises when speakers associate several criteria (necessary or sufficient conditions) with a concept without any widespread agreement regarding which conditions for the concept are necessary and which are sufficient. *See* Jeremy Waldron, *Vagueness in Law and Language: Some Philosophical Issues*, 82 CAL. L. REV. 509, 517–19 (1994).

species of vagueness. This type of vagueness arises when it is not an *individual* language user's uncertainty about the criteria for application of a term that occasions doubt about its meaning, but rather disagreement among a *group* of users of the same term that occasions uncertainty among the group taken as a whole. This disagreement is an extremely common phenomenon in legal disputes. Legal interpreters taken as a group often disagree among themselves about the criteria of terms such as 'equal protection', 'due process', 'reasonable', and the like. Gallie's discussion of "essentially contested concepts,"²⁰² and Dworkin's discussion of the concept-conception distinction are useful investigations of this kind of vagueness-related phenomenon.²⁰³

With this understanding of vagueness and open texture before us, I can explain why the rule of law norms of clarity, notice and accountability *presuppose* that legal commands should be deductively applicable, and that vague norms, by contrast, are inconsistent with those values. First, one cannot deductively apply a predicate to a particular object or set of objects when that predicate is *actively vague*²⁰⁴ — that is, when the predicate is one about whose criteria of application on a particular occasion of use a language user or group of users is or are in doubt. The reason for this is not difficult to see: deductive application of a predicate requires the assignment of a truth value to the proposition that states that a given individual has the property named by the predicate,²⁰⁵ but the whole point about an actively vague term is that, prior to precisification of the vagueness, the language user is uncertain about its truth value.²⁰⁶ For example, suppose a school administrator must enforce a dorm regulation that reads, "any person who keeps a cat or dog in any dorm room shall be subject to a fine and possible eviction," and a student has brought into the dorm an animal that, though it looks a lot like a cat, is also capable of reciting

²⁰² W.B. Gallie, *Essentially Contested Concepts*, 56 PROC. ARISTOTELIAN SOC'Y (n.s.) 167 (1956).

²⁰³ See DWORIN, TAKING RIGHTS SERIOUSLY, *supra* note 119, at 134–36.

²⁰⁴ Given my definition of vagueness, the phrase 'actively vague' is perhaps redundant. I use it only for emphasis.

²⁰⁵ I am leaving aside here questions about so-called "fuzzy logic" and the like, for reasons compellingly advanced in SCHEFFLER, cited above in note 200, at 65–78.

²⁰⁶ This view is, I think, widely accepted among legal theorists and philosophers of language. It is clearly presented, for example, in Hart's treatment of the "core" and "penumbra" of legal meaning:

If a penumbra of uncertainty must surround all legal rules, then their application to specific cases *in the penumbral area* cannot be a matter of logical deduction, and so deductive reasoning, which for generations has been cherished as the very perfection of human reasoning, cannot serve as a model for what judges, or indeed anyone, should do in bringing particular cases under general rules. *In this area* men cannot live by deduction alone.

H.L.A. Hart, *Positivism and the Separation of Law and Morals*, 71 HARV. L. REV. 593, 607–08 (1958) (emphasis added). The delightful example J.L. Austin proffered of the "philippic-delivering" cat gets at the same point. See J.L. AUSTIN, PHILOSOPHICAL PAPERS 67–68 (J.O. Urmson & G.J. Warnock eds., 3d ed. 1979).

famous political speeches. Were it not for this cat's fantastical ability, the administrator might reason, "the regulation prohibits the keeping of all cats or dogs in the dorm, and you kept a cat in the dorm, so you violated the regulation." Or, in the familiar and more formal idiom of the syllogism:

- (1) Any person who keeps a cat or dog in any dorm room shall be subject to a fine and possible eviction. [Major premise]
- (2) This student kept a cat or dog in a dorm room. [Minor premise]
- (3) Therefore, this student is subject to a fine and possible eviction. [Conclusion]

Now suppose that no other borderline beast had presented itself to the administrator before the appearance of this student and his companion. For the administrator, prior to the appearance of this animal, the term 'cat' was not *vague*, although it was *open-textured* (meaning that it retained the potential for being vague at some future time for this language user). The administrator could thus apply the regulation with its complete categorical sweep — a student who brought Lassie into the dorm, for example, could be evicted with full deductive forthrightness. But when the student with the logorrheic cat appeared, the open-textured term became *actively* vague for the administrator. Swift, deductively generated punishment could no longer be meted out²⁰⁷ since the administrator was (in my hypothetical) at least temporarily unsure (I am supposing) whether this zoological marvel was indeed a *cat* at all. Thus, although there would be no problem generating the major premise:

²⁰⁷ In saying that the administrator could evict the student "with full deductive forthrightness" and could mete out "swift, deductively generated punishment," I am presupposing that the administrator has made the prior *interpretive* decision to apply the regulation literally, if possible. (And in my hypothetical, literal application is possible regarding the Lassie-owning student because, as applied to Lassie, 'dog' is not vague, but literal application is not possible regarding the speechifying cat because, as applied to that beast, 'cat' is vague.) The role of deduction in the interpretation of legal rules is often not clearly understood. Posner, who probably sees the relation of deduction and interpretation more clearly than many legal academics, is nevertheless instructively unclear in his treatment of that relation. He asserts that "there is no such thing as deduction from a text. No matter how clear the text seems, it must be interpreted . . . [M]eaning cannot be extracted from a text merely by taking the language of the text and applying the rules of logic to it." Richard A. Posner, *Legal Formalism, Legal Realism, and the Interpretation of Statutes and the Constitution*, 37 CASE W. RES. L. REV. 179, 187 (1986). Posner's basic point here is correct but misleadingly expressed. Consider the syllogism 'all men are mortal; Socrates is a man; therefore, Socrates is mortal'. The syllogism is clearly a "deduction from a text," namely, the text 'all men are mortal [and] Socrates is a man'. To be sure, that text must be interpreted in order for it to yield a deduction; that is neither more nor less true of this text than it is of the statutory and constitutional provisions that are the main objects of Posner's concern in the passage quoted above. But as the "text" comprised of the major and minor premises of the Socrates syllogism reveals, the fact that a text stands in need of interpretation (as do *all* texts, if they are to be comprehended) does not prevent it from serving as a premise in a deductive argument. On the contrary, interpretation *enables* texts to play that logical role.

(1) Any person who keeps a cat or dog in any dorm room shall be subject to a fine and possible eviction,

as to this student and this animal, the minor premise *did not yet have a truth value* and thus could not serve as the deductive link between the major premise and the conclusion:

(2) ??This student kept a cat or dog in a dorm room.

To resolve the case before him, the administrator must decide whether this dubifying creature is a cat *for the purposes of the regulation*, a prime opportunity for deploying the resources of multistep exemplary reasoning.

The second reason for which rule of law norms require, at least presumptively, legal rules that are deductively applicable, is this: the rule of law values of clarity-cum-notice, and accountability presuppose that the judge who issues a written opinion to justify and explain an authoritative judicial decision, including one that relies on exemplary argument, is *not* in doubt about the applicability of the key terms in the opinion she is writing. Consider Justice Clark's opinion in *Burton v. Wilmington Parking Authority*,²⁰⁸ which seems to be a paradigm violation of these rule of law norms. In *Burton*, the Court considered whether a private restaurant that rented space from a city-owned building was subject to the race-discrimination proscriptions of the Fourteenth Amendment. The case turned on whether the contacts between the city authorities and the restaurant were sufficient to constitute state action.²⁰⁹ What is remarkable about this opinion is its *insistent refusal* to provide criteria that would resolve doubts about the application of the key legal concepts at issue ("state action" and "equal protection").²¹⁰ As both Justice Harlan in dissent²¹¹ and com-

²⁰⁸ 365 U.S. 715 (1961).

²⁰⁹ See *id.* at 716-17.

²¹⁰ Clark wrote for the Court:

Because readily applicable formulae may not be fashioned, the conclusions drawn from the facts and circumstances of this record are by no means declared as universal truths on the basis of which every state leasing agreement is to be tested. Owing to the very "largeness" of government, a multitude of relationships might appear to some to fall within the Amendment's embrace, but that, it must be remembered, can be determined only in the framework of the peculiar facts or circumstances present. Therefore respondents' prophecy of high universal application of a constitutional precept so peculiarly dependent for its invocation upon appropriate facts fails to take into account "Differences in circumstances [that] beget appropriate differences in law." Specifically defining the limits of our inquiry, what we hold today is that when a State leases public property in the manner and for the purpose shown to have been the case here, the proscriptions of the Fourteenth Amendment must be complied with by the lessee as certainly as though they were binding covenants written into the agreement itself.

Id. at 725-26 (citations omitted).

²¹¹ Justice Harlan observed:

The Court's opinion, by a process of first indiscriminately throwing together various factual bits and pieces and then undermining the resulting structure by an equally vague disclaimer, seems to me to leave completely at sea just what it is in this record that satisfies the requirement of "state action." I find it unnecessary, however, to inquire into the

mentators²¹² immediately noticed, the opinion provides no clarity or notice to other private or state entities regarding what kinds of contacts between the state and private enterprises would come within the scope of the state-action requirement as conceived by the *Burton* majority. Nor, by the same token, does this insistently vague opinion give the reader enough information to assure herself that the Court did not reach its decision for impermissible reasons.

These reasons for recognizing a close connection between rule of law values and deductively applicable legal rules have, for the interpreter of structural enthymemes, an interpretive payoff. As I have suggested, vagueness in legal texts is a typical — indeed perhaps the most common — triggering context of doubt calling upon legal interpreters to use the resources of exemplary argument. If legal exemplary reasoners seek to serve the rule of law ideals noted above, then the best reconstruction of their structural enthymemes consists in providing AWRs that satisfy the entailment requirement. I expand this point in the next section.

3. *Confirming Evidence: The “Law of Deductive Form” in the Practice of Judicial Decisionmaking.* — I offer one additional bit of pragmatics-based, contextual, interpretive evidence to support the claim that deduction is the basic mode of justificatory legal argument. This evidence is not found in relatively abstract considerations about the effect of rule of law norms, but rather in a striking fact about the practice of legal argument.²¹³ If, in a context of doubt about the criteria of application of a legal concept that appears in a legal rule (“consideration,” “vehicle,” etc.), a judge is to conclude that a given party has *satisfied* the criterion for that concept, then the judge will specify a *sufficient condition* for application of that concept. Having specified that criterion, she may then deductively conclude that the party satisfied it. Similarly, if in a context of doubt a judge is to conclude that a given party has *not* satisfied the criteria for an applicable legal concept, she will specify a *necessary condition* for the nonapplication of that concept. Having specified it, she may then deductively infer that the party did not satisfy it. This seems to me to be a ubiquitous pattern of justificatory legal interpretive reasoning, and thus I make bold

matter at this stage, for it seems to me apparent that before passing on the far-reaching constitutional questions that may, or may not, be lurking in this judgment, the case should first be sent back to the state court for clarification as to the precise basis of its decision.

Id. at 728–29 (Harlan, J., dissenting).

²¹² See, e.g., Thomas P. Lewis, *Burton v. Wilmington Parking Authority — A Case Without Precedent*, 61 COLUM. L. REV. 1458, 1462–63 (1961).

²¹³ Consider Grice’s discussion of why it is that interpreters may assume that speakers are following the norms of conversation that Grice identifies: “A dull but, no doubt at a certain level, adequate answer is that it is just a well-recognized empirical fact that people do behave in these ways; they learned to do so in childhood and have not lost the habit of doing so; and, indeed, it would involve a good deal of effort to make a radical departure from the habit.” GRICE, *supra* note 195, at 28–29.

to call it the *law of deductive form*.²¹⁴ This argumentative pattern allows a judge to reach deductive closure in a case — closure that would not be possible if the judge articulated only a sufficient condition of a concept and also held that the concept did not apply, or articulated only a necessary condition while also holding that it did apply. This argumentative pattern thus reflects the deep connection that members of this culture of legal argument believe exists between legal justification and deduction.²¹⁵

²¹⁴ Of course, this is an explanatory, descriptive law, not a “legal” one. The two cases discussed below in Part VII — *Adams v. New Jersey Steamboat Co.*, 151 N.Y. 163 (1896), and *Mills v. Wyman*, 20 Mass. (3 Pick.) 207 (1825) — exhibit these features of judicial practice. For a brief discussion of how this observation pertains to analogical and disanalogical legal inference, see below at p. 1017.

²¹⁵ Burdens of proof, which function in legal argument as default rules of decision, might appear to be inconsistent with the law of deductive form. Because these rules are a pervasive feature of Anglo-American legal reasoning practice, they deserve some explanation here. (I draw on MacCormick’s very useful but, for reasons I will note, incomplete discussion. See MACCORMICK, *supra* note 59, at 41–52. Also, for purposes of this discussion, I will follow MacCormick’s use of the propositional calculus. See *supra* note 60.) To sustain a suit in court, a plaintiff must persuade the court, at least as a matter of reasonable *prima facie* judgment, of two claims: (1) that she will be able to meet the court’s standard of proving a set of facts — call the conjoined propositions that state these facts ‘P’; and (2) on pain of not surviving a motion to dismiss, that there is a valid legal rule that links, as antecedent and consequent, the facts she claims she can prove, *P*, to the claim for relief she wishes to make — call this claim proposition ‘Q’. *Q* might be, for example, a claim for damages or equitable relief in a civil suit, or it might be a claim for some criminal penalty when the “plaintiff” is the state.

By virtue of procedural rules that impose burdens of proof, the plaintiff must meet some standard of proof (such as “preponderance of the evidence” or “beyond a reasonable doubt”) before the legal system will accept that *P* is true. The logical consequence of a plaintiff carrying this burden, when there is indeed a rule of the system ‘if *P* then *Q*’, is that the plaintiff is entitled to *Q*. Another way to put this point is that the *default assumption* of the system is that, for any facts *P* a plaintiff might seek to prove in order to win some claim of damages *Q*, from the point of view of the legal system, *P* is *not* true. The consequence of a plaintiff’s failing to prove *P* to the degree required by the applicable burden of proof rule is that the plaintiff is not entitled to *Q*. And — again, from a logical point of view — the setting in which a plaintiff survives a motion to dismiss (by pointing to a rule ‘if *P* then *Q*’ that the court is likely to believe is a valid rule of the system) but fails to prove *P*, seems to look like this:

- (1) The plaintiff establishes the (likely) validity of ‘if *P* then *Q*’;
- (2) When the plaintiff fails to carry the burden of proving *P*, the legal system concludes by *default*, that ‘not-*P*’ is true; and
- (3) The legal system concludes that, from its point of view, ‘not-*Q*’ is true.

Now note that ‘not-*Q*’ does *not* validly follow from ‘not-*P*’ and ‘if *P* then *Q*’ — at least not as a matter of truth-functional logic.

MacCormick correctly points to the role of default rules in shaping a litigant’s argumentative strategies as strong evidence against those who would *deny* that “deductive logic is relevant to the justification of legal decisions.” MACCORMICK, *supra* note 59, at 45. But given MacCormick’s enthusiasm for an account of adjudication that emphasizes the importance of deduction, it is striking that he observes but does not explain why legal systems that use burdens of proof as default rules of decision seem to rely on invalid inferences whenever a court decides that a plaintiff has not carried her burden. Are we to conclude that logically fallacious reasoning is at the heart of every case in which the court decides that a plaintiff has failed to carry her burden? Is this feature of Anglo-American legal systems incompatible with the law of deductive form stated above?

4. *Deductive Clarity and the Rule of Law as a Regulative Ideal.*

— I have been arguing that, by virtue of the contextual presuppositions and commitments of rule of law norms regarding notice and restraint on arbitrary discretion, including judicial discretion, we may interpret the structural enthymemes of legal exemplary arguments as having a deductive structure — that is, as having AWRs that satisfy the entailment requirement. As theorists of analogy, we must be careful to assume neither too much about what the rule of law requires of judges, nor too much about what judges think it requires. We must not lose sight of the fact that the rule of law norms present only an *ideal* of argumentative practice. Here, one does well to recall that Lon Fuller, whose account of the rule of law norms is deep and broadly influential, treated the rule of law as part of the law's "morality of aspiration."²¹⁶ These norms seem, in Fuller's view, to be part of the law's virtues, excellences, and perfections — always to be sought, even though most often not achieved. The goal of striving to achieve deductive clarity in order to honor the rule of law ideals of notice, clarity, and constraint on arbitrary government power, is itself an ideal goal that performs its function even when those who make the law do not quite reach it.²¹⁷

No. To see why not, we must understand that the operation of burdens of proof as default rules is one of several areas in which *pragmatic* features of the institutional context of legal argument shape and constrain the *logical* (truth-functional semantic) features of those arguments. Let us say that a plaintiff wishes to get *Q* (an award of damages), and that there is a background assumption in the context of the cause of action that the plaintiff might bring in an effort to get *Q*. According to this background assumption, the *only way for the plaintiff to get Q* is by carrying the burden of proving *P*. Thus, in this special context, the result of a plaintiff's failure to carry the burden of proving *P* is that 'not-*Q*' is true. However, this result is not best understood as an inference from the premises 'if *P* then *Q*' and 'not-*P*'. It should be understood as justified by a contextual, pragmatic background assumption rather than by another rule of the system (whether a rule of law or of logic). Even though the system *in effect* concludes that 'not-*Q*' is true when the plaintiff cannot carry the burden of proving *P*, the system does *not* do so by presupposing, or in some other way relying upon, the truth of some proposition like 'if not-*P* then not-*Q*' (the rule on which it would have to rely if the conclusion of not-*Q* were to be valid). If it *did* rely upon the truth of that additional proposition, and if 'if *P* then *Q*' is also a valid rule of the system (which is at least a prima facie assumption by the court that would enable the plaintiff to survive a motion to dismiss), then the system would in effect be relying on a rule that said '*P* if and only if *Q*', which is too strong: typically, the legal system endorses other sufficient conditions for *Q*, in addition to *P*. In sum, the pragmatic context shapes logical structure in such a way that the legal system's conclusion 'not-*Q*' from the plaintiff's failure to prove *P* is not inconsistent with the law of deductive form. If, *in the context of a given cause of action*, the *only way* for the plaintiff to get *Q* is by proving *P*, then, *in that context* *P* operates as *both* a necessary and a sufficient condition for *Q*. And this is so even though the jurisdiction in which the action has been brought does *not* endorse the stronger rule '*P* if and only if *Q*' in other contexts. For additional discussion relevant to this point, see note 263 below.

²¹⁶ FULLER, *supra* note 197, at 42.

²¹⁷ See *id.* at 3–94. "[L]aws should be clearly expressed in general rules that are prospective in effect and made known to the citizen." *Id.* at 94. Several of the rule of law norms that Fuller identifies either assert or clearly presuppose that laws should have deductive clarity. Among these norms are that laws be clear, see *id.* at 63–65; that for the most part laws not be retroactive, see

5. *Disconfirming Evidence: "Gestaltism" and the Practice of Judicial Decisionmaking.* — For many judicial "speakers" of legal analogies, the rule of law values of clarity, notice, and accountability act as regulative ideals that pull them toward legal exemplary arguments whose AWRs satisfy the entailment requirement. These rule of law values also lead many of these speakers to feel deep mistrust for legal exemplary arguments that rely on balancing tests and totality-of-the-circumstances tests.²¹⁸ This same intuition causes some to recoil at judicial reasoning that has the "I can't say what it is, but I know it when I see it" structure.²¹⁹ The logical form of such reasoning seems to be:

Some cases of *F* are cases of *G*.

This is a case of *F*.

Therefore, this is a case of *G*.

Decisions that offer no more than this deductively invalid structure of justification rely on a judge's apparently inexplicable sense of the Gestalt of a case. Justice Clark's opinion in *Burton v. Wilmington Parking Authority* is an extreme example of the type.²²⁰ Because these "Gestaltist" decisions provide very little in the way of predictability and judicial accountability, they starkly fail to satisfy the rule of law ideals of clarity, notice, and accountability. Thus, if I am correct in my contention that judges are best understood as seeking to offer deductively clear analogy-warranting rules (more precisely, analogy-warranting rules that satisfy the entailment requirement) in order to satisfy rule of law ideals, Gestaltist decisions should be rare phenomena and should be subject to stern condemnation when they occur.

Is this prediction confirmed? Sometimes, Gestaltism is indeed the occasion for stern rebuke from members of the practice — the dissent in *Burton* is a model of such a complaint.²²¹ But my predictive suggestion might seem to fly in the face of, and thus be disconfirmed by, a much more powerful point about this practice, namely, the *thoroughgoing* use in Anglo-American — indeed, in perhaps all modern Western juristic practice — of open-textured legal concepts, not only in

id. at 51–62; that there be "congruence between official action and the law," *id.* at 81; that the laws not contain contradictions, *see id.* at 65–70; and that they be general, *see id.* at 46–49. The last two wear their logical presuppositions on their abstracted sleeves.

²¹⁸ *See, e.g.,* Antonin Scalia, *The Rule of Law as a Law of Rules*, 56 U. CHI. L. REV. 1175, 1179 (1989).

²¹⁹ Alexander Bickel's indignation on a related methodological issue appeals to the same rational intuitions. *See* ALEXANDER BICKEL, *THE SUPREME COURT AND THE IDEA OF PROGRESS* 50–54 (1978) (discussing the Supreme Court's approach to the task of defining obscenity).

²²⁰ *See* *Burton v. Wilmington Parking Auth.*, 365 U.S. 715, 716–26 (1961); *supra* notes 208–211 and accompanying text. Note that I am not adducing *Burton* as an example of exemplary argument — I offer no analysis of whether it should be understood as such — but rather only as an example of Gestaltist argument.

²²¹ *See* *Burton*, 365 U.S. at 728 (Harlan, J. dissenting); *supra* note 211.

constitutional provisions (for example, “equal protection of the laws”) or statutory provisions (for example, “good faith” in the Uniform Commercial Code,²²² or “unreasonable restraint of trade” in the Sherman Act²²³), but also in analogy-warranting rules in common law decisions.²²⁴ In *MacPherson v. Buick Motor Co.*,²²⁵ for example, Cardozo expresses the *ratio* of the case in these terms:

If the nature of a thing is such that it is *reasonably certain* to place life and limb in peril when *negligently* made, it is then a thing of danger. Its nature gives warning of the consequences to be expected. If to the element of danger there is added knowledge that the thing will be used by persons other than the purchaser, and used without new tests, then, irrespective of contract, the manufacturer of this thing of danger is under a duty to make it *carefully*.²²⁶

To be sure, such open-textured legal terms are capable of being reconstructed in the form of rules that can be deductively applied. But such reconstruction, we are told by the Legal Realists and their intellectual progeny, is window dressing, a mere “pretense,” as Edward Levi put it.²²⁷ The prevalence of such Gestaltist decisions is a challenge to my argument above, for it seems clear that right at the heart, and not at the margin, of judicial decisionmaking is an insistent practice by judges of *not* using terms that give either the predictability or accountability that philosophers have thought to be the principal characteristics of the rule of law. How then could we, as interpreters of these judges’ structurally enthymematic arguments, assume that they are seeking to use deductive form in order to satisfy rule of law values like notice, clarity, and accountability?

There are two answers to this challenge. The first shows that it is possible to reconcile even decisions that rely on very open-textured concepts²²⁸ with the basic aspirational ideal of the rule of law by recognizing that many judges who articulate highly open-textured AWRs do so in the belief that the concept will undergo what we might call a “logical evolution” toward clarity. In Anglo-American legal practice, judges do not — indeed, cannot²²⁹ — state all of the necessary and sufficient conditions for a legal concept. But they may logically evolve

²²² U.C.C. § 1-203 (1987).

²²³ *NCAA v. Board of Regents of the Univ. of Okla.*, 468 U.S. 85, 100 (1984) (construing 15 U.S.C. § 1 (1994)).

²²⁴ For a sample of doctrinal and economic issues pertaining to the “rules”–“standards” distinction, see Kaplow, cited above in note 153, *passim*; Duncan Kennedy, *Form and Substance in Private Law Adjudication*, 89 HARV. L. REV. 1685, 1687–1713 (1976); and Sullivan, cited above in note 153, at 56–123. For a discussion of the problems with this distinction, see pp. 971–72 above.

²²⁵ 111 N.E. 1050 (N.Y. 1916).

²²⁶ *Id.* at 1053 (emphases added).

²²⁷ See LEVI, *supra* note 6, at 1; *supra* p. 931.

²²⁸ Open texture admits of degrees: the greater the likelihood that a term will be vague, the greater the degree of that term’s open texture.

²²⁹ See *infra* pp. 1018–21 (discussing “defeating norms”).

a concept that begins abstractly with perhaps only a few clear (nonvague) applications into one that moves asymptotically toward a complete definition that specifies all of the concept's necessary and sufficient conditions.²³⁰ Although the idea of logical evolution may be something of a philosophical fiction, many of the most famous of the highly open-textured analogical opinions — *MacPherson* included — immediately move to offer precise (nonvague) necessary or sufficient conditions, which are then applied deductively in the final step of the opinion.²³¹

²³⁰ Oliver W. Holmes argued that something like this “logical evolution” would take place with legal concepts in the common law. He argued, for example, that in torts cases regarding standards of conduct that come for the first time before courts, the judge may have no “clear views of public policy applicable to the matter” and may thus give much of the decision to the jury, which acts as an “aid to the conscience” of the judge. OLIVER W. HOLMES, *THE COMMON LAW* 98 (Mark D. Howe ed., 1963). “But supposing,” Holmes continued, “a state of facts often repeated in practice, is it to be imagined that the court is to go on leaving the standard to the jury forever? Is it not manifest, on the contrary, that if the jury is, on the whole, as fair a tribunal as it is represented to be, the lesson which can be got from that source will be learned?” *Id.* On Holmes’s model, judges might reflect what they “learned” from seeing juries wrestle with *similar* cases over and over (“[f]acts do not often exactly repeat themselves in practice; but cases with comparatively small variations from each other do,” *id.* at 99), and eventually begin reclassifying questions of fact (which are typically given to the jury) as questions of law (which are given to the judge) and directing verdicts under the clear “legal” rules that “evolved” from jury experience. Thus, Holmes described the process that I have referred to as “logical evolution” — “logical” because, in the process Holmes describes, courts would settle on *logical criteria* for the relatively straightforward, deductive application of legal concepts. Although Holmes’s analysis is largely descriptive, it also seems to be an “evolutionary” process that he considered normatively attractive. Not surprisingly, the norms that were at issue are closely associated with the rule of law:

Legal, like natural divisions, however clear in their general outline, will be found on exact scrutiny to end in a penumbra or debatable land. This is the region of the jury, and only cases falling on this doubtful border are likely to be carried far in court. *Still, the tendency of the law must always be to narrow the field of uncertainty.*

Id. at 101 (emphasis added). Other scholars have discussed the issue of an “evolution” of legal concepts that is similar to what I am calling “logical” evolution. *See, e.g.*, Robert C. Clark, *The Interdisciplinary Study of Legal Evolution*, 90 *YALE L.J.* 1238 *passim* (1981); E. Donald Elliot, *The Evolutionary Tradition in Jurisprudence*, 85 *COLUM. L. REV.* 38 *passim* (1985); Herbert Hovenkamp, *Evolutionary Models in Jurisprudence*, 64 *TEX. L. REV.* 645 *passim* (1985).

²³¹ The *MacPherson* court reasoned:

From this survey of the decisions, there thus emerges a definition of the duty of a manufacturer which enables us to measure this defendant's liability. Beyond all question, the nature of an automobile gives warning of probable danger if its construction is defective. This automobile was designed to go 50 miles an hour. Unless its wheels were sound and strong, injury was almost certain. It was as much a thing of danger as a defective engine for a railroad. The defendant knew the danger. It knew also that the car would be used by persons other than the buyer. This was apparent from its size; there were seats for three persons. It was apparent also from the fact that the buyer was a dealer in cars, who bought to resell. The maker of this car supplied it for the use of purchasers from the dealer just as plainly as the contractor in *Devlin v. Smith* supplied the scaffold for use by the servants of the owner. The dealer was indeed the one person of whom it might be said with some approach to certainty that by him the car would not be used.

MacPherson v. Buick Motor Co., 111 N.E. 1050, 1053 (N.Y. 1916). Another good example of a well known Gestaltist exemplary argument in which the judge supplies some logically necessary conditions and some logically sufficient conditions is Justice Traynor's decision in *Drennan v. Star*

There is another response to the challenge: the pragmatics-based assumption that judicial reasoners by analogy are aspiring to satisfy these particular normative ideals of the rule of law is, like any pragmatically based assumption, defeasible.²³² From the point of view of institutional design and maintenance, there are important trade-offs between “particularism” of the open-textured sort and “generalism” of the ruly sort. The rule of law values of clarity, notice, and accountability reflect a judgment in favor of the general, but some judges may think that *other* values are more important in judicial decision. What is the theorist to do with the exemplary arguments they offer? The theorist should recognize that such judges are more willing than others to argue with a Gestaltist structure, and she should leave it to the normativists to argue about which approach to legal decisionmaking is more acceptable.

I have argued for the strong presumption that judicial “speakers” of exemplary arguments are aspiring toward the rule of law values, and that, as theorists of analogy, we should therefore reconstruct structural enthymemes in exemplary argument as satisfying the entailment requirement. The remainder of this Article will describe what such a reconstruction would look like in light of these inquiries into structural enthymemicity, semantics, pragmatics, and rule of law values. My leading examples will be *Adams v. New Jersey Steamboat Co.*²³³ and *Mills v. Wyman*.²³⁴

VII. DEDUCTIVE FORM IN LEGAL EXEMPLARY ARGUMENT

A. *Deductive Form in Legal Analogical Argument*

In *Adams*, valuables were stolen from a passenger’s rented steamboat cabin. The issue in that case was whether the steamboat owner was strictly liable to the passenger for the loss (it having been decided below that neither the steamboat owner nor the passenger was negligent).²³⁵ Apparently, only a couple of cases were directly on point: one held that an innkeeper was strictly liable for the theft of boarders’ valuables, while another held that a railroad company was not strictly

Paving Co., 333 P.2d 757 (Cal. 1958), in which Traynor articulated the necessary condition for application of the promissory estoppel rule to subcontractor bids:

[A] general contractor is not free to delay acceptance after he has been awarded the general contract in the hope of getting a better price. Nor can he reopen bargaining with the subcontractor and at the same time claim a continuing right to accept the original offer. In the present case plaintiff promptly informed defendant that plaintiff was being awarded the job and that the subcontract was being awarded to defendant.

Id. at 760 (citation omitted).

²³² See GRICE, *supra* note 195, at 28; LEVINSON, *supra* note 190, at 114.

²³³ 151 N.Y. 163 (1896). Credit for unearthing this gem and providing very useful discussion thereof belongs to Professor Golding. See GOLDING, *supra* note 96, at 46–49, 102–12.

²³⁴ 20 Mass. (3 Pick.) 207 (1825).

²³⁵ See *Adams*, 151 N.Y. at 166.

liable to passengers for the theft of their valuables from open-berth sleeping-car trains.²³⁶ One might say that the legal issue was put to Judge O'Brien thus: in the "eyes of the law," was the steamboat sufficiently like an inn, on the one hand, or sufficiently like a railroad, on the other, to receive the same legal treatment?

Of particular relevance is Judge O'Brien's reasoning about the inn case.²³⁷ After quoting that portion of the opinion, I will offer an interpretive reconstruction of its structure as a paradigmatic exemplary argument:

The defendant has . . . been held liable as an insurer against the loss which one of its passengers sustained under the circumstances stated. The principle upon which innkeepers are charged by the common law as insurers of the money or personal effects of their guests originated in public policy. It was deemed to be a sound and necessary rule that this class of persons should be subjected to a high degree of responsibility in cases where an extraordinary confidence is necessarily reposed in them, and where great temptation to fraud and danger of plunder exists by reason of the peculiar relations of the parties. The relations that exist between a steamboat company and its passengers, who have procured staterooms for their comfort during the journey, differ in no essential respect from those that exist between the innkeeper and his guests.

The passenger procures and pays for his room for the same reasons that a guest at an inn does. There are the same opportunities for fraud and plunder on the part of the carrier that were originally supposed to furnish a temptation to the landlord to violate his duty to the guest.

A steamer carrying passengers upon the water, and furnishing them with rooms and entertainment, is, for all practical purposes, a floating inn, and hence the duties which the proprietors owe to the passengers in their charge ought to be the same. No good reason is apparent for relaxing the rigid rule of the common law which applies as between innkeeper and guest, since the same considerations of public policy apply to both relations.

. . . .

. . . [T]he traveler who pays for his passage, and engages a room in one of the modern floating palaces that cross the sea or navigate the interior waters of the country, establishes legal relations with the carrier that cannot well be distinguished from those that exist between the hotel-keeper and his guests. The carrier in that case undertakes to provide for all his wants, including a private room for his exclusive use, which is to be as free from all intrusion as that assigned to the guest at a hotel. The two relations, if not identical, bear such close analogy to each other that the same rule of responsibility should govern.

²³⁶ See *id.* at 166–68.

²³⁷ In a portion of the opinion not quoted in the text accompanying this note, O'Brien distinguishes the railroad case. That part of his reasoning — "argument by disanalogy" — can also be handled with this basic schema, as I discuss below. See *infra* note 258 and accompanying text.

We are of the opinion, therefore, that the defendant was properly held liable in this case for the money stolen from the plaintiff without any proof of negligence.²³⁸

Reconstructed in accord with the schema presented above, the argument is as follows:

Target (*y*) = the steamboat owner.

Source (*x*) = the innkeeper.

Shared characteristics:

F: has a client who procures a room for specified reasons *R* (privacy, etc.).

G: has tempting opportunity for fraud and plunder of client.

Inferred characteristic:

H: is strictly liable.

Argument:

- (1) *y* has *F* and *G* (target premise);
- (2) *x* has *F* and *G* (source premise);
- (3) *x* also has *H* (source premise);
- (4) AWR: if anything that has *F* and *G* also has *H*, then everything that has *F* and *G* also has *H*;
- (5) Therefore, *y* has *H*.

As emphasized in my earlier discussion of exemplary argument, a centrally important step in this argument is step 4, which asserts the analogy-warranting rule. In *Adams*, exemplary argument serves the *contextual* need of providing a justificatory interpretation of applicable law (which in this case consists wholly of common law precedents) in a context of doubt about the application of those precedents. The analogy-warranting rule in the reconstructed argument satisfies the entailment requirement (that the AWR be able to serve as a premise that, taken with the “target premise,” deductively entails the conclusion), as it must in order to serve its contextual purpose of justification.

Notice that the structure of the analogy-warranting rule is slightly different from the structure offered in the example above, in which I first introduced the entailment requirement.²³⁹ This structure seems to capture the kind of entailment to which legal argument in particular aspires, by providing a method of representing the way in which such argument seeks to use exemplary reasoning to “treat like cases alike,” albeit within a particular, contingently evolving legal system. As noted above, this norm of “formal justice” must be understood to require that a particular legal system treat *relevantly* similar cases alike. The

²³⁸ *Adams*, 151 N.Y. at 166–67, 170 (citations omitted).

²³⁹ See *supra* pp. 970–71.

schema of legal analogy presented above provides an interpretive reconstruction of the two elements of this requirement: that the system is committed to treating any relevantly similar items (items having the same characteristics) *in this legal system* in the same way.²⁴⁰ Note that if we reconstruct Judge O'Brien's argument in such a way that it does not rely on an AWR that satisfies the entailment requirement, we have to reconstruct it on some model that is *logically analogous*²⁴¹ to the Gestaltist pattern discussed above, namely:

In some cases when there are *F* and *G*, there is *H*.

In this case, there are *F* and *G*.

Therefore, in this case there is *H*.

I turn now to a different question. A reconstruction of legal exemplary argument that sees deduction as playing as important a role as the theory I am advancing does, must take pains to account for the principal obstacle to deductivist reconstruction of legal arguments: defeasibility. The account I am presenting here offers such an account as part of its model of "argument by *disanalogy*."

B. Deductive Form in Legal Disanalogical Argument

1. "*Distinguishing*" Cases as *Disanalogical Argument*. — Argument by disanalogy, like argument by analogy, works by comparing two (or more) items, but instead of focusing on characteristics that the items share, an argument by disanalogy focuses on characteristics that they do not share. Recall that in an argument by analogy, one argues that because the two (or more) items (source and target) share some characteristics, one may infer that they share some additional characteristic that one of them (the source) is known to have. By contrast, in argument by disanalogy, one argues that because the two or more items — which seem *prima facie* to be relevantly similar — do *not* share some characteristics, we may not infer that they share some additional characteristic that one of them (the source) is known to have. Before presenting a formal reconstruction of a legal argument by disanalogy, I will show how the process works with a more intuitively simple example.

Recall the example of the student and the proctor arguing about whether permission to use a pen on an exam extends to use of a word processor.²⁴² The proctor might well object to the conclusion of the student's argument by offering the following counterargument. Unlike

²⁴⁰ Notice that lines (2), (3), and (4) entail the "theorem": "everything that has *F* and *G* also has *H*." The verb 'has' refers to an authoritative precedential "source" case that has already been decided at the time at which the "target" case arises. (I am indebted to Kit Fine for his suggestion of this structure of the analogy-warranting rule in step (4), and to Robert Nozick for additional helpful discussion.)

²⁴¹ For discussion of logical analogy, see above at note 181 and accompanying text.

²⁴² See *supra* p. 963.

the pen, a word processor has a memory capacity that could be used for hard-to-detect cheating; therefore, permission to bring pens to the exam does not by itself extend to permission to bring word processors. The structure of disanalogical argument is similar to that used in the discussion of *Adams*, and I shall use it to present the proctor's argument. The student has proposed an *analogy-warranting rule* under which both the pen and the word processor, which share some characteristics, also share the "inferred" characteristic of being permitted for use on an exam. A reconstruction of the student's analogical argument is as follows:

Target (y) = use of word processor on exam.

Source (x) = use of pens on exam.

Shared characteristic:

F: assists student in communicating ideas to professor.

Inferred characteristic:

H: is permitted to be used on the exam.

Argument:

- (1) y has *F* (target premise);
- (2) x has *F* (source premise);
- (3) x also has *H* (source premise);
- (4) AWR: any *F* also has *H*;
- (5) Therefore, y has *H*.

In support of this argument, the student might explain and justify his proposed AWR by reference to the convenience for students in being able to use their word processors, fairness to individual students with poor handwriting, and so on. This justification constitutes the "analogy-warranting rationale" for the AWR.

The proctor might seek to "distinguish" the pen and the word processor for purposes of assessing whether both of them are permitted for use on the exam. The proctor might point to a characteristic that they do not share, and argue that, by virtue of that unshared characteristic, the pen may be used for the exam while the word processor may not. Structurally, the proctor's disanalogical argument might look like this:

Target (y) = use of word processor on exam.

Source (x) = use of pens on exam.

Shared characteristic:

F: assists student in communicating ideas to professor.

Unshared characteristic:

G: does not provide a method for hard-to-detect cheating.

Inferred characteristic:

H: is permitted to be used on the exam.

Argument:

- (1) *x* and *y* both have *F*;
- (2) *x* also has *G*;
- (3) *y* does not have *G* (*y* has not-*G*);
- (4) *x* also has *H*;
- (5) Disanalogy-warranting rationale (DWR): any *F* is *H* unless it also has not-*G*;

[i.e., all things that are both *F* and *G* are *H*.]

[Alternative: by itself, the presence of *F* in an item is not a sufficient condition of *H*, but the presence of *F* and *G* are jointly sufficient conditions for *H*.]²⁴³

- (6) Therefore, the presence of *F* and *H* in *x* does not provide a sufficient basis for inferring the presence of *H* in *y*.

Just as the student might offer an *analogy*-warranting rationale that points to convenience or fairness to the student, so the proctor might point to a *disanalogy*-warranting rationale, one that pointed to the problems of administrability or of fairness to all honest students (who would suffer if cheaters were not detected). This is the basic way in which reasoners deploy the structure of exemplary, *disanalogical* argu-

²⁴³ This analysis of the disanalogy-warranting rules relies on an interpretation, common among logicians, of the logical meaning of 'unless'. On this reading, '*P* unless *Q*' is logically equivalent to 'if not-*P* then *Q*' and to 'if not-*Q* then *P*', both of which are equivalent to '*P* or *Q*' and '*Q* or *P*' (when 'or' is given the *inclusive* interpretation — that is, the complex proposition '*P* or *Q*' is true when either the constituent proposition *P* is true, or the constituent proposition *Q* is true, or *both*). See BARKER, *supra* note 63, at 72–73. (It is not clear that this inclusive-or interpretation of 'unless' captures the intended meaning of 'unless' when both *P* and *Q* are true; for example, is 'I will do my homework unless I watch the basketball game' true when I both do my homework and watch the basketball game? Moreover, in many cases, 'unless' clearly has the logical force of exclusive-or, such as in, 'you will get pie unless you don't do your homework'. This sentence is false when the person *both* gets pie *and* does not do his homework. Though resolution of this question would be important for a complete analysis of the logic of legal argument, it is not important for my purposes here, and the commonly accepted interpretation is sufficient.) Similarly, '(if *P* then *Q*) unless *R*' would be equivalent to 'if not-*R* then (if *P* then *Q*)', which is in turn equivalent to '(if not-*R* and *P*) then *Q*'. As I explain below, the term 'unless' is the logical term that captures the phenomenon of *defeasibility*, when defeasibility is treated *not* as a phenomenon in which the force of an argument's conclusion is undermined by the addition of premises, see *infra* note 270 and accompanying text, but rather as the rewriting of a rule so as to impose additional necessary or additional jointly sufficient conditions. In the example just given, the rule 'if *P* then *Q*' is "defeated," one might say, by *R*, when a reasoner asserts '(if *P* then *Q*) unless *R*'. That is what the proctor does in my simple example above. I am further assuming here that the proctor is giving presumptive force to the rule 'any *F* is *H*' — this is the common decision that judges make when they distinguish authoritative precedents, as I explain below at pp. 1009–10. Note that the argument presented there is expressed in predicate logic (see above at note 60 for a discussion of predicate versus propositional logic): 'for all *x*, (if *x* has *F*, then *x* has *H*) unless *x* also has *G*', which is equivalent to 'for all *x*, if *x* has not-*G* and *F*, then *x* has *H*'. The two alternative formulations of the *disanalogy*-warranting rule in the text simply report these logical equivalences.

ment to *distinguish* cases that might, on first glance, seem relevantly similar.

Argument by disanalogy is the argument pattern exhibited in *Mills v. Wyman*,²⁴⁴ a well known contracts case. At issue in *Mills* was the promise of a father to repay a “good Samaritan” for the latter’s expenses in taking care of the father’s deathly ill son.²⁴⁵ The father made the promise only after the do-gooder had rendered the services.²⁴⁶ The common law generally held that “past consideration is no consideration,” and the issue in *Mills* was whether the father’s promise was legally enforceable by virtue of “moral obligation” or moral consideration.²⁴⁷ The Supreme Judicial Court of Massachusetts, per Chief Judge Parker, decided that moral obligation alone could *not* provide the required consideration to enforce a promise.²⁴⁸ But the court was faced with some precedents in which judges had stated that moral consideration *was* sufficient consideration to support a promise. Reasoning by disanalogy, Chief Judge Parker distinguished those cases from *Mills*.

Capable lawyer that he was, Parker noticed that in all the cases in which it was said that moral obligation was sufficient consideration to support legal enforcement of a promise, there had been prior “valid” consideration for the promise that had been “extinguished by the operation of positive law.”²⁴⁹ The leading example was that of a promise to repay a debt, which at some point had been legally enforceable (had sufficient consideration for its enforcement), but which later became extinguished by the operation of a discharge in bankruptcy. (Other examples included debts of infants and debts barred by statutes of limitations.) Some cases before Judge Parker said that the bankrupt’s promise to repay the debt, made after the discharge in bankruptcy, was supported by sufficient consideration to enforce the promise. Those cases characterized the nature of the obligation on the bankrupt as moral consideration and made broad statements to the effect that “moral obligation is a sufficient consideration to support an express promise.”²⁵⁰ According to Parker’s interpretation of the case law, however, these authorities had spoken too broadly. On his reading, the law did not say that in all cases in which there was moral obligation (Parker made it quite clear that he believed that there *was* moral obligation in *this* case²⁵¹), there was consideration to support a prom-

²⁴⁴ 20 Mass. (3 Pick.) 207 (1825).

²⁴⁵ *Id.* at 209.

²⁴⁶ *See id.*

²⁴⁷ *Id.*

²⁴⁸ *See id.* at 211.

²⁴⁹ *Id.* at 209.

²⁵⁰ *Id.*

²⁵¹ Witness, for example, this rhetorical craft in Parker’s opinion:

ise. To establish the narrower view, he constructed an argument by disanalogy that distinguished the prior cases from the one before him.

Recall that in the pattern of argument by disanalogy, there is a relevant *dissimilarity* between x and y that is sufficient to justify giving y a different legal treatment than x received.²⁵² Here is a reconstruction of Parker's analysis by this pattern:

Target (y) = the case under consideration (involving renege promise by father).

Source (x) = precedent cases, including those stating (wrongly, in the view of Parker, the "disanalogical" reasoner) that moral obligation was sufficient consideration for enforcement of a contract.

Shared characteristic:

F : there was a morally obliging promise to pay that was not supported by additional new consideration.

Unshared characteristic:

G : there had existed a prior legally binding promise that later became extinguished by the operation of positive law.

Inferred characteristic:

H : there was adequate consideration to support enforcement of the promise.

Argument:

- (1) x and y both have F ;
- (2) x has G ;
- (3) y does not have G (y has not- G);
- (4) x also has H ;
- (5) DWR: any F is H unless it also has not- G (all things that are both F and G are H);²⁵³
- (6) Therefore, the presence of F and H in x does not provide a sufficient basis for inferring the presence of H in y .

On [the defendant's son's] return from a foreign country, he fell sick among strangers, and the plaintiff acted the part of the good Samaritan, giving him shelter and comfort until he died. The defendant, his father, on being informed of this event, influenced by a transient feeling of gratitude, promises in writing to pay the plaintiff for the expenses he had incurred. But he has determined to break this promise, and is willing to have his case appear on record as a strong example of particular injustice sometimes necessarily resulting from the operation of general rules.

Id.

²⁵² In *Mills*, as in many legal-interpretive disanalogical inferences, the source and target items being compared are *cases* (more precisely, rules and rationales applied in particular settings). In one typical disanalogical pattern, the source is an authoritative precedent, and the target is the case being decided.

²⁵³ As discussed above, see *supra* note 243, step 5 is logically equivalent to 'for all x , if x has both F and G , then x has H ', and is also equivalent to 'for all x , (if x has F then x has H) unless x also has not- G '.

Several observations are due. Just as we distinguished the analogy-warranting rule from the analogy-warranting rationale, so too we will distinguish the *disanalogy*-warranting rule from the *disanalogy*-warranting rationale. Recall that rationales explain and justify rules. The *disanalogy*-warranting rule states the logical relation between the unshared characteristics (*G* in the example above — recall that the characteristics are shared in argument by analogy) and the inferred characteristics (*H*). In the *Mills* schema, step 5 articulates the *disanalogy*-warranting rule; this rule states that, logically speaking, from the presence of *F* in an item, one cannot infer the presence of *H*, but from the presence in an item of both *F* and *G*, one can infer the presence of *H*.

Typically, as in *Mills*, *disanalogy*-warranting rules impose additional conditions on the rules stated (or implied) in prior cases. That is, they rewrite the rule articulated by the earlier judge (the judge of the source case) by adding new conditions to the bundle of jointly sufficient conditions in the original rule. Thus, in *Mills*, apparently (and roughly speaking), the precedents Judge Parker was reading stated some rule like:

- (i) Moral obligation is sufficient consideration to support enforcement of a promise.

Logically speaking, this rule makes moral obligation a *sufficient condition* for consideration. Judge Parker's argument by *disanalogy* narrows that rule by imposing an additional condition in the antecedent of the conditional in (i), yielding:

- (i') Moral obligation alone is insufficient to support enforcement of a promise, but moral obligation along with prior valid consideration that was extinguished by the operation of positive law are sufficient.

This rewriting of the rule allows a judge in a target case to achieve what Raz calls "the very function of distinguishing, namely, modifying a rule to avoid its application to a case to which it does apply as it stands"²⁵⁴ — in just the way that (i), as it stood before Parker got his *disanalogical* hands on it, would have applied to the case before him.

²⁵⁴ RAZ, *supra* note 62, at 186. For reasons that Raz ably presents, when a judge in most Anglo-American systems rewrites the rule of a prior case in a new case (as Parker did in *Mills*), the rewritten rule must satisfy several constraints. It must impose additional jointly sufficient conditions on the rule articulated in the distinguished case, it must contain all of the conditions of the original rule, and it must deductively justify the result in the original case. *See id.* at 186–87 & n.13. Although I have relied in my reconstruction of *disanalogy* on Raz's analysis of distinguishing, Raz himself does not treat distinguishing as a type of *disanalogical* inference or reasoning. *See id.* at 201–06. Indeed, most writers on legal analogy do not recognize or, at any rate, do not explicitly treat distinguishing as a type of argument by analogy. An exception is Eisenberg, who notes correctly that, "[a]t its core, reasoning by analogy is the mirror image of the process of distinguishing." EISENBERG, *supra* note 22, at 87.

Two other notes on the schema of *disanalogy* presented here are in order. First, the schema that I offer has one step more than that for analogy. This additional step (it is the first step in the schema, namely, 'x and y both have characteristic *F*') is included in order to reflect the *prima*

The function of a disanalogy-warranting rationale (“DWRa”) is to explain why, in the “eyes of the law,” the logical relation between the stated characteristics articulated by the disanalogy-warranting rule (“DWR”) does or should obtain. One of the virtues of recognizing a distinction between DWR and DWRa (and, in the case of exemplary, analogical reasoning, between AWR and AWRa) is that such recognition allows us to see clearly those instances in which one of these norms (the DWR or the DWRa) is clearly expressed in the enthymematic argument while the other is not. *Mills* is a good example of such a case; its disanalogy-warranting rule is quite clear (see step 5), while the disanalogy-warranting rationale that might explain and justify the DWR is not clearly presented in (nor is it easily reconstructed on the basis of) the enthymematic opinion itself. To explain why “moral obligation” in the source cases seemed to be sufficient, while in other cases (including the target case) it is not — such explanation constitutes the DWRa — Judge Parker offered only a cryptic distinction between the obligations of “natural law” or “natural justice,” which Parker claimed existed in the source cases, and the mere moral obligation that existed in the target case before him.²⁵⁵

2. “Competing” Analogies as Disanalogical Argument. — There is another reasoning pattern commonly encountered in legal systems (especially in Anglo-American systems) that calls upon the resources of disanalogical argument. This is the pattern in which two (or more) lines of precedent both seem, prima facie, to govern a case at hand, yet each line of precedent suggests an opposite result. Although the structure of disanalogical argument is no different in this reasoning pattern than it is in the “distinguishing” pattern, the phenomenon is important enough to warrant a separate example to illustrate how it

facie applicability of cases that are ultimately distinguished by disanalogical argument. Second, and relatedly, I use “unless” in step 5 of the schema to capture the sense that there is some prima facie reason to believe that the compared items do both have the inferred characteristic — even though the reasoner’s ultimate “all things considered” conclusion is that they do not. Such is the importance of this special type of disanalogical legal argument that I have allowed it to shape the schema for all disanalogies.

²⁵⁵ Said Parker:

In all these cases [in which the promise at issue was enforced — for example, promises to pay debts that were excused by such statutes as a bankruptcy statute] there is a moral obligation founded upon an antecedent valuable consideration. These promises therefore have a sound legal basis. They are not promises to pay something for nothing; . . . but the voluntary revival or creation of obligation which before existed in natural law, but which had been dispensed with . . . principally for the public convenience.

Mills, 20 Mass. (3 Pick.) at 209.

I am not claiming that no explanation along these lines could be supplied (that is, that no plausible DWRa could be fashioned). Surely there are many accounts of natural law and natural justice rich enough to supply the needed DWRa in this doctrinal setting. All I claim here is that the enthymematic opinion in *Mills* did not itself supply a plausible DWRa; it asserted a distinction between moral obligation and natural justice without explaining how that distinction worked in this context.

works according to the theory presented here. Fortunately, *Adams v. New Jersey Steamboat Co.*, used above to illustrate legal *analogical* argument,²⁵⁶ also affords an illustration of the “competing analogy” variety of disanalogical argument.²⁵⁷

Recall that in *Adams*, the question was whether the owner of a steamboat was strictly liable to a steamboat passenger for the theft of goods from the passenger’s room. Recall too that there were cases, which the *Adams* court took to be authoritative, that had held that an innkeeper was strictly liable for the theft of goods from the room of an inn guest. In the analysis offered above, I described Judge O’Brien’s articulation of an analogy-warranting rule according to which the steamboat (the “target case”) was relevantly similar to the inn (the “source case”) for the purpose of assessing strict liability for theft (the “inferred characteristic”).

In a separate portion of the opinion, Judge O’Brien confronted a line of precedent distinct from that of the innkeeper cases. This line of cases held that the owner of a railroad was *not* strictly liable to railroad passengers who had personal goods stolen from the open-berth sleeping cars on trains. Considered with the inn cases, this line of railroad cases framed the following reasoning problem for the judge: for purposes of assessing strict liability for theft, is the steamboat cabin (or the steamboat passenger) relevantly similar to the inn room (or inn guest), or is it instead relevantly similar to the railroad sleeping car (or railroad passenger)? This way of framing the reasoning task is good as far as it goes, but it does not go very far, for it relies on the vague predicate “relevantly similar.” To see how that predicate is analyzed in a typical case that deploys this kind of disanalogical reasoning, one must reconstruct the structural enthymeme and observe how the judge sorts through shared, unshared, and inferred characteristics.

Judge O’Brien’s explanation of why the railroad sleeping car is “distinguishable” from the inn is complex and somewhat obscure.²⁵⁸ It

²⁵⁶ See *supra* pp. 1003–05.

²⁵⁷ Another example is *California v. Carney*, 471 U.S. 386 (1984), discussed briefly above at p. 936.

²⁵⁸ The relevant portion of the opinion reads as follows:

The relations of the carrier to a passenger occupying one of these berths are quite different with respect to his personal effects from those which exist at common law between the innkeeper and his guest, or a steamboat company that has taken entire charge of the traveler by assigning to him a stateroom. . . .

. . . [A]side from authority, it is quite obvious that the passenger has no right to expect, and in fact does not expect, the same degree of security from thieves while in an open berth in a car on a railroad as in a stateroom of a steamboat, securely locked and otherwise guarded from intrusion. In the latter case, when he retires for the night, he ought to be able to rely upon the company for his protection with the same faith that the guest can rely upon the protection of the innkeeper, *since the two relations are quite analogous*. . . . The carrier by railroad does not undertake to insure the personal effects of the passenger which are carried upon his person against depredation by thieves. It is bound, no doubt, to use due care to protect the passenger in this respect; and it might well be held to a higher degree of care when it assigns sleeping berths to passengers for an extra com-

mixes different types of reasons for his assertions in a way that leaves unclear exactly what his argument is: some are reasons of judicial authority; others are reasons of justice; others invoke an unclear distinction among different kinds of contractual arrangements that passengers could make with owners of sleeping-car railroads.²⁵⁹ Despite these opacities, the basic argument is clear enough for my purposes here — to illustrate how he seems to be reasoning with the “competing analogies” of the steamboat and the railroad.

The basic argument is that the railroad passenger, who was, in that day, occupying an open berth in a sleeping car, both *did* not expect and *should* not have expected that his valuables would be protected “against depredation by thieves.”²⁶⁰ Unlike both the inn guest and the steamboat passenger, the railroad passenger was not lulled into a false sense of security by being given a locked compartment in which to sleep. The railroad passenger thus did not use the sleeping car (of that day) for the same reasons of privacy and so forth that the steamboat passenger or inn guest did. And by the same token, the sleeping-car railroad *owner* did not have the same tempting “opportunit[y] for fraud and plunder”²⁶¹ that the inn and steamboat owners had — since passengers would not have been lulled into leaving valuables in the open berths.

In other words, in what seems to be the core of O’Brien’s “distinguishing” of the railroad cases from those of the inn and the steamboat, he argues that, unlike an inn or steamboat owner, a railroad owner does not satisfy the sufficient conditions for the inferred characteristic, namely, strict liability to its clients. Thus, recall the analysis of O’Brien’s argument that the inn guest and the steamboat guest are “relevantly similar” under an analogy-warranting rule:²⁶²

Target (*y*) = the steamboat owner.

Source (*x*) = the innkeeper.

Shared characteristics:

pensation than in cases where they remain in the ordinary coaches in a condition to protect themselves. But it is only upon the ground of negligence that the railroad company can be held liable to the passenger for money stolen from his person during the journey. . . . The carrier of passengers by railroad, whether the passenger be assigned to the ordinary coaches or to a berth in a special car, has never been held to that high degree of responsibility that governs the relations of innkeeper and guest, and it would perhaps be unjust to so extend the liability *when the nature and character of the duties which it assumes are considered.*

But the traveler who pays for his passage, and engages a room in one of the modern floating palaces that cross the sea or navigate the interior waters of the country, *establishes legal relations with the carrier that cannot well be distinguished from those that exist between the hotelkeeper and his guests.*

Adams v. New Jersey Steamboat Co., 151 N.Y. 163, 168–70 (1896) (emphases added).

²⁵⁹ See *id.* at 167–70.

²⁶⁰ *Id.* at 169.

²⁶¹ *Id.* at 167.

²⁶² See *supra* pp. 1003–05.

F: has a client who procures a room for specified reasons *R* (privacy, etc.).

G: has tempting opportunity for fraud and plunder of client.

Inferred characteristic:

H: is strictly liable.

Argument:

- (1) *y* has *F* and *G* (target premise);
- (2) *x* has *F* and *G* (source premise);
- (3) *x* also has *H* (source premise);
- (4) AWR: if anything that has *F* and *G* also has *H*, then everything that has *F* and *G* also has *H*;
- (5) Therefore, *y* has *H*.

Let us now offer a shorthand name for the owner of the railroad sleeping car:

Secondary target: (*z*) = the owner of the railroad sleeping car.

Properly reconstructed, O'Brien's argument is that the secondary target, the railroad owner, *does not satisfy the sufficient conditions for the inferred characteristic* that both the (primary) target, the steamboat owner, and the source, the innkeeper, *do* satisfy:

(2a) *z* does *not* have *F* and *G*.

Because, *in this case*, the only way to achieve *H* is by satisfying the jointly sufficient conditions for *H* — namely, *F* and *G* — one is not entitled to conclude that *z* has *H*.²⁶³

We may now observe, more generally, the two basic ways in which legal reasoners can use “disanalogical” argument to handle “competing analogies.” One strategy is to construct a single analogy-warranting rule that does double duty both as an analogy-warranting rule and as a disanalogy-warranting rule. In pursuing this strategy, the reasoner must discover (abduce) and confirm²⁶⁴ a warranting rule that satisfies two conditions. First, the rule must produce the outcome that is, in the reasoner's considered judgment, the proper outcome for the source and target cases — that is, it must be a rule under which the source

²⁶³ The qualification “in this case” calls attention to the fact that the rule O'Brien uses, “everything that has *F* and *G* also has *H*” (for the form of this rule, see above at pp. 1003–05), is a *semantic* rule with a *pragmatic* constraint. The rule O'Brien uses does not have the logical structure “everything has *F* and *G* if and only if it has *H*.” And yet, in the context of this case, the only way that an owner of a relevant carrier or accommodation will be found to have the inferred characteristic *H* (strict liability) is if it satisfies both *F* and *G*. That is, failure to satisfy *F* and *G* leads to the conclusion that *H* is also not present. But that is an *invalid* inference from the rule that “everything that has *F* and *G* also has *H*.” (It commits the fallacy of “denying the antecedent.”) To understand why what appears to be a logically fallacious inference is acceptable in the legal context, one must understand the way in which *pragmatic* considerations affect the structure of legal argument. I explain this same issue, but with a different example, above at note 215.

²⁶⁴ On confirmation and disconfirmation of analogy-warranting rules, see pp. 1021–25 below.

case is relevantly similar to the target case with respect to the shared characteristics and the inferred characteristic. Second, the rule must be such that, when it is applied to the “distinguished” case (referred to as the “secondary target” above), that case is not, under the rule, relevantly similar to the target case or the source case with regard to the shared characteristics and the inferred characteristic. This is the strategy that O’Brien pursued in *Adams*.

A distinct strategy for handling competing analogies is to perform the “analogical” analysis, with the analogy-warranting rule, in one step of the overall argument, and to perform a separate “disanalogical” argument to distinguish the competing case. The difference between the two strategies is in whether the court constructs one rule to handle both the “analogy” and the “disanalogy,” as Judge O’Brien did in *Adams*, or instead writes two separate rules, one for “analogizing,” as in the first part of *Adams* (the part that compared the steamboat owner to the innkeeper), and the other for distinguishing, as in *Mills*.

C. *Applying the “Law of Deductive Form” to Arguments by Analogy and by Disanalogy*

With the patterns of analogical and disanalogical argument (in both the “competing analogy” and the “distinguishing” varieties) now before us, let me return briefly to the argument offered above regarding the strong evidence of the deeply felt connection in Anglo-American legal practice between legal justification and deduction. As argued above, according to the law of deductive form, in a context of doubt about whether an individual in a case sub judice falls within the scope of a legal concept that pertains to the case, a judge will articulate a *sufficient* condition if he is going to conclude that the individual does fall within the concept’s scope, and he will articulate a *necessary* condition if he is going to conclude that the individual does not fall within the concept’s scope.²⁶⁵

The judicial opinions in *Adams* and *Mills* operate as the law of deductive form predicts. Recall that in *Adams*, Judge O’Brien concluded that the plaintiff steamboat passenger did satisfy the criteria for a strict liability cause of action against the steamboat owner. Using analogical reasoning in a context of doubt, the judge articulated sufficient conditions for the concept of strict liability and inferred deductively that the steamboat owner satisfied them. Using the same analogy-warranting rule, he also was able to conclude that the railroad owner did *not* satisfy those sufficient conditions.²⁶⁶ In *Mills*, Judge Parker concluded that the promise at issue did *not* satisfy the criteria of legal consideration. Using reasoning by disanalogy (also in a con-

²⁶⁵ See *supra* p. 997.

²⁶⁶ See *supra* pp. 1003–05.

text of doubt), he articulated necessary conditions for consideration and inferred deductively that the plaintiff did not satisfy them.²⁶⁷

VIII. DEFEASIBILITY AND DISANALOGY

A. *The Semantics of Defeasibility*

The interpretive reconstruction of reasoning by disanalogy also enables us to explain the widespread phenomenon of defeasibility in legal interpretive argument. As most philosophers understand the concept of defeasibility, a defeasible argument is one in which the addition of premises can weaken the force of the conclusion. Because the addition of premises cannot undermine the force of a conclusion in a valid deductive argument, defeasibility usually is treated as a property of inductive arguments. Compare the following propositions:

- (1) Most *F*s are *G*s.
- (2) *x* is an *F*.
- (3) Thus, *x* is a *G*.

Proposition (3) does not follow deductively from (1) and (2) but rather is “made probable” by them (when the conditions of *F* and *G* are controlled in certain ways). Adding premises to this argument can undercut the force of the conclusion as, for example, the following premises do:²⁶⁸

- (1a) Most *FH*s are not *G*s.²⁶⁹
- (1b) *x* is an *FH*.

In deductive argument, by contrast, one cannot “defease” the argument by adding new premises.²⁷⁰ And yet, the phenomenon of defeasi-

²⁶⁷ See *supra* pp. 1009–11.

²⁶⁸ See GILBERT HARMAN, *CHANGE IN VIEW* 4–5 (1986).

²⁶⁹ Here, ‘*x* is an *FH*’ indicates that *x* is a element in the category of *F*. ‘*FH*’ is to be understood as a logical species of which the category *F* is the genus. For example, if ‘*F*’ represents the category of cats (a cat-egory) and ‘*FH*’ represents the category of calico cats (calicat-egory), then some individual calico cat, which we might call ‘*x*’, would be both an *F* (a cat) and an *FH* (calico cat).

²⁷⁰ Consider, for example, the valid deductive argument:

- (1) All *F*s are *G*s.
- (2) *x* is an *F*.
- (3) Therefore, *x* is a *G*.

Proposition (3) follows deductively from (1) and (2). Now notice what happens if we add to the premises of that argument these additional premises:

- (1a) Most *FH*s are not *G*s.
- (1b) *x* is an *FH*.

The addition of (1a) and (1b) to premises (1) and (2) does *not* undermine the validity of the inference of the conclusion (3) from the premises (1), (2), (1a), and (1b). Why? Because valid inference requires only that whenever (in “every possible world,” per notes 56 and 145 above) all the premises of an argument are true, the conclusion also be true. But because (1a) entails that some *F*s are not *G*s, it *contradicts* (1). Thus, (1) and (1a) cannot *both* be true, and thus there is no “possible world” in which (1), (2), (1a), and (1b) will all be true while (3) is false — that is, (3)

bility has long been recognized as a deep part of (at least) Anglo-American legal decisionmaking, as I have implicitly conceded in my discussion of *Mills*. Can I have it both ways — that defeasibility is part of legal decisionmaking but legal decisionmaking still relies on deductions?

The short answer is yes, and the short explanation of that answer is that, for many reasons, including those discussed above regarding the rule of law regulative ideal norms, “defeating” decisions such as those by Judge Parker in *Mills* are best reconstructed from a logical point of view as *changes* in the law, as reflected by *changes* in the logical structure of analogized and disanalogized legal rules, rather than as the addition of new premises to a perpetually open-ended premise set (as in inductive arguments). This is a different conception of defeasibility than philosophers usually recognize — let us call it ‘deductive defeasance’ — but it is one that makes the best sense of *modifications* of deductive rules, such as modification of the rule ‘if *P* then *Q*’ to a rule ‘if *P* then *Q*, unless *R*’.²⁷¹ I have illustrated above how the model of disanalogy can handle the deductive defeasance phenomenon, understood in this way. But semantics does not tell the whole story of defeasibility. As in several discussions above, we should attend also to pragmatic considerations.

*B. The Pragmatics of Deductive Defeasance:
The Role of Defeating Norms in Anglo-American Law*

Deductive defeasance has a special character in the institutional settings in which justificatory legal interpretive reasoning takes place. In those settings, legal interpretive reasoning is guided by two special norms (among others) that are in important ways closely analogous, one in Anglo-American common law and the other in the law of American federal jurisdiction. The common law norm is usually referred to by the distinction between ratio decidendi and obiter dicta; I will call it the “ratio” norm. The American federal law norm is the “case-or-controversy” limit of federal jurisdiction (which is effected by such prudential and jurisdictional norms as mootness, ripeness, standing, and abstention) under Article III, Section 2 of the Constitution.²⁷²

I argued above that the special institutional setting of legal interpretive reasoning places pragmatic limits on the logical form of exemplary arguments (namely, this setting requires that exemplary arguments rely on deductively applicable analogy-warranting rules).²⁷³

validly follows from (1), (2), (1a), and (1b). (Another way to put the point is that every conclusion follows validly from a contradiction).

²⁷¹ See *supra* note 243.

²⁷² See GEOFFREY R. STONE, LOUIS M. SEIDMAN, CASS R. SUNSTEIN & MARK V. TUSHNET, CONSTITUTIONAL LAW 84–126 (2d ed. 1991).

²⁷³ See *supra* section VI.D.

The *ratio* and case-or-controversy norms effect similar pragmatic constraints on legal interpretive reasoning when the object of interpretation is a precedent. For our purposes here, a “precedent” is a text produced by a legal interpretive authority (a judge), written to resolve particular claims in a (legally) justified manner, printed in an official law report. According to the *ratio* norm, the authoritative force of a precedent is limited to those particular factual characteristics in the dispute that the precedent resolves that are a relevantly necessary part of the precedent’s (legal) justification. According to the analogous case-or-controversy norm, federal judges may exercise Article III judicial power only insofar as they are resolving a live “case or controversy,” and they may not render so-called “advisory opinions” apart from the context of a live dispute.

These pragmatic, institutional normative constraints are interpretive norms that guide the interpretation of judicial opinions. Both norms dictate that only some acts of interpretive reasoning can have formal, authoritative, binding force on future legal interpreters. This means that, when interpreting those cases, legal interpreters must treat as binding law only that part of the opinion that addressed relevant particulars in that case. Moreover, as these norms are deployed in the Anglo-American system, later interpreters are free to rely on their own judgments about the authoritative scope of a precedent, even when that judgment appears to be at odds with the judgment of the author(s) of the precedent; this is the practice known as “distinguishing” cases.²⁷⁴ In giving legal interpreters this kind of interpretive power, both norms build defeasibility (both as traditionally understood and in the deductive defeasance sense) into the legal reasoning system. Thus, we may call them “defeating norms.”

To follow the dictates of the defeating norms, legal interpreters rely on the resources of reasoning by disanalogy. In large part, it is their acceptance of the defeating norms (along with the rule of law norms of clarity, notice, and accountability) that motivates judges to behave in writing opinions as the law of deductive form predicts they will. The defeating norms pressure a judge who concludes that a party *does not* satisfy a criterion for a legal concept *not to articulate a sufficient condition* for the concept, and they pressure a judge who concludes that a party *does* satisfy a criterion *not to articulate a necessary condition*. This important institutional limitation on judges’ interpretive powers is widely recognized by judges and lawyers — indeed, recognized widely enough that some theorists reconstruct legal arguments to reflect at least a tacit recognition of that limitation.²⁷⁵

²⁷⁴ See RAZ, *supra* note 62, at 183–89; *supra* note 254.

²⁷⁵ It is worth observing that there is no *necessary* connection between one judge’s care (call this judge *J*₁) in articulating deductively applicable AWRs and another judge’s willingness (call this judge *J*₂) to rewrite those rules. Consequently, there will be no *necessary* increase in predict-

This analysis of deductive defeasance also suggests an additional reason for which *examples* are important in exemplary reasoning even though, in a sense, they become conceptually subordinate to the analogy-warranting rules that are abduced and confirmed in the course of exemplary reasoning.²⁷⁶ One reason for which an exemplary reasoner finds it useful to pay attention to source examples once the AWR that covers the target has been adduced is that, in a context of doubt, the legal reasoner uses the resources of analogy both to build and to maintain confidence in her judgment about how that doubt is to be resolved in light of the well known fact that later judges may well come along and rewrite the AWR.²⁷⁷ One of the most important ways in which legal analogists seek to build and maintain that confidence is by averring that *defeasibility itself* is “defeated” in the target case under consideration because it was likewise defeated in the relevantly similar source case — where the AWR supplies the criteria of “relevant similarity.” That is, the reasoner keeps her eye on the shared characteristics of source and target and thus does not simply dispense with the source example, because she is confident that source and target are alike in the respects specified by the AWR, that those respects are relevant to being “defeated” or not, that the source case managed to defeat defeasibility, and that therefore one ought to adjudge defeasibility as being likewise defeated in the target case as well.²⁷⁸ Thus, although from a *semantic* point of view the actual source example seems conceptually dispensable, the continuing focus on it in exemplary reasoning has perduring epistemic (and rhetorical) *pragmatic* value throughout the course of a particular exemplary inference. In this way, exemplary reasoning is (dare one say it) analogous to abductive

ability and accountability associated with increased clarity in judicial opinions because later judges can still decide to rewrite earlier judges’ clearly stated rules. But it does seem reasonable to believe that the following correlation obtains to a significant extent. The clearer and less open-textured J_1 makes his AWR, the higher the cost to J_2 (other things equal) of rewriting the rule, if J_2 respects the conservative value of stare decisis. Part of what makes defeasibility such a ready device in our system is that a later judge J_2 can exploit the lack of clarity of earlier judge J_1 , or the high degree of open texture in J_1 ’s rule by claiming that the rewritten rule is what J_1 actually intended, thereby avoiding the cost of appearing to be “activist.” Given the Anglo-American system’s presumptive respect for conservatism, clarity and lower degrees of open texture should raise the cost of change and thus yield greater predictability and accountability. This tendency raises another point. Judges in the position of J_2 can, of course, elect to rewrite earlier decisions of analytically careful judges in the position of J_1 . But the rule of law values of predictability and accountability might still be well served under such circumstances if one demands not only clarity in the statement of an AWR from J_1 , but also a clear statement from J_1 of when derogations from the stare decisis norm would be acceptable. Thus, parties would have a clear sense of necessary or sufficient conditions from J_1 and some clear sense of what it would take for later judge J_2 to change those conditions.

²⁷⁶ See *supra* section IV.G.

²⁷⁷ See *supra* pp. 979–82.

²⁷⁸ This idea was jointly worked out in conversation with Robert Nozick.

inference in that there are pragmatic reasons justifying an inferential practice that seems unjustifiable on solely semantic grounds.²⁷⁹

To be sure, a judge who reasons analogically knows that a later judge (indeed, he himself in a later case) has, by virtue of the defeasing norms, the interpretive power to rewrite his analogy-warranting rule in a manner that narrows the set of jointly sufficient conditions for the inferred characteristic. No doubt this awareness often imposes some discipline on the judge as he fashions his AWRs, but in representing judges' (and others') patterns of exemplary argument, we need not represent this awareness in the schemas themselves.²⁸⁰ A judge fashions the AWR and defends it with an analogy-warranting rationale as best he can within the limits of his argumentative capacities, knowing that he does not have the power (indeed, one may guess that he usually does not have the desire) to fix for all time his AWR.

IX. EXEMPLARY ABDUCTION REVISITED: CONFIRMATION, DISCONFIRMATION, AND THE ROLE OF ANALOGY-WARRANTING RATIONALES

A. Justification, Truth, and Analogy-Warranting Rationales

Down the home stretch, I return to the role of abduction in legal exemplary argument in order to expand briefly some earlier suggestions about analogy-warranting rationales. Several points are worth making about the abductive exemplary process and its use of analogy-warranting rationales. Recall that abduction is, from a logical point of view, a fallacious inference, and that therefore the AWRs that are abduced cannot be justified by deduction alone. In order for those AWRs to be compelling, they must be *explained* and *justified* by rationales that are independent of the AWRs themselves and that organize analogized particular items into a sensible pattern. A crucial part of the stage that follows the abductive discovery of deductively applicable legal rules is what we might call "confirmation" — the demonstration that the AWR that has been abduced effects an *acceptable sorting* of a range of particular items, actual or hypothetical, thought relevant by the legal reasoner.²⁸¹

²⁷⁹ For discussion of the pragmatics and semantics of abduction, see section II.C above.

²⁸⁰ For example, to capture the phenomenon of defeasibility in his schema for legal analogy, Golding makes the conclusion take the following form: "Therefore, unless there are countervailing considerations, . . ." GOLDING, *supra* note 96, at 110. In this form, the legal arguer seems to add an epistemically otiose addendum to his argument, as if clearly *asserting* some proposition *P* (not merely proposing it, for example) and adding, "and I think it is true," or adding, "and I think its denial is false." The very act of asserting the conclusion pragmatically "implicates" that the asserter has already concluded that there are no countervailing considerations.

²⁸¹ In legal argument, the demonstration that the sorting effected by the AWR is acceptable is a staple of briefs and oral arguments in which the advocate shows the court that the rule he advocates — which surely will *entail* the result the lawyer wishes for his client — manages to draw an acceptable line or is needed to stop a slide along a slippery slope.

There are three noteworthy limits on the relation between analogy-warranting rules and the analogy-warranting rationales that exemplary reasoners offer to justify those rules. First, the criteria of “acceptability” are supplied not by the AWR itself, but by AWRAs; we should not be surprised to find that, like the rules of deductive inference, deductively applicable AWRs are *servants* of justification and explanation, and neither their progenitors nor their masters. Second, there is no general reason to believe that AWRAs will satisfy the entailment requirement, even when the AWRs they explain and justify do; indeed, the AWRAs will often be *actively vague* in just those “hard cases” in which legal exemplary reasoners look to them for guidance. Thus, in many of these hard cases, the AWRAs will *underdetermine* various AWRs that nevertheless may plausibly be explained and justified by reference to them, so that different reasoners will sometimes discern and endorse different AWRs even when they endorse the same AWRa. Third, it is possible, indeed quite common, for different reasoners to discern and endorse different AWRs because they endorse (or at least rely upon) different AWRAs.

No theory that failed to allow for these features of legal reasoning could succeed. The theory advanced in this Article is indeed able to explain them, in part by insisting on the distinction between the AWR and the AWRa in the reconstructed form of the exemplary argument.

By supplying criteria of acceptability, the AWRa plays the vital role in exemplary reasoning of guiding the reasoner toward judgments of *truth*. The exemplary reasoner is concerned with more than the formal cogency of exemplary reasoning, whether the relevant type of formal cogency sought is inductive (in a context calling for inductively justified AWRs) or deductive (in a context calling for deductively justified AWRs). To understand the role of the AWRa, recall the basic structure of exemplary reasoning according to the model developed here. On this model, exemplary reasoning is a patterned sequence of three reasoning steps that a reasoner performs in a *context of doubt* about the meaning of some concept, text, or rule, as well as in a specific *context of argument* (for example, scientific versus legal). In the first step, that of “discovery” (or abduction), the reasoner searches for a proposed AWR using (what he hopes will prove to be) heuristically well chosen source cases (such as actual precedents or hypotheticals). The second step is that of *confirmation* or *disconfirmation* of the proposed AWRs that have been abducted (“discovered”). In this process of confirming or disconfirming an abducted AWR, the reasoner looks in two directions, as it were. In one direction, he looks “up” to the analogy-warranting rationales that he takes as his guide to true (or reliable) judgments and that will eventually explain and justify the AWR. In so looking, he tests the abducted AWR for a strong degree of coherence with those rationales. He also looks “down” to see whether the

AWR under consideration effects an acceptable sorting of chosen particulars — taking into account, for example, concerns about slippery slopes and overbreadth. In the third step, the reasoner applies the confirmed AWR to the case under consideration.

Let me now focus on the second step in that three-step process. The reasoning device in that step is “reflective adjustment” of the sort familiar from the work of Goodman and Rawls.²⁸² Multiple “holistic” adjustments are possible among an abduced AWR, a proposed application of that AWR, and the AWRs that might explain and justify it. For example, an abduced AWR might be rejected because, although it may be an attractive solution in some ways, it does not, as applied to some particular cases, cohere sufficiently with explanatory and justificatory rationales that the reasoner is unwilling to amend. Or the AWR might be so compelling that the reasoner chooses to hold onto the AWR and effect a modification of the rationales so that they can indeed provide an explanation of justification of that AWR. Or it may be that an abduced AWR, although adjudged to be adequately explained and justified by AWRs that the exemplary reasoner takes as her guide to true (or reliable) judgments, turns out to yield particular results that are, at least *prima facie*, unacceptable to the reasoner. Here again, two kinds of adjustment are possible — revision of the AWR (and, if necessary, the AWRs) to accommodate the rejection of this application of the AWR, or holding fast to the AWR (and AWRs) while revising the judgment that the application of the AWR in the contemplated particular cases is, all things considered, unacceptable.

With slight emendation, Goodman’s description of the process by which rules of deductive and inductive inference are discerned and justified serves extremely well to describe this process of confirming or disconfirming abduced AWRs in each of the aforementioned directions, “up” toward AWRs and “down” toward particular applications:

An analogy-warranting rule is amended if it yields a conclusion we are unwilling to accept; a proposed conclusion is rejected if it violates an analogy-warranting rule we are unwilling to amend.²⁸³

²⁸² See *supra* pp. 938–39. Holyoak and Thagard seem to recognize the importance of confirmation in exemplary argument. They argue that “[v]iewing analogical thinking in the context of coherence-based decision making provides a deeper approach to the normative question,” namely, the question “how should an inference based on analogy be justified?” HOLYOAK & THAGARD, *supra* note 4, at 145. They also acknowledge that “[r]eflective equilibrium seems to depend on the kind of coherence-guided decision making we have been emphasizing.” *Id.* at 152. Where they go wrong, in my view, is in endorsing the view, picked up from Cass Sunstein, that reflective equilibrium is analytically distinct from exemplary argument. See *id.* at 152; Sunstein, *supra* note 96, at 781–83. As I have tried to show, there are two ways in which reflective adjustment is analytically inseparable from exemplary argument. First, it is a type of exemplary argument, exhibiting all the structural features thereof. See *supra* pp. 938–39. Second, reflective adjustment plays a deep role *within* the process of confirmation and disconfirmation, as I have been arguing in the accompanying text.

²⁸³ See *supra* note 178.

There are many possible ways that a tentatively abducted AWR, the AWRa that might be offered to explain and justify it, and some particular conclusions that might test both the AWR and the AWRa can be combined in the process of mutual revision — too many, in fact, to provide an example of each type here. Still, one example will help to demonstrate the process. Consider *E.I. Du Pont De Nemours & Co. v. Claiborne-Reno Co.*,²⁸⁴ an early twentieth-century case dealing with the “illusory promise” doctrine in the law of contracts. In *Du Pont*, the parties entered into a distributorship agreement that was to continue as long as Reno’s services were, in Du Pont’s judgment, “satisfactory.”²⁸⁵ When Du Pont terminated the contract, Reno brought an action for breach, contending that Du Pont had terminated the contract even though Du Pont was in fact still satisfied with Reno’s performance; in effect, Reno maintained, and the jury agreed, that Du Pont’s termination had been in bad faith.²⁸⁶ Among Du Pont’s defenses was that the contract was “void for want of mutuality” because Reno could terminate at any time it chose while Du Pont was obliged (if the contract were valid) to continue performing indefinitely, as long as it was honestly satisfied with Reno’s services.²⁸⁷

To decide the case, the Eighth Circuit relied on several precedents. Quoting and analyzing them in detail, the court fashioned an AWR according to which the contract was, as Du Pont contended, void for “lack of mutuality”:

While it is true that in the contract under consideration there is no specific provision that the Reno Company could terminate the contract at will, we regard this fact as immaterial, and we interpret the contract as allowing it so to do.

.....

We gather, from the cases in this and other circuits to which we have referred that, *where a contract is so lacking in mutuality of obligation or certainty of consideration that it may be cancelled [by one party] or that specific performance will be denied on that sole ground . . . its termination by either party creates no liability for damages resulting from a refusal to carry on.*²⁸⁸

The court was equally clear in stating the components of its analogy-warranting *rationale*. One was a concern for fairness:

²⁸⁴ 64 F.2d 224 (8th Cir.), *cert. denied*, 290 U.S. 646 (1933).

²⁸⁵ *See id.* at 226.

²⁸⁶ *See id.* at 226–27. A party sometimes seeks to make its contractual obligations conditional on its subjective judgment of “satisfaction” with the services of the other party. The paradigm case involves a promise to pay for a portrait one has commissioned only if the portrait is “satisfactory.” When courts allow parties to condition their contractual obligations in this way, they require the parties to meet the standard of “good faith” in reporting their judgments of satisfaction or dissatisfaction. *See* E. ALLAN FARNSWORTH, *CONTRACTS* 582–83 (2d ed. 1990).

²⁸⁷ *Du Pont*, 64 F.2d at 227–29.

²⁸⁸ *Id.* at 232 (emphasis added) (citations omitted).

No doubt, the rule which requires mutuality of obligation with respect to contracts to be performed in the future, where the promise of one party constitutes the sole consideration for the promise of the other, arises from what is regarded by the courts as the inherent unfairness of enforcing a contract which requires performance by one of the parties, but leaves the other party free to accept or reject performance.²⁸⁹

The opinion nicely illustrates the process of exemplary argument. The court sifted through the details of precedent cases, abduced an AWR — the rule that a contract that is terminable at will by only one party is void for lack of “mutuality of obligation” — which it explained and justified by reference to an AWRa consisting of values of “inherent fairness,” as well, it seems, as the value known as *stare decisis* (itself a rule of law value). So far so good, as least for my illustrative purposes.

The trouble is, the opinion seems demonstrably wrong under the doctrinal law of that day. The court basically held that because only one party had the right to terminate at will, the putative contract was actually premised on an illusory promise and thus was not really a contract at all.²⁹⁰ That analysis was almost certainly incorrect. Viewing a terminable-at-will provision as an illusory promise rests uneasily with the various common law doctrines — such as “Wood’s Rule” for employment contracts²⁹¹ — that allowed *both* parties to terminate at will. That is, contract law would embrace the odd result that *two* illusory promises could make for a binding contract but one could not. In other words, the court’s articulation of an AWR that equated lack of mutuality and illusoriness was inconsistent with, or at least in powerful tension with, another well established rule of the jurisdiction.

Having abduced the rule on which it did in fact settle, the court should have tested the AWR for consistency with other rules, noted its inconsistency with at least one of these (such as Wood’s Rule), and revised one or the other rule so that both rules (the abduced AWR and Wood’s Rule), the applicable rationale(s), and the applications of those rules in the case sub judice and in other cases made relevant by these rules all reached rational reflective adjustment. Had the court done so, it might have been led by a *rule of law value* — namely, the value

²⁸⁹ *Id.* at 227.

²⁹⁰ Traditional contract rules require that, in bilateral contracts, promises must not be “illusory.” A paradigm example of an illusory promise is, “I promise to do it if I want to.” From the doctrinal point of view, the problem with such a promise is that it does not really commit the promisor to any course of action, and because the consideration in a bilateral contract *is* the promise itself, an illusory promise cannot be consideration. Throughout the *Du Pont* case, the court made clear that it linked the problem of lack of mutuality with the problem of consideration — and, in so doing, it conflated mutuality and illusoriness. *See id.* at 227–33. As Farnsworth notes, many courts conflated mutuality and illusoriness. *See* FARNSWORTH, *supra* note 286, at 75–76 & n.3.

²⁹¹ Under Wood’s Rule, an employment contract was presumed to be terminable at will at any time by either party. *See* FARNSWORTH, *supra* note 286, at 53–54.

that requires laws to be consistent — to modify the tentatively abduced rule.²⁹² Or the court could have revised the rule that was inconsistent with its abduced AWR — namely, Wood's Rule — in order to allow the consistent application of the abduced AWR.²⁹³

However unsatisfactory the court's actual performance, this case nicely illustrates the varieties of rational adjustment that a court might make — or might fail to make — when confirming or disconfirming analogy-warranting rules.

B. *Is Abduction a Form of Mysticism?*

Early in my analysis, I suggested that the account of exemplary reasoning presented here would avoid the extremes of both skepticism and mysticism about the rational force of exemplary reasoning. But by insisting on such a prominent role for abduction, have I given the game away by conceding too much to the mystic and thereby giving aid and comfort to the skeptic? Cannot the mystic point to my claim that abduction — that admittedly logically invalid inference — plays a crucial role in exemplary argument, and see in that claim a concession that at the heart of exemplary argument is a free, creative, undisciplined — nay, intuitive — act that, like all mystical processes, resists and befuddles rational explication? And cannot the skeptic point to the same claim not to deny its correctness as an explication of exemplary reasoning, but instead to say, yes, we knew all along that exemplary argument is too untamed, too beholden to the lax wanderings of intuition, to constitute a reliable form of reasoning?

I think not. Although abduction requires what is inevitably an imaginative and somewhat untamed moment of rational insight,²⁹⁴ it is nevertheless bound by significant rational constraints in settings calling for either inductive or deductive analogy-warranting rules. And in the latter setting, say, from the point of view of a legal interpreter who aspires to satisfy the rule of law norms discussed above, two very significant constraints — necessary conditions — guide her process of discovery in any plausible legal argument: the AWRs that are discovered must satisfy the entailment requirement, and they must sort particulars in a way that is plausibly explained and justified by AWRAs. Again, because reasoners disagree, these conditions will not alone be thought *sufficient* to render reasoning by analogy justified. But underdetermination must not be conflated with a lack of rational constraint.

²⁹² See *supra* note 197.

²⁹³ The Supreme Court of New Hampshire did just this when it modified Wood's Rule to allow a breach of contract claim by an employee who was fired for not yielding to sexual advances made by her foreman. See *Monge v. Beebe Rubber Co.*, 316 A.2d 549, 551 (N.H. 1974).

²⁹⁴ See *supra* note 94 (discussing the flash of insight a Nobel laureate had when "discovering" the principle of DNA mapping).

X. CONCLUDING THOUGHTS AND SOME PRACTICAL HEURISTICS FOR THE ART OF LEGAL ANALOGY

Not least important of the virtues of the foregoing theory is its capacity to provide the legal reasoner with heuristic guidance in assessing the strengths and weaknesses of analogical and disanalogical reasoning. The theory can do so by focusing attention on the fact that an argument by analogy is more likely to succeed when there are *compelling reasons* to believe that the presence in an item of some characteristics supports the inference that some other characteristics are also present. This is what underlies the idea of “rational force” that has been a focus of this Article. To assess whether the reasons really are compelling, one should at a minimum identify in a given exemplary argument its AWR and the AWRa that either has been explicitly supplied or could plausibly be supplied. Doing that, in turn, requires careful identification of the source(s) and the target, the characteristics known to be shared, the characteristic that might be inferred, and the explicit or implicit claim about the logical relation that obtains between propositions stating the presence of shared characteristics and the proposition stating the presence of the inferred characteristic. (The same analysis works as well for argument by disanalogy, *mutatis mutandis*.)

Obviously, a knowledge of the logical form of argument by analogy (a “knowledge-that”) will not provide all the skills one needs to make or criticize such arguments effectively (a “knowledge-how”). Nor can logic tell one what the relevant shared and inferred characteristics are or what logical form an exemplary argument’s AWRs should have — *that* vital explanation and justification can only be supplied by analogy-warranting rationales. Philosophy can, however, discern that each of these elements must be present in order for an exemplary argument to be rationally persuasive, and logic and good sense can assist one’s judgment thereof.

I have sought to show that, properly understood and executed, exemplary reasoning has underacknowledged intellectual virtues, virtues that give it rational force and make it a suitable device by which legal reasoners can aspire to serve and satisfy the aspirational virtues of the rule of law. The model of analogical reasoning (and disanalogical reasoning) shows that exemplary argument moves in distinct and coherent stages in particular contexts. In a context of doubt, an exemplary reasoner abduces an analogy-warranting rule. The *abduction*, though not itself a *deduction*, is nevertheless guided by significant constraints that include, in legal argumentative contexts, the criteria that the rule abduced must satisfy the entailment requirement; resolve (or purport or aspire to resolve) at least all known relevant cases, including cases that pull in opposite directions, by performing a “defeasibility check”; and be plausibly explained and justified by accepted rationales before it is

finally applied (as suitably modified in the process of confirmation) to the case at hand.

It is important to keep in mind what I have *not* argued and do *not* claim. I do not claim that exemplary argument is a *type* of deductive inference; nor do I claim that exemplary argument is reducible to deduction or even that there is a deductive form of exemplary argument. Finally, I do not claim that the process of resolving legal disputes can be handled “mechanically” or without the “need for the further exercise of choice in the application of general rules to particular cases.”²⁹⁵ Rather, my account offers a philosophical explanation of the concept of exemplary, analogical reasoning as a sequence of reasoning steps that are significantly constrained but certainly not wholly determined in advance. My argument recognizes the important role of interpretive norms — norms of both pragmatics and semantics — in the understanding of exemplary argument. I may be forgiven for hoping that, at the end of its own processes of discovery in a context of doubt about the nature and logical forms of exemplary reasoning, my account has interpreted analogical reasoning, legal and otherwise, in a fashion both analogical and exemplary.

²⁹⁵ HART, *supra* note 13, at 129.