CHAPTER 2

ADVANCED ANALYSIS OF REASONING ABOUT EVIDENCE

The casebook to which this casebook traces its origin begins with this statement:

I have spoken of evidence and reasoning as belonging to the region which has to do with methods of arriving at the law and fact that are involved in an issue. In expressing this I have said, with what may seem a certain violence of phrase, that they belonged, in a way, with procedure. It will be useful to indicate here, a little more plainly, just what is meant by this. Reasoning, the rational method of settling disputed questions, is the modern substitute for certain formal and mechanical "trials" (i.e. tests) which flourished among our ancestors for centuries, and in the midst of which the trial by jury emerged. When two men to-day settle which is the "best man" by a prizefight, we get an accurate notion of the old Germanic "trial." Who is it that "tries" the question? The men themselves. There are referees and rules of the game, but no determination of the dispute on grounds of reason,—by the rational method. So it was with "trial by battle" in our old law; the issue of right, in a writ of right, including all elements of law and fact, was "tried" by this physical struggle, and the judges of the Common Pleas sat, like the referee at a prize-fight, simply to administer the procedure, the rules of the game. So of the King's Bench in criminal appeals; and so sat Richard II. at the "trial" of the appeal of treason between Bolingbroke and Norfolk, as Shakespeare represents it in the play. So of the various ordeals; the accused party "tried" his own case by undergoing the given requirement as to hot iron, or water, or the crumb. So of the oath; the question, both law and fact, was "tried" merely by the oath, with or without fellow-swearers. The old "trial by witnesses" was a testing of the question in like manner by their mere oath. So a record was said to "try" itself. And so when out of the midst of these methods first came the trial by jury, it was the jury's oath, or rather their verdict, that "tried" the case. How this mode of trial came to swallow up the others, and then to lose some of its chief features, and become shaped into an instrument of our modern purely rational procedure, is a long story, and is not for this place. But as we use the phrase "trial" and "trial by jury" now, we mean a rational ascertainment of facts, and a rational ascertainment and application of rules. What was formerly "tried" by the method of force or the mechanical conformity to form, is now "tried" by the method of reason.

SELECT CASES ON EVIDENCE AT THE COMMON LAW,
JAMES BRADLEY THAYER 1 (1892).

More recently, the principal author of this casebook has argued that a sophisticated understanding of the processes of reasoning with evidence, by both judges and jurors as fact-finders and law-appliers, is essential to an understanding and mastery of evidence rules, principles, and institutions:

The horn-book requirement for admitting evidence is based on the premise that jurors will evaluate evidence rationally, by applying it logically to one material proposition after another, in determining whether the elements of the cause of action have been proved to the requisite degree of probability. . . . Traditional theory assumes that a jury will decide the relationship between the law and the facts of the case as if solving a puzzle in logic—viewing evidence in pieces and discretely evaluating their connection through formal principles. . . . More recently philosophical, psychological, and trial advocacy literature, as well as studies of juries, suggest that jurors reason and process information not merely as Aristotelian logicians, but somewhat more holistically, in terms of stories they can relate to. The present tendency is to recognize that advocates place—and juries expect them to put—more flesh on the bare bones of traditional evidence-in-chief, which provide only a factual skeleton supporting a legal concept. . . . Yet, there are dangers in this more relaxed view. There is . . . the increased possibility that jurors fixed on story-telling will be less willing to responsibly address the precise substantive-legal-factual issues for which they were empaneled. A jury deliberation is not a coffee klatch.

Blue Cross and Blue Shield of New Jersey v. Philip Morris, Inc., 138 F.Supp. 2d 357 (E.D.N.Y 2001) (Weinstein, J.) (extensive citation and quotation omitted).

These two quotations, from a text that evolved very considerably over the span of more than a century, reveal a consistent commitment to presenting evidence doctrines and institutions in a way that reveals, honors, respects, and interrogates the mix of reason and emotion that inevitably affect all of those actors who are entrusted with the solemn duty of applying law to facts in circumstances that can result in the deprivation of life, liberty, or property. In the latest, current evolution of this casebook, we reflect our commitment to the sophisticated understanding of these matters by starting with the detailed presentation of a method of analysis of evidence rules and arguments that students, lawyers, and judges from legal systems around the world have found valuable. We offer the material in this chapter in the belief that a true mastery of law—including the law of evidence—must include a firm grasp of the reasoning methods by which evidence analysts make decisions under the guidance of rules of evidence, what makes those reasoning methods strong, and what makes them weak. We also offer it in the belief that only a brief glance at these methods does not give the reader a fair opportunity to take advantage of powerful, sophisticated tools that can aid the analysis of evidence arguments, both one's own and others'.

Accordingly, the material in this chapter offers to those who are interested the opportunity to understand and master the method of analysis introduced in Chapter 1, the Logocratic Method. Because this chapter supplements, but does not duplicate the material introducing the method in the previous chapter, it is intended to be read after and in light of the first chapter. Where appropriate, this chapter provides references to material in the other chapter, and vice versa.

1. FROM ENTHYMEME TO ARGUMENT: LOGOCRATIC METHOD AND THE VIRTUES AND VICES OF ARGUMENTS

A. ARGUING VIRTUE AND VICE

We have said that evidence itself has the character of argument, and that very often in informal reasoning about evidence (whether in evidence litigation or some other domain), reasoners use evidentiary enthymemes, which are arguments whose logical form is not explicit. We have also spoken of the Logocratic Method of *argufying* argument-enthymemes and, similarly, *rulifying* rule-enthymemes, which is to use interpretive judgment to give a fair formal representation of the argument-enthymeme or rule-enthymeme that makes explicit the logical form of the argument or rule. We offered examples from *Knapp* of argufication of an argument-enthymeme and rulification of a rule-enthymeme.

In the Logocratic Method, once the argument-enthymeme has been argufied, the analyst moves to the next step, which is to assess the *virtues and vices* of the arguments, including strength and weakness as one type of virtue and vice (respectively). There is a counterpart analysis of the virtues and vices of rules as well: the virtue is discernible clarity of logical structure, the vice, a lack thereof.

We may introduce the idea of the virtue of an argument by considering, once again, an example from *Knapp*. Recall that the issue in *Knapp* was whether the trial judge erred, as defendant-appellant Knapp claimed, by admitting testimony of the prosecution's witness that was not logically relevant. In his opinion in *Knapp*, Justice Gillett presented an argument-enthymeme to reach the conclusion that the trial judge had ruled correctly, because the evidence was logically relevant. (We have identified the argument-enthymeme and argufied it previously, see Chapter 1, section 2 (D)(2), pages 18–19).

Once we have fairly formally represented an argument-enthymeme, we are in a position to ask a vital question about the argument thus represented. How *good* is it? We can be more precise about what we mean in characterizing an argument as "good" or "bad" by speaking of an argument's *virtues* or *vices*. When we have offered simple and clear definitions of those terms, we can ask of Justice Gillett's argument, in what ways does it exhibit virtue, or fail to do so? We now offer the basic concepts of virtue and vice that operate in the Logocratic Method, and then use them to assess Justice Gillett's argument in *Knapp*.

B. WHAT IS VIRTUE, AND WHAT KINDS OF THINGS CAN BE VIRTUOUS?

As we shall use the term, 'virtue' means functional excellence. The basic framework we use is found in Aristotle's conception of arete (Greek: ἀρετή), translated as 'virtue' or 'excellence'.[1] If some object x is an F, then the virtue of x as an F is that characteristic of x that makes x a good F. Put concisely: an object x's virtue reflects its good performance of the function of Fs.[2] For example, consider an object (x) that is a knife (F). The virtues of a knife are those features that make it a

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[1] See Aristotle, Nicomachean Ethics (Terence Irwin trans., 1999) (c. 350 B.C.E.).

[2] Id.

good knife, such as having an appropriately sharp blade—we say "appropriately," because as we can see on quick reflection, the virtue of a butter knife differs from that of a steak knife in the degree of sharpness required for functional excellence.

Many and varied kinds of things can be "bearers" of virtue, that is, can properly be said to be virtuous (or not). Among this vast array of possibly virtuous (or vicious[3]) items are implements such as knives, hammers, and spoons; institutions, such as schools, universities, and the legal institutions that comprise the "rule of law"[4]; professionals, such as lawyers, doctors, and professors; and arguments, which is the central focus of the Logocratic Method. As we will see, there are various kinds of purpose one might have for arguments, and those purposes guide our judgments about what is virtuous, that is, what is functionally excellent in arguments.

C. THE (SYNONYMOUS) CONCEPTS MODE OF LOGICAL INFERENCE AND LOGICAL FORM

We identify two types of Logocratic virtue, "mode-independent" and "mode-dependent." The reference in these phrases to "mode" is to the "mode of logical inference" of an argument. Understanding the concept of a mode of logical inference can be a powerfully illuminating and enabling tool for the student of argument, including legal evidentiary arguments. We therefore take some time carefully and clearly to present the concept of a mode of logical inference, with examples from doctrinal evidentiary arguments, before returning to the concept of Logocratic Virtue that we define in using these two concepts of mode-dependent and mode-independent virtues of arguments.

So pervasive is the appearance in our daily and intellectual lives of inferences with evidence, that even the discipline of logic itself can usefully be understood with an *evidentiary* conception.[5] According to this conception, logic is the study of the different modes of logical inference that different kinds of arguments display. An argument's *mode of logical inference* (or, synonymously, its *logical form*) is *the evidential relation between the argument's premises* and its *conclusion*.

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[3]   From here on, unless otherwise noted, an ascription to an item of virtue should be understood to mean virtue or vice. Thus, our discussion of the criteria for virtuous evidentiary argument is also perforce a discussion of the vices of evidentiary arguments. Virtue and vice are best understood as on a spectrum rather than a bivalent, yes-no, state, more virtuous and less vicious, or more vicious and less virtuous.

[4]   Philosopher Joseph Raz provides a trenchant example of a conception of the *rule of law* as an instrument that has a specific virtue:

Regarding the rule of law as the inherent or specific virtue of law is a result of an instrumental conception of law. The law is not just a fact of life. It is a form of social organization which should be used properly and for the proper ends. **It is a tool in the hands of men differing from many others in being versatile and capable of being used for a large variety of proper purposes. As with some other tools, machines, and instruments a thing is not of the kind unless it has a least some ability to perform its function. A knife is not a knife unless it has some ability to cut. The law to be law must be capable of guiding behaviour, however inefficiently**. Like other instruments, the law has a specific virtue which is being morally neutral as to the end to which the instrument is put. **It is the virtue of efficiency; the virtue of an instrument as an instrument. For the law this virtue is the rule of law. Thus the rule of law is an inherent virtue of the law, but not a moral virtue as such.**

Joseph Raz, The Rule of Law and Its Virtue, in The Authority of Law: Essays on Law and Morality 210, 226 (2d ed. 2009) (emphases added).

[5]   See Skyrms, Choice & Chance, supra Chapter 1, note 3, at 4, 15.

D. MODE-DEPENDENT LOGOCRATIC VIRTUES: THE FOUR MODES OF LOGICAL INFERENCE AND THEIR CHARACTERISTIC VIRTUES

There are four fundamental, irreducible modes of logical inference. They are distinguished from one another by the relation that obtains between the premises of the argument and its conclusion when the argument yields the most warranted inference (that is, when the argument is most "internally strong," as defined below, see section 1(E)(1), page 138) from premises to conclusion that it is logically capable of yielding.[6] All four modes of logical inference are found in legal argument in general, in evidentiary legal arguments in particular, and indeed in arguments in every domain of argument.

(1) DEDUCTION AND ITS MODE-DEPENDENT VIRTUE

In a *valid* deductive argument, it is logically impossible that the premises should all be true while the conclusion is false. That is, the truth of the premises of a valid deductive argument provides *incorrigible evidence* for the truth of its conclusion. Validity is what we will call the *characteristic virtue* of a deductive argument. The **characteristic virtue** of a type of argument is that property or set of properties of that type of argument the possession of which make it the best exemplar of that type. The characteristic virtue of a deductive argument is validity. Some arguments are deductive but lack this virtue—they are invalid—and in that way, they are vicious.

Here is an argument-enthymeme, in its argumental context,[7] from *Old Chief v. United States* (printed and discussed in Chapter 1, pages 45–54) that, we suggest, can be argufied—fairly formally represented—as a valid deductive argument.

a. *Argument-Enthymeme in Old Chief v. United States*

In 1993, petitioner, Old Chief, was arrested after a fracas involving at least one gunshot. The ensuing federal charges included not only assault with a dangerous weapon and using a firearm in relation to a crime of violence but violation of 18 U.S.C. § 922(g)(1). This statute makes it unlawful for anyone "who has been convicted in any court of, a crime punishable by imprisonment for a term exceeding one year" to "possess in or affecting commerce, any firearm. . . ." "[A] crime punishable by imprisonment for a term exceeding one year" is defined to exclude "any Federal or State offenses pertaining to antitrust violations, unfair trade practices, restraints of trade, or other similar offenses relating to the regulation of business practices" and "any State offense classified by the laws of the State as a misdemeanor and punishable by a term of imprisonment of two years or less." § 921(a)(20).

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[6]   We might say that the criteria of identity of each logical form is an ideal—something like a Platonic "Form". What distinguishes deductive, inductive, analogical, and inference to the best explanation arguments from each other are the *ideal forms* of those arguments.

[7]   Note that there is no sharp distinction between the argument-enthymeme itself and its context, that is, the set of sentences in which the argument-enthymeme occurs in, such as a judicial opinion or lawyer's brief. All argufication, like interpretation itself, must be sensitive to the context in which the interpreted text occurs.

As a threshold matter, there is Old Chief's erroneous argument that the name of his prior offense as contained in the record of conviction is irrelevant to the prior-conviction element, and for that reason inadmissible under Rule 402 of the Federal Rules of Evidence. Rule 401 defines relevant evidence as having "any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence." Fed. Rule Evid. 401. To be sure, the fact that Old Chief's prior conviction was for assault resulting in serious bodily injury rather than, say, for theft was not itself an ultimate fact, as if the statute had specifically required proof of injurious assault. But its demonstration was a step on one evidentiary route to the ultimate fact, since it served to place Old Chief within a particular sub-class of offenders for whom firearms possession is outlawed by § 922(g)(1). A documentary record of the conviction for that named offense was thus relevant evidence in making Old Chief's § 922(g)(1) status more probable than it would have been without the evidence.

Justice Souter here offers an argument, namely, a *relation* between two sets of propositions, a set of premises and a set of conclusions, in which the former is offered to, or can be taken to, provide support for the latter. In order to assess whether this is a strong argument or not, we must first discern what the argument is. This means, specifically, that me must move from the natural language presentation of his argument (the way it appears in the report of the judicial opinion) to a *fair formal representation* of the argument in a way that makes explicit the argument's premises, its conclusion, and its logical form. This is a matter of interpretation—an essential lawyerly skill. Using interpretation to discern its premises and conclusion, we can *fairly represent* Justice Souter's arguments as follows:

b.   *Old Chief Argument: Valid Deductive Argument*

proposition (type and #)	Proposition
Premise ε_1	Relevant evidence is evidence having "any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence."
Premise ε_2	Being a person "who has been convicted in any court of, a crime punishable by imprisonment for a term exceeding one year" is a "fact that is of consequence to the determination of the action."
Premise ε_3	The evidence of a documentary record of the prior conviction of defendant Old Chief for assault resulting in serious bodily injury makes it more probable than it would be without the evidence that he was a person "who has been convicted in any court of a crime punishable by imprisonment for a term exceeding on year."

| Conclusion h_1 | The evidence of a documentary record of the prior conviction of defendant Old Chief for assault resulting in serious bodily injury is relevant. |

In this argument table we have "argufied" Justice Souter's argument-enthymeme. This means that we have identified its premises and conclusion and represented it as a deductive argument. This argument possesses the characteristic virtue we have identified for deductive arguments: it is valid. If premises ε_1, ε_2, and ε_3 are all true, it is not possible (or conceivable—try it!) for the conclusion to be false.

Note, too, that the premises of a *valid* deductive argument may in fact (that is, in our actual world) be *false*, as in the argument

ε_1 All whales are fish

ε_2 Fido is a whale

therefore

h   Fido is a fish

—in which premise ε_1 is false. This deductive argument is valid, but it is not *sound*. A *sound* deductive argument is a valid argument whose premises are in fact true. (Truth in some possible world is also a virtue of arguments, but this type of virtue pertains not to deductive arguments alone, but to any argument in any of the four modes of logical inference. We will return to this point when we consider the virtue of dialectical strength of an argument, below.)

Judges very often, perhaps even always, use deductive arguments to apply legal rules to the facts of cases, whether those are rules of substantive law or "adjective law" (rules of evidence and procedure). This is true even when they also use other modes of logical inference among interlocking arguments (for example, using argument by analogy to interpret a term in an applicable legal rule that is vague). Do you believe that Justice Souter's argument above is both valid *and* sound? What is it that can make the premises of a legal argument *true*? (This is an important jurisprudential question, but regardless of your knowledge of jurisprudence you likely have at least a solid educated intuition about that question.)

(2) THE BASIC PATTERNS OF INDUCTIVE INFERENCE AND ITS MODE-DEPENDENT VIRTUE

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 belief in the truth of the conclusion to some degree of probability. There are two main varieties of inductive inference: inductive generalization and inductive specification. The *Knapp* case exemplifies both.

a.   *Inductive Generalization*

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 the notes below we'll use two examples to illustrate the form of inductive generalization. One is the *Knapp* judge's analysis of logical relevance in

the case he was deciding, the other is a simplified example from empirical science (induction is one of the foundations of all empirical scientific reasoning).

Where	'$\alpha_1 \ldots \alpha_n$'	stands for a set of individual instances
	'φ'	stands for one property that the individuals $\alpha_1 \ldots \alpha_n$ have been noted to possess
	'θ'	stands for another property the individuals $\alpha_1 \ldots \alpha_n$ have been noted to possess

the pattern of inductive generalization is:

(ϵ_1) α_1 is both φ and θ (i.e., has both characteristics, φ and θ)

   [e.g., Person A made a factual assertion and Person A spoke truly.]

   [e.g., Bird A was a swan and Bird A was white.]

(ϵ_2) α_2 is both φ and θ

   [e.g., Person B made a factual assertion and Person B spoke truly.]

   [e.g., Bird B was a swan and Bird B was white.]

(ϵ_3) α_3 is both φ and θ

   [e.g., Person C made a factual assertion and Person C spoke truly.]

   [e.g., Bird C was a swan and Bird C was white.]

. . .

(ϵ_n) α_n is both φ and θ

   [e.g., Person N made a factual assertion and Person N spoke truly.]

   [e.g., Bird N was a swan and Bird N was white.]

(ϵ_{n+1}) There were [few or no] observed instances of an α that was φ and was not θ

   [e.g., There were few persons who made a factual assertion and did not speak truly—*Knapp*: "even in the greatest liars . . . where they lie once they speak truth 100 times."]

   [e.g., No swans were observed to be non-white.]

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Therefore h: [Probably] [**All or Most**] φ's are θ

   [e.g., *Knapp*: Probably, **most** persons who make factual assertions are persons who speak truly.]

   [e.g., Probably, **all** swans are white.]

Note that, like all arguments, *inductive arguments are arguments consisting of evidence (premises of the argument) and hypotheses (the conclusion of the argument) that the evidence is said to support*. Thus, the premises of an inductive argument are

evidentiary propositions (the "ε_i" in our Logocratic ε–h schema) and the conclusion is a hypothesis that the evidence is offered to support (the "h_i" in our ε–h schema).

b.   *Inductive Specification*

The other type of inductive inference is *inductive specification*. Instead of reaching a conclusion about a class of individuals, an inductive specification offers a conclusion about one individual, based on a generalization about the classes to which that individual belongs. Again, we illustrate the form of this argument by reference to the two examples offered above.

In the *Knapp* example, the inductive specification is the argument that in the set of all persons—even including that set "the greatest liars"—who made factual assertions, a great many persons spoke truly the vast majority of the time (*Knapp* endorses the claim that the ratio is 100 to 1!); therefore, some individual person D who made a factual assertion (or perhaps the next individual person who will make a factual assertion) is also likely to have spoken truly (or likely will speak truly).

In the swan example, the inductive specification is the argument that a great many (actually, in this example, all) swans were white; therefore, some individual swan was white (or perhaps the next observed individual swan will be white).

Note that inductive specifications are a basic form of argument for making *predictions* based on empirical evidence—predictions, for example, about the next person we encounter who will make a factual assertion, or the color of the next swan we will see. It is in part for this reason that inductive arguments are so fundamentally a part of arguments in empirical science.

The abstract form of an inductive specification argument is this:

(ε_1 through ε_n) α_1 through α_n have all been both φ and θ (i.e., has both characteristics, φ and θ)

> [e.g., Person A through Person N all made a factual assertion and spoke truly.]

> [e.g., Bird A through Bird N all were swans and white.]

(ε_{n+1})   There were [few or no] observed instances of an α that was φ and was not θ

> [e.g., There were few persons who made a factual assertion and did not speak truly.]

> [e.g., No swans were observed to be non-white.]

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Therefore h: Some individual α_{n+1} [probably] has both φ and θ.

> [e.g., Some person (perhaps some person we encounter in the future) who makes a factual assertion probably spoke (or probably will speak) truly.]

> [e.g., Some bird (perhaps some bird we encounter in the future) who is a swan probably is white.]

c. *The Mode-Dependent Virtues of Inductive Generalizations and Inductive Specifications*

Note that the premises of inductive arguments (both generalizations and specifications) cannot provide support for the conclusion that is as strong as the support that the premises of a valid deductive argument provide for its conclusion. Even when all the premises of an inductive generalization are true, and even if the number of such premises is vast, the premises cannot guarantee the truth of the conclusion. Put another way, unlike in a valid deductive argument, it is conceivable that all the premises are true and that the conclusion is false. (In fact, it used to be believed that all swans were white until black swans were discovered in Australia. See Frederick Schauer, Profiles, Probabilities, and Stereotypes 8 (2006).)

To assess the virtues or vices of inductive inference, that is, in order to assess the strength of the inferential or epistemic warrant that the premises of an inductive inference provide for the conclusion, one must assess the premises or conclusion according to several criteria. Note that the criteria for virtuous inductive specifications are logically dependent on those for virtuous inductive generalizations, since the specification is an application of the generalization to a specific instance. One useful articulation of the criteria for a virtues inductive generalization is as follows:

Guidelines for Evaluating Inductive Generalizations

1. Try to determine what the sample is and what the population is. If it is not stated what the population is, make an inference as to what population is intended, relying on the context for cues.

2. Note the size of the sample. If the sample is lower than 50, then, unless the population is extremely uniform or itself very small, the argument is weak.

3. Reflect on the variability of the population with regard to the trait or property, x, that the argument is about. If the population is not known to be reasonably uniform with regard to x, the sample should be large enough to reflect the variety in the population.

4. Reflect on how the sample has been selected. Is there any likely source of bias in the selection process? If so, the argument is inductively weak.

5. For most purposes, samples based on volunteers, college students, or persons of a single gender, race, or social class are not representative.

6. Taking the previous considerations into account, try to evaluate the representativeness of the sample. If you can give good reasons to believe that it is representative of the population, the argument is inductively strong. Otherwise, the argument is weak.

Trudy Govier, A Practical Study of Argument 265 (7th ed. 2014).

In his similar list, philosopher Stephen Barker makes one crucially important addition:

[T]here must be an adequate explanatory relation among the identified characteristics in the premises.

See Steven Barker, The Elements of Logic 187 (5th ed. 1994).[8]

This is not an exhaustive list of the criteria of inductive vice and virtue. Unlike the theory of other modes of inference (especially, indeed perhaps only, deduction), logicians and epistemologists do not agree on an exclusive and exhaustive set of criteria. (Can you think of other important criteria not listed above?)

(3) INFERENCE TO THE BEST EXPLANATION ('IBE'—ALSO REFERRED TO AS 'ABDUCTION' IN THE LITERATURE ON THE THEORY OF ARGUMENT): ITS STRUCTURE AND MODE-DEPENDENT VIRTUE

a. *The Terminology and Idea of Inference to an Explanation*

The term 'abduction' was introduced into the theory of argument by the American philosopher Charles Sanders Peirce. Philosopher Gilbert Harman rebranded the reasoning process Peirce called 'abduction' to 'inference to the best explanation', and since that time, philosophers, logicians, and other students of the theory of argument have used both terms. In this presentation we shall use the terms interchangeably, and define below precisely what we refer to with these two labels. A successful meta-abduction—inference to the best *explanation of* inference to the best explanation—must have or rely on some cogent conception of the speech-act of explanation. Reasoners offer explanations that take different forms. They sometimes explain *why* something is what it is, sometimes explain *how* something is what it is, by virtue of what, what genealogy it has, and sometimes explain *what* something is.

According to the Logocratic account of abduction, explanations are always offered from and according to the criteria of a *point of view*. One might be said literally to have a point of view, that is, to occupy some position in space that gives one a particular visual vantage. On the forest floor, one might see only trees; from a point atop a mountain, one might see the forest and not only the trees; from a bird's-eye view (say, from an airplane), one might see the shape of a lake; from an astronaut's-eye view, the shape of the earth.

Expertise provides another type of point of view. An expert witness might tell a jury or judge what the facts are from the point of view of a biologist, a chemist, a ballistician, a psychiatrist, and so on. One might also identify an institutional or social point of view, the point of view of a particular type of actor in an institutional

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[8] Barker's whole list of criteria for a strong induction is:
- a sufficient number of observed instances in the premises
- a proper degree of shared characteristics among the identified characteristics in the premises
- a proper degree of unshared characteristics among the identified characteristics
- the logical strength of the conclusion ("all," "some," "probably," "very likely" etc.)
- the explanatory relations among the identified characteristics in the premises

The final criterion is important because of what philosopher Nelson Goodman called the "grue" problem, which we can explain concisely as follows (but using an example different from Goodman's more complex one). In the inductive generalization above to the conclusion 'all swans are white', the premises are observations based on experience. *Experientially*, each premise is of an item that is OBSERVED AND SWAN AND WHITE. When we make the inductive generalization, we generalize over the properties of swans and whiteness, to get 'all swans are white', but we do not, and should not, generalize over observed and swan, to get 'all swans are observed'. Why not? A deep part of the reason, to which Goodman and Barker both point, is that we believe that there is an explanatory relation between bird species and bird color, but not between bird species and being observed.

or other social setting—the points of view, for example, of a legislator, a judge, a lawyer, a citizen, a president, a "bad man," a parent, a child, a professor, a student.

One might also identify an "enterprise" conception of point of view, and indeed the enterprise conception is, we suggest, the common thread that runs through all the notions of point of view mentioned above, both the more ordinary and the more reflectively philosophical. This point of view might even be understood as the point of view of an enterprise, an enterprise in which particular methods of analysis are chosen both to produce factual judgments and to serve specified cognitive goals. Examples of such enterprises include: systems of legal reasoning (the "legal point of view"); systems of moral reasoning (on a cognitivist account of morality, at least, this yields the "moral point of view"); philosophical reasoning (the "philosophical point of view"); systems of reasoning in support of business objectives (the "business point of view"); the "military point of view"; the "economic point of view"; "the religious point of view". . . and so on for many other enterprises.

In each use of point of view noted above, the concept of point of view is invoked to justify some claim, either a claim about what we ought to believe (a theoretical claim) or how we ought to act (a practical claim). Note that simply identifying the general point of view of an enterprise does not by itself answer the following question: What are the specific aims of the enterprise for abductive reasoners who recognize themselves as pursuing the same generic enterprise, but who often disagree about what are the proper specific aims of the enterprise? Such disagreements are a principal source (but not the only source) of the difference among theories within an enterprise. It is, for example, a source of disagreement among legal theorists who march under such banners as "Legal Positivism," "Natural Law," "Legal Realism," and "Critical Legal Studies."

The enterprise conception of point of view, properly supplemented by Laudan's axiological model, can serve to explicate the concept of the "point of view" in its different philosophical uses.[9] Generalized from the particular intellectual domain of science, Larry Laudan's axiological model of scientific explanation greatly helps us to explicate the role of viewpoint on the enterprise conception, both in explanation generally and in abduction specifically. The enterprise conception of a point of view posits that an intellectual enterprise that produces distinctive justificatory claims may be dissected into three separate components: factual judgments, the distinctive methods that the enterprise uses to generate those factual judgments, and the distinctive cognitive aims that the methods are chosen to advance and serve. One invokes a point of view to justify some claim. To serve this justificatory function, the point of view is assumed to be a reliable method of achieving the (explicit or implicit) aims of some rational enterprise.

The enterprise conception of point of view, supplemented with Laudan's axiological model, allows us to offer an identity criterion for an individual point of view:

> The point of view of enterprise E consists of the factual judgments, produced by the methodological rules adopted to serve the axiological goals of E.

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[9]   See generally, L. Laudan, Science and Values (1984).

According to this criterion, there are a great many logical species of abduction. The list of these types is long, likely, in principle, unending. We here identify some of the domains of abduction that are of particular interest for Logocratic analysis of law—*legal* abduction, *moral* abduction, *logical* abduction, *interpretive* abduction, and *philosophical* abduction (including metaphysical).

b.   *The Characteristic Virtues of IBE-Abduction*

An account of the characteristic virtues of abduction closely tracks the enterprise conception of point of view as elaborated with the help of Laudan's axiological model. A virtuous abduction accurately deploys methods to issue the judgments that are characteristic of that point of view, in turn choosing methods that do a good job of serving the axiological aims. Because the contexts and domains of abductive argument vary so widely, it is not possible to say much that is specific about the virtues of an abductive argument apart from this. However, a deep research project is involved by practitioners of abduction in their respective fields concerning the elements of their respective points of view. They perforce consider and argue about (albeit not usually in these terms) what are, and what should be the axiological goals, methods chosen to serve those goals, and what are the judgments that issue from application of those methods. As Laudan's model makes clear, disagreement among abductive reasoners is possible regarding any of the three-part judgment-method-goal triads that comprise a point of view.

What is the legal point of view? What should be the legal point of view? What are or should be its judgments, methods, and aims? These are questions that occupy much of jurisprudence. However, even among jurisprudential theories as opposed as Legal Positivism and Natural Law, it is clear that legal abduction consists to a very large extent in explanation of whether the criteria of rules are satisfied—even if rules do not (as they cannot) provide a complete explanation of legal outcomes, whether in evidence or in other legal domains.

c.   *The Formal Structure of IBE-Abduction*

Inference to the best explanation involves, as its name suggests, inference to an explanation of some fact or set of facts. In this argument, a statement of the phenomenon (or phenomena) to be explained and the putative explanation both appear as premises of the argument and the explanation itself is the argument's conclusion. The fundamental pattern of inference to the best explanation consists in four basic steps, three premises (represented as 'ε_1', 'ε_2', 'ε_3') and a conclusion (represented as 'h'). The generic pattern of inference to the best explanation has this structure:

Premise ε_1:   The statement of the phenomenon to be explained, called the *explanandum*.

Premise ε_2:   The statement of one or more sets of propositions that could *plausibly* explain the phenomenon to be explained. (One or more "plausible explanation" conditionals Φ_n, of the form, "If Φ_i were true or otherwise warranted in this case, that would explain the explanandum.")

Premise ε_3:   The statement asserting, of those propositions or sets of propositions that could plausibly explain the phenomenon

(identified and stated in premise ε_2), that proposition or set of propositions is the *best* explanation—*as measured by the interests and purposes of the arguer*.[10] It is perhaps intuitively clear that, in inference to the best legal explanation, the interests and purposes of the plaintiff or prosecutor compete with the interests and purposes of the defendant, and thus, in an adversary system, they offer competing legal explanations of events and transactions; one, for example, that the transactions amounted to breach of contract, the other, that they did not. The same dynamic pertains to inferences to the best explanation that are made under the aegis of rules of evidence, the proponent arguing that the proffered evidence is best explained, from a legal point of view, as admissible, the opponent arguing that the proffered evidence is best explained, from a legal point of view, as (for example) hearsay and not admissible. The question of the point of view a judge has, or should have, when offering her own inference to the best legal explanation, is a deep jurisprudential question.

Conclusion h: The statement that this best-among-the-plausible explanations is the explanation the arguer endorses.

IBE is extremely common, nay, ubiquitous in legal analysis, including analysis under rules of evidence. Every time a legal analyst explains a set of facts from a legal point of view—e.g., are the facts of this transaction best explained as contract, or as tort, or as the crime of murder; or is the proffered evidence logically relevant, or conditionally relevant, or hearsay, or character evidence—that analyst uses the argument pattern of inference to the best *legal* explanation. And when the factfinder (judge alone, or judge plus jury) finds those facts that are material to a substantive law claim, the factfinder uses inference to the best *legal-factual explanation*.[11]

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[10] A good deal more can be said with precision about the nature of the point of view and its role in IBE. See the discussion in Brewer, *Scientific Expert Testimony and Intellectual Due Process*, 107 YALE L.J. 1535, 1568–79 (1998). Here an intuitive example may suffice. Suppose one country, which is a signatory to several international treaties, contemplates invading another country. One can evaluate the advisability of that action from several distinct points of view, each point of view being comprised of distinctive kinds of judgments, methods for producing those judgments, and aims served by those methods. The distinct points of view that can be taken in this question of advisability of invasion may cohere and agree one with another, but also may well not. It might be advisable (or ill-advised) from a military point of view, or from a legal point of view, or from a moral point of view. See also R. Giere, Scientific Perspectivism 13–15 and passim (2006). A competition among points of view about the invasion of the Ancient Island of Melos by the Athenians is trenchantly explored by the ancient historian Thucydides. See Thucydides, History of the Peloponnesian War Book 5 § 89 (Benjamin Jowett trans., 1883) (Athenian envoys to Melian representatives, "[I]nto the discussion of human affairs the question of justice only enters where the pressure of necessity is equal, and that the powerful exact what they can, and the weak grant what they must.").

[11] Different domains have different methods for assessing facts more precisely. There are, among many others, legal facts, logical facts, physics facts, biological facts, and possibly moral facts (which can be explained whether one is a moral realist or a moral relativist). This understanding of facts is given sustained theoretical defense in N. Goodman, Ways of Worldmaking (1978) (see especially Chapter VI "The Fabrication of Facts"). By the phrase 'legal facts' we refer to what evidence jurists sometimes call a "material fact" or "operative fact." It is especially important to distinguish domains of factual claims because the methods for establishing putative facts are distinctive in those distinctive domains. Our brief discussion of inference to the best explanation will help to explain this point. An example in one well-known case reveals that what is "in fact" a "chicken" for the purposes of a contract may well differ from what a chicken is for the purposes of ornithology. See the well-known case of *Frigaliment Importing Co. v. B.N.S. International Sales Corp.*, 190 F. Supp. 116 (Friendly, J.), a dispute about the meaning of "chicken" in a contract putatively for that commodity. Among the many definitions canvassed by one of

Virtually all the cases in this book offer inference to the best legal explanation, and a great many of them also offer inference to the best legal-factual explanation.

As we will see again with analogical arguments, there are ways in which one mode of logical inference can play a role *within* another, and inference to the best legal explanation is one such instance. At some point in an inference to the best legal explanation, the Logocratic analyst seeks to explain the facts of a given case (or hypothetical) by determining what legal rules *might* apply to the fact pattern, and then determining the outcome of the application of the rule to the fact pattern. One of the most likely successful representations of the application of rules to potential facts is as a possible deductive argument.[12] Another way we may understand the role of deduction within inference to the best legal explanation is that the analyst *explains the fact pattern from a legal point of view*.[13] Thus, for example, when Justice Gillett in *Knapp* reasoned his way to the best legal explanation of the prosecutor's proffer of the doctor's testimony about how the old man in question died (see discussion in Chapter 1, section 2(D)), he used an application of the rule for logical relevance to offer a *deductive* argument to determine that this proffered evidence was logically relevant. In so doing he used his application of the deductively applicable rule for logical relevance to conclude that, because the requirements of the rule were in fact satisfied by the facts of the case before him ('satisfied' here means that there was sufficient evidence for the facts, under the appropriate burden of persuasion), the best explanation of the proffer of evidence by the prosecutor is that the proffer was, from a legal point of view, logically relevant. In effect, that is, the justice reasoned that, because the requirements of the rule of logical relevance (*evidence is relevant if and only if evidence conduces to the proof of a pertinent hypothesis*) were satisfied, that rule would be the best explanation of the prosecutor's proffer of evidence.

We can also present the role of deduction within legal abduction using *Knapp* as an illustration in a more formal way, using the formal IBE pattern we have just identified. In *Knapp* the proposition to be explained from a legal point of view was the prosecutor's proffer of evidence ε_1 offered to support the hypothesis h_1, and h_1, in turn, which serves as an evidentiary proposition ε_2 offered to support h_2 (the "ultimate issue" in the case—note that there is a chain of arguments, from ε_1 to h_1 which then in turn serves as premise ε_2 to h_2). Note also that the explanandum, the item to be explained in *Knapp*, and as is typical of inferences to the best legal explanations in reasoning with evidence rules, is *an evidentiary-enthymeme*. In *Knapp* Justice Gillett's task was to explain *from a legal point of view* the prosecutor's proffer of ε_1 offered to prove h_2.

[Abstract form of IBE-Premise ε_1]

Premise ε_1   Statement of proposition to be explained in IBE, the "explanandum," abbreviated "Θ"

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the parties' witnesses, is "Chicken is everything except a goose, a duck, and a turkey. Everything is a chicken, but then you have to say, you have to specify which category you want or that you are talking about."

[12]   This is because the role of reasoning with rules in legal abduction is so often best represented as deductive reasoning, see the discussion in Brewer, Exemplary Reasoning, infra note 14, at 999–1003.

[13]   For extensive analysis of the concept of "point of view" and its role in inference to the best explanation, see Brewer, Scientific Expert Testimony and Intellectual Due Process, 107 Yale L.J. 1535, 156–81 (1998).

[IBE Premise ε_1 in example of *Knapp*]

Premise ε_1   the prosecutor proffers an evidentiary enthymeme, seeking to have evidence ε_1 admitted, in order to prove h_1 and then from there to prove h_2. This proffer calls for the trial judge to explain the proffer from a legal point of view—is ε_1 offered for h_1 (logically) relevant or not (or does it fit some other definition of admissibility/excludability, such as hearsay, character, privilege, etc.)

evidentiary enthymeme proposition ε_1

The prosecutor's proffer of testimony by the doctor that the old man, whom defendant claimed to have heard died of a beating at the hands of the decedent, died of natural causes and not from a beating

evidentiary enthymeme proposition h_1/ε_2

Defendant **did not act in** self-defense fearing for his life

evidentiary enthymeme proposition h_2

Defendant committed first-degree murder

[Abstract form of IBE-Premise ε_2]

Premise ε_2   Statement of a proposition Φ_1 such that, if Φ_1 were true, Φ_1 would be a plausible explanation of the explanandum Θ

[IBE Premise ε_2 in example of *Knapp*]

Plausible-explanation proposition Φ_1

If the prosecutor's evidence ε_1 proffered to support h_1 was *logically relevant* ('logically relevant' is our contemporary term) to h_1, *that would plausibly explain this evidence from a legal point of view*.

[Comment: this is a statement of a proposition that Justice Gillett thinks could plausibly explain the explanandum (which, recall, is the prosecutor's evidentiary enthymeme). In *Knapp* Justice Gillett discusses only one proposition that he thinks is a plausible explanation of the prosecutor's proffer, namely, that the prosecutor's evidence ε_1 proffered to support h_1 was *logically relevant*. In order to determine whether this explanation is the best explanation, Justice Gillett must see whether the criteria of the rule for logical relevance are satisfied on the facts before him. This is where deduction plays a role *within* inference to the best legal explanation.]

[Abstract form of Premise ε_3 of inference to the best legal explanation]

Premise ε_3   Statement of a proposition Φ_i such that, Φ_i is the best explanation of all the plausible explanations of explanandum Θ

[IBE Premise ε_3 in example of *Knapp*]

That the prosecutor's evidence ε_1 proffered to support h_1 *was* logically relevant to h_1 is the best explanation of all the plausible explanations of the explanandum (the prosecutor's proffer of doctor's testimony offered to address defendant's self-defense claim), by virtue of this valid *deductive* argument:

Premise ε_1 evidence is relevant **if and only if** evidence conduces to the proof of a pertinent hypothesis

Premise ε_2 the prosecutor's evidence conduces to proof of a pertinent hypothesis

Conclusion h the prosecutor's evidence is relevant

[IBE conclusion h in example of *Knapp*]

[Justice Gillett did determine that the prosecutor's proffer met the requirement of the rule for logical relevance, as we've noticed earlier (we present a representation of the argufied argument in *Knapp* about logical relevance that is more concise than the more detailed representation in Chapter 1, pages 18–19). Justice Gillett offers this deductive argument as part of his resolution of the case by admitting the prosecutor's proffered evidence. What we've now added to our understanding is that his deductive argument was in important step within his inference to the best legal explanation.]

Note that some IBE inferences can fairly be represented as having as much force as valid deductive inferences. Consider, for example, how one can explain how it is that a pawn in chess can appear on the same column as a pawn on the same "team" (color). The answer, that one pawn on that team "captured" an opposing piece, or en passant, is an application of deductively applicable rules of chess. Other IBE explanations have only as much force as the inductive specifications on which they rely. Thus, in some IBEs the premises provide incorrigible evidence for the truth of their conclusions (as in the chess explanation, and when IBE is used, as it indeed is, in mathematical and logical reasoning), and sometimes only probabilistic warrant (probability less than 1). Whether inferences to the best *legal* explanation, in which legal rules play such an important role (as we just observed), also have the force of deductively applicable rules is a nice and important jurisprudential question.[14]

(4) ANALOGY AND ITS MODE-DEPENDENT VIRTUES

In an analogical argument, one reasons that because two or more items (call these the "source" of the analogy and the "target" of the analogy) share some characteristics ("shared characteristics"), one can infer that they share an additional characteristic that is of particular interest to the reasoner (the "inferred characteristic"). In order to have rational cogency, arguments by analogy operate by discovering, articulating, and then applying a *rule* that links the presence of the shared characteristics to the inferred characteristic (the "analogy-warranting rule.")[15]

Analogical argument is a centerpiece of reasoning from precedent, a dominant mode of reasoning in Anglo-American law. Very often judges and lawyers argue that a precedent case is (or is not) relevantly similar to a case under consideration in some particular ways that are of interest to the reasoner. Analogical arguments also appear in arguments made in the course of evidence litigation. Sometimes these are arguments from precedent, as in common law evidentiary reasoning, but sometimes analogical arguments are used for other purposes, including when a statute, such as

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[14] For a discussion of relevant considerations on this issue, see Brewer, On the Possibility of Necessity in Legal Argument: A Dilemma for Holmes and Dewey, 34 John Marshall L. Rev. 9 (2000).

[15] For an extended discussion of analogical argument, see Brewer, Exemplary Reasoning: Semantics, Pragmatics, and the Rational Force of Legal Argument By Analogy, 109 Harv. L. Rev. 923–1028 (1996).

the Fed.R.Evid., is the principal source of law. Here is an example of an analogical argument offered by Justice O'Connor in the *Old Chief* case (see Chpater 1, pages 45–54):

> [I]n our system of justice, a person is not simply convicted of "a crime" or "a felony." Rather, he is found guilty of a specified offense, almost always because he violated a specific statutory prohibition. . . . That a variety of crimes would have satisfied the prior conviction element of the § 922(g)(1) offense does not detract from the fact that petitioner committed a specific offense. The name and basic nature of petitioner's crime are inseparable from the fact of his earlier conviction and were therefore admissible to prove petitioner's guilt.

> The principle is illustrated by the evidence that was admitted at petitioner's trial to prove the other element of the § 922(g)(1) offense—possession of a "firearm." The Government submitted evidence showing that petitioner possessed a 9-mm. semiautomatic pistol. Although petitioner's possession of any number of weapons would have satisfied the requirements of § 922(g)(1), obviously the Government was entitled to prove with specific evidence that petitioner possessed the weapon he did. In the same vein, consider a murder case. Surely the Government can submit proof establishing the victim's identity, even though, strictly speaking, the jury has no "need" to know the victim's name, and even though the victim might be a particularly well loved public figure. The same logic should govern proof of the prior conviction element of the § 922(g)(1) offense. That is, the Government ought to be able to prove, with specific evidence, that petitioner committed a crime that came within § 922(g)(1)'s coverage.

Old Chief v. United States, 519 U.S. 172, 195 (1997) (O'Connor, J., dissenting). Here are the elements of Justice O'Connor's analogical argument:

Sources for the analogical argument:

source 1	[I]n our system of justice, a person is not simply convicted of "a crime" or "a felony." Rather, he is found guilty of a specified offense, almost always because he violated a specific statutory prohibition.
source 2	To prove the element of the § 922(g)(1) offense—possession of a "firearm"—the Government submitted evidence showing that petitioner possessed a 9-mm. semiautomatic pistol, even though possession of any number of weapons would have satisfied the requirements of § 922(g)(1).
source 3	In a murder case, the Government submits proof establishing the victim's identity, even though, strictly speaking, the jury has no "need" to know the victim's name, and even though the victim might be a particularly well-loved public figure.

Target for the analogical argument:

> The Government's proffer of evidence that defendant Old Chief's prior felony conviction which brought him within the scope of being a "felon

in possession of a firearm," and thus within the scope of the offense
specified by § 922(g)(1), was for assault causing serious bodily injury.

Shared characteristic	There is a use of a specific name to prove the element of a legal rule
Inferred characteristic	The use of a specific name to prove the element of a legal rule is legally permitted

Analogy-warranting rule   If

there is a use of a specific name to prove the element of a legal rule

then

the use of a specific name to prove the element of a legal rule is legally permitted[16]

Analogy-warranting rationale: ?

Note: A fully virtuous argument by analogy—one that has all of the characteristic virtues of an argument by analogy—also has either an explicit or fairly easily discernible *analogy-warranting rationale*, which offers a justification for the analogical arguer's endorsement of the analogy-warranting rule. Specifically, this justification is an explanation of why one may infer the presence of the inferred characteristic of the analogy from the presence of the shared characteristic.[17] Justice O'Connor offers no easily discernible analogy-warranting rationale for her analogy-warranting rule—unless it is something like (and as vague as) "common sense."

a.   *Mode-Dependent Virtues of Analogical Arguments*

What are the characteristic virtues of an analogical argument, the features that make such an argument as strong as an analogical argument can be? The main criterion of virtue comes from powerful work done by philosopher Paul Grice, who showed that the communicative exchanges operate under a powerful presumption, namely, that speakers and authors behave in accord with a 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

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[16]   I represent the analogy-warranting rule here as a rule that is capable of yielding a valid deductive inference, by means of modus ponens. In some reasoning by analogy, the analogy-warranting rule yields only "defeasible modus ponens," meaning that the rule is only a probabilistic generalization (as in this very condensed analogical argument: 'This dog is like other dogs in my experience in being a pit bull, and those pit bulls have been vicious, so this dog is also likely to be vicious."). The question of the role of deduction in the adequate representation of legal arguments is a deep jurisprudential question. See Brewer, Traversing Holmes' Path toward a Jurisprudence of Logical Form, in The Path of the Law and Its Influence: The Legacy of Oliver Wendell Holmes 94 (S. Burton ed., 2000). For discussion of deductive and inductive analogy-warranting rules, see the discussion in Brewer, Exemplary Reasoning, supra note 14, at 983–1017.

[17]   See Brewer, Exemplary Reasoning, supra note 14, at 966–68.

engaged."[18] Argument, including analogical argument, is a type of communicative exchange to which both authors-speakers and readers-listeners apply the interpretive presumption that the author-speaker is obeying the cooperative principle. Specifically for analogical argument this means that fully virtuous analogical (and disanalogical) arguments communicate sufficiently clearly what are the: sources, targets, shared characteristics (analogy), unshared characteristics (disanalogy), analogy-warranting rule, and disanalogy-warranting rule. No less important is a vital additional virtue for analogical and disanalogical arguments: that there is a cogent and compelling analogy- or disanalogy-warranting rationale, appropriate for either deductively warranting contexts or inductively warranting contexts.[19]

E. MODE-INDEPENDENT LOGOCRATIC VIRTUES

We have considered the first two types of Logocratic virtues, namely, the virtues of arguments that are *dependent on their logical form*. We have briefly summarized what are the mode-dependent, characteristic virtues of deduction, induction, analogy, and inference to the best explanation. There are also Logocratic virtues that are *independent of* the logical form, and it is to discussion of these that we now turn. These are virtues of arguments that apply to all arguments regardless of their logical form, including, of course, evidential arguments. These virtues of arguments are, more specifically, types of *strength* (virtue) or *weakness* (vice) understood as *creative instrumental efficacy for achieving one or another (or some combination) of three goals or purpose*. We refer to these three types of mode-independent strength (or weakness) as *internal*, *dialectical*, and *rhetorical*.

(1) INTERNAL (ALSO REFERRED TO AS "INFERENTIAL" OR "EPISTEMIC") STRENGTH OR WEAKNESS

One logical, form-independent purpose for argument is to use argument to infer conclusions from premises in such a way that the argument is *internally strong,* in the sense that *if* the premises of the argument are true, then they provide strong support for the conclusion of the argument. Or, we could equally well say, if the premises are the argument are believed, they provide strong support for believing the conclusion of the argument; this is what we mean by the phrase 'epistemic strength'. And we could also equally well say, if the premises are the argument are true, they provide strong support for *inferring* the conclusion of the argument; this is what we mean by the phrase 'inferential strength'.

For example, in the argument below, we can assess the "inferential strength" or the "epistemic strength" or the "internal strength" that the two premises ε_1 and ε_2 provide for the conclusion h.

ε_1 All men are mortal.

ε_2 Socrates is a man.

therefore

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[18] Grice, Logic and Conversation, in 3 Syntax and Semantics: Speech Acts 46 (P. Cole and J. L. Morgan eds., 1975).

[19] The distinction between deductively warranting contexts or inductively warranting contexts is discussed in Brewer, Exemplary Reasoning, supra note 14, at 983–1017.

h   Socrates is mortal.

This is a type of argument—which we have identified above as a *valid deductive argument*—in which the internal (inferential, epistemic) strength is as strong as possible. Put another way, in this argument, whenever all the premises (ε_1 and ε_2) are true, it is not conceivable that the conclusion (h) is false. There cannot be any stronger warrant than the internal warrant that these premises of this argument, and this type of argument (valid deductive argument), provide for its conclusion.

It is very useful to note that, in Logocratic theory, there is an important relationship between mode-dependent virtues of deduction, induction, analogy, and abduction, on the one hand, and this type of mode-independent virtue—internal strength, on the other. The mode-independent virtue of internal strength is a function of the degree to which an argument exemplifies the characteristic, mode-dependent virtues associated with its type of argument.

(2) DIALECTICAL (ALSO REFERRED TO AS "EXTERNAL") STRENGTH OR WEAKNESS

Internal (inferential, epistemic) strength is only one of three important measures of am argument's strength or weakness. Another is *dialectical* strength (or weakness). A *dialectic* of arguments is a *competition* among arguments. Recognizing that dialectical strength (or weakness) is a type of strength (or weakness) distinct from internal (inferential, epistemic) strength allows us to make further distinctions among dialectical competitions of arguments. There can be:

(i)   *External* competition *among* arguers, as for example in litigation, when there is competition of prosecutor or plaintiff against a defendant, or when, on a multi-judge panel, there is competition of majority and dissenting judges.

(ii)   *Internal* competition *within* an arguer, as for example when a judge or lawyer debates the pros and cons of a legal argument (or when a philosopher does likewise with philosophical arguments—compare Socrates in Plato's dialogue *the Apology*: "[T]he greatest good of man is daily to converse about virtue and all that concerning which you hear me *examining myself and others . . . .*" (38A) (emphasis added)).

(iii) *Formal* competition of arguments (and arguers), guided by formal rules, as for example in litigation (*rules of evidence and procedure may be very usefully understood as rules that guide the formal competition of litigants' and judges' arguments*) or in various scholastic debate competitions.

(iv) *Informal* competition of arguments (and arguers), guided by informal rules, as for example in philosopher Socrates' debates with his interlocutors in the Socratic "elenchos" (Ancient Greek term for cross-examination).

(3) RHETORICAL STRENGTH OR WEAKNESS

The third measure of strength (or weakness) of an argument is its ***rhetorical*** strength (or weakness). In Part 2 of his treatise *Rhetoric*, the philosopher Aristotle defines 'rhetoric' as follows:

> Rhetoric may be defined as the faculty of observing in any given case the available means of persuasion. This is not a function of any other art. Every other art can instruct or persuade about its own particular subject-matter; for instance, medicine about what is healthy and unhealthy, geometry about the properties of magnitudes, arithmetic about numbers, and the same is true of the other arts and sciences. But rhetoric we look upon as the power of observing the means of persuasion on almost any subject presented to us; and that is why we say that, in its technical character, it is not concerned with any special or definite class of subjects.

Aristotle, Rhetoric 7 (W. Rhys Roberts trans., 2010) (c. 350 B.C.E). In accord with this definition, we may say that rhetoric is the attempt by a source rhetor to persuade a target audience to accept a proposition or set of propositions. Legal arguers, including judges, lawyers, and law students (as well as arguers in many other settings) seek not only to offer arguments that are internally strong and dialectically strong (strong in competition with other arguments), but also are *persuasive* to one or more target audiences.

Some of the most famous decisions in the Supreme Court's history have been arguments that were dialectically weaker (in that they were dissenting Justices' opinions, which, by definition, lost the dialectical competition with the majority justices' opinion) but were rhetorically strong for target audiences of subsequent generations of judges and lawyers. One may cite, for example, Justice Harlan's dissent in Plessy v. Ferguson, 163 U.S. 537, 559 (1896) ("In my opinion, the judgment this day rendered will, in time, prove to be quite as pernicious as the decision made by this tribunal in the Dred Scott Case.") (Harlan, J., dissenting) and Justice Holmes's dissent in Lochner v. New York, 198 U.S. 45, 74 (1905) (Holmes, J., dissenting).

In the specific area of evidence litigation, judicial opinions offer a good deal of evidence of their effort to offer arguments that are rhetorically strong (while *also* internally and dialectically strong). Some of this evidence is in the form of rhetorical devices like metaphors and other figures of speech, as for example in Justice Thurgood Marshall's final opinion as a full sitting Justice in Payne v. Tennessee, 501 U.S. 808, 844 (1991) (Marshall, J., dissenting). In that opinion, Justice Marshall used reasoning by analogy (see the discussion above, section 1(D)(4)) to challenge the majority's argument attempting to justify overturning two Supreme Court precedents that were then only two and four years old. Although he lost the dialectical competition with the majority (by definition, since this was a dissenting opinion), his opinion had clear evidence of an effort to make a rhetorically strong appeal:

> Power, not reason, is the new currency of this Court's decision-making. Four Terms ago, a five-Justice majority of this Court held that "victim impact" evidence of the type at issue in this case could not constitutionally be introduced during the penalty phase of a capital trial. . . . By another 5–4 vote, a majority of this Court rebuffed an attack upon this ruling just two Terms ago. Nevertheless . . . today's majority overrules Booth and Gathers and credits the dissenting views expressed in those cases. Neither the law nor the facts supporting Booth and Gathers underwent any change in the last four years. Only the personnel of this Court did. . . . In dispatching Booth and Gathers to their graves, today's majority ominously suggests

that an even more extensive upheaval of this Court's precedents may be in store.

Id. at 844. A particularly colorful effort to offer an argument that is rhetorically strong comes from lawyer Daniel Webster, arguing to the Supreme Judicial Court in Massachusetts in Commonwealth v. Knapp, 9 Pick. 495 (Mass. 1830), that "suicide is confession." Webster, the prosecutor, sought to persuade the factfactinder to believe that a man who had committed suicide had committed murder, in order to aid Webster's cases against others who, Webster argued, aided and abetted the man who had committed suicide. Webster's rhetorical appeal (in language reminiscent of the dramatic action in Edgar Allen Poe's short story *The Tell-Tale Heart*), made in order to establish that the court should consider suicide to be confession (consider this argument when in Chapter 5 you consider the framework of confessions in Fed.R.Evid. 801(d)(2)), is as follows:

> The human heart was not made for the residence of such an inhabitant. It finds itself preyed on by a torment which it does not acknowledge to God nor man. A vulture is devouring it, and it can ask no sympathy or assistance, either from heaven or earth. The secret which the murderer possesses soon comes to possess him; and, like the evil spirits of which we read, it overcomes him, and leads him whithersoever it will. He feels it beating at his heart, rising to his throat, and demanding disclosure. He thinks the whole world sees it in his face, reads it in his eyes, and almost hears its workings in the very silence of his thoughts. It has become his master. It betrays his discretion, it breaks down his courage, it conquers his prudence. When suspicions, from without, begin to embarrass him, and the net of circumstance to entangle him, the fatal secret struggles with still greater violence to burst forth. It must be confessed, it will be confessed; there is no refuge from confession but suicide, and suicide is confession.

VII American State Trials 395, 515–16. (John D. Lawson ed., 1917)

2. SUMMARY OF THE ARGUING VIRTUES

We have spoken about two kinds of virtues and vices of arguments. Those that are specific to an argument's mode of logical inference ("mode-dependent virtues") and those that pertain to an argument regardless of its mode of inference ("mode-independent virtues"). For the mode-independent virtues, we have marked the idea of virtue as functional excellence by calling attention to three kinds of things arguers do with arguments as—pick the metaphor that best suits one's interests in argument in a given context—tools, instruments, implements, and weapons.

(1)   An arguer sometimes seeks to construct an argument that is internally strong, and we identified three ways to describe this kind of strength:

(a)   if the premises are *true or otherwise warranted* (such as probabilistically warranted, less than 100% probability), then they provide some degree of support for the truth, or other warrant, of the conclusion

(b)   epistemic strength—*belief* in the truth or other type of warrant of the premises provides support for *belief* in the conclusion

(c)   inferential strength—the truth or other warrant of the premises *licenses the inference* to the conclusion

(2)   Arguers sometimes seek to construct an argument that is dialectically strong, meaning that it is strong in competition with another argument. A paradigm for this kind of competition is the contest of inferences to the best legal explanation of prosecutor (or plaintiff) and defendant in virtually every case (including *Knapp*, illustrated in detail above), and of majority and dissenting judges on multi-member judicial panels (illustrated in the *Sherrod* case, above).

(3)   Arguers sometimes seek to construct an argument that is rhetorically strong, meaning that it is strong in its capacity to persuade a target audience, including multiple target audiences that might yield differing measures of rhetorical strength for same argument. For example, a dissenting judge's argument has by definition lost the dialectical competition of arguments with those of the majority, but it might persuade segments of the public, or the bar, or indeed future majorities of judges. Compare, e.g., Lawrence v. Texas, 539 U.S. 558, 604 (2003) (Scalia, J., dissenting) ("At the end of its opinion—after having laid waste the foundations of our rational-basis jurisprudence—the Court says that the present case 'does not involve whether the government must give formal recognition to any relationship that homosexual persons seek to enter.' Do not believe it. . . . This case 'does not involve' the issue of homosexual marriage only if one entertains the belief that principle and logic have nothing to do with the decisions of this Court. Many will hope that, as the Court comfortingly assures us, this is so.") with Obergefell v. Hodges, 135 S. Ct. 2584 (2015) (majority holding same-sex couples may exercise the fundamental right to marry).

3.   DEFEASIBILITY AS A STRENGTH-VIRTUE AND WEAKNESS-VICE IN AN ARGUMENT: VITAL FOR UNDERSTANDING EVIDENTIARY ARGUMENTS

We will conclude this presentation of the Logocratic Method with an explanation of one additional feature of arguments that is vital for a complete understanding and mastery of arguments in evidence (and other domains): the property of *defeasibility*. And we shall suggest that this property is simultaneously a weakness-vice of arguments (since in a defeasible argument true or warranted premises cannot provide incorrigible evidence for the truth or warrant of the conclusion) and a virtue, the virtue of flexibility of adapting one's judgments about the world to new information. We also in this section return to Justice Gillett's argument in *Knapp* regarding logical relevance to illustrate the very typical operation of defeasible arguments in juristic reasoning about evidence.

Recall that, on our evidential conception of the discipline of logic (see Chapter 1, pages 13–16), logic studies the evidential relation between the argument's premises and its conclusion. Consider this shorter representation of the argufied argument in *Knapp* about logical relevance (the more detailed representation is in Chapter 1, section 2(D)(2)):

Premise ε_1 evidence is relevant **if and only if** evidence conduces to the proof of a pertinent hypothesis

Premise ε_2 the prosecutor's evidence conduces to proof of a pertinent hypothesis

Conclusion h the prosecutor's evidence is relevant

Represented thus, this is a valid deductive argument, and has the highest possible degree of what we have called internal strength (also, "epistemic" and "inferential" strength, see discussion in section 1(E)(1) above): whenever all the premises of this type of argument are true, the conclusion must be true as well.

Now consider this hypothetical argument, which tracks a series of items of evidence that a prosecutor might offer to support the conclusion-hypothesis of guilt on a murder charge:

Argument 1

Premise/item of evidence ε_1 Jones confessed to shooting Smith.

Premise/item of evidence ε_2 Each of five witnesses testified that he or she saw Jones shoot Smith.

Premise/item of evidence ε_3 Jones's fingerprints were found on the gun recovered at the scene of Smith's shooting.

Therefore,

Conclusion/hypothesis h   Jones shot Smith.

If premises ε_1, ε_2, and ε_3 were all true, doesn't it seem likely that you—and a factfinder—would consider them strong "evidence" for the conclusion h? But now suppose that these additional items of evidence/premises ε_4 through ε_7 are all also true (including, that is, ε_1, ε_2, and ε_3):

Additional premises

Premise/item of evidence ε_4 Jones was beaten by the police and ordered to confess.

Premise/item of evidence ε_5 Each of the five witnesses was bribed by the prosecutor to testify that he or she saw Jones shoot Smith.

Premise/item of evidence ε_6 Fingerprint evidence is reliable only 40% of the time.

Premise/item of evidence ε_7 The technicians in laboratory to which the gun was sent for fingerprint analysis were both incompetent and corrupt.

If we put all these premises together as one superset of premises, how strong is the support the whole set (all of the new "evidence," premises ε_1 through ε_7) provides for the conclusion h?

Argument 2 (= Argument 1 + Additional premises)

Premise/item of evidence ε_1	Jones confessed to shooting Smith.
Premise/item of evidence ε_2	Each of five witnesses testified that he or she saw Jones shoot Smith.
Premise/item of evidence ε_3	Jones's fingerprints were found on the gun recovered at the scene of Smith's shooting.
Premise/item of evidence ε_4	Jones was beaten by the police and ordered to confess.
Premise/item of evidence ε_5	Each of the five witnesses was bribed by the prosecutor to testify that he or she saw Jones shoot Smith.
Premise/item of evidence ε_6	Fingerprint evidence is reliable only 40% of the time.
Premise/item of evidence ε_7	The technicians in laboratory to which the gun was sent for fingerprint analysis were both incompetent and corrupt.
Therefore,	
Conclusion/hypothesis h	Jones shot Smith.

Compare Argument 1 and Argument 2. Whereas Argument 1 seems to provide strong evidence for the conclusion that Jones shot Smith (although not conclusive—keep in mind that the burden of persuasion in a criminal case like this would be beyond a *reasonable* doubt, not beyond *all* doubt), Argument 2, which contains and adds premises to the premises in Argument 1, provides far less, if any, support for the conclusion that Jones shot Smith. We shall call the additional premises added to the premises of Argument 1 *defeasiary evidence*. Overall, this example illustrates the property of **defeasibility.** Argument 1 is defeasible, and it is defeasiary evidence that is added to Argument 1 resulting in Argument 2.

> **Definition of 'defeasible':** An argument from premises to a conclusion is defeasible if and only if the argument is one in which it is possible that the addition of some premises to the argument's original premises can undermine the degree of evidential warrant that the original premises provide for the conclusion.

Of the four modes of logical inference we have examined, valid deductive inferences are always indefeasible (they are never defeasible). Inductive arguments, whether generalizations or specifications, are always defeasible. Some analogical arguments are defeasible, others are indefeasible (some are offered in which the analogical-warranting rationales belong to deductive systems), and likewise some abductive arguments are defeasible, others are indefeasible (some offer explanations of deductive phenomena, in which the explanatory system belong to deductive systems).

Reasoning about facts in evidence involves both inductive inference and inductively-informed inferences to the best explanation, and thus is

always defeasible. This fact can be deeply empowering for the evidence analyst who engages dialectical competitions over the facts of litigated (or mooted) cases, for it means that the opponent of evidence whose support is inductive (and therefore defeasible) might always be able to search for, and perhaps find, additional premises that undermine the support that the opponent's original evidence-premises provided for a conclusion. To take one very prominent example in recent U.S. litigative history, when the prosecutor in the O.J. Simpson trial presented a good deal of evidence (that is, evidentiary arguments) about blood samples and the "bloody glove" that seemed deeply incriminating of the defendant, the defense was able to present potentially *defeasiary evidence* about the alleged mishandling of evidence in the chain of custody and the character of a vital prosecution witness, police officer Mark Fuhrman. And in the dialectical competition between prosecutor and defendant in that case, the defendant's defeasiary challenges to the prosecution's factual arguments for guilt seem to have won that famous-infamous dialectical competition.[20]

Bottom line: whether one is a proponent or opponent of evidentiary arguments, one out to be on the lookout for potentially defeasiary evidence that might undermine the force of one's own, or one's opponent's, evidential arguments. If used in competitive evidentiary arguments in this way, defeasibility in an argument may be thought of as a weakness of an argument's internal strength (though not necessarily of its dialectical or rhetorical strength). But if we think of this same process of defeasible reasoning about the facts of the world, defeasibility has the virtue of allowing us flexibly to revise our beliefs in light of new information.

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[20] See G. Uelman, The O.J. Files: Evidentiary Issues in a Tactical Context (1998).