

## A PRAGMATIC MODEL OF LEGAL DISPUTATION

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Deductive and inductive logics have long been recognized as having places of importance in modeling the logical structure of legal argumentation. But as Larry Alexander and Richard Friedman observed in their contributions to this special issue, legal argument is typically more like the ordinary reasoning used in everyday conversational exchanges that take place outside courtrooms. This kind of reasoning is neither deductive nor inductive; rather it is presumptive in nature. Presumptive reasoning is based on burden of proof, and unlike deductive reasoning, it is subject to retraction once new premises enter into the evidentiary picture in a disputation. Conclusions drawn by presumptive reasoning are tested out by the asking and answering of questions in a dialogue. But what kind of logic could be used to model this type of argumentation? I contend that a new kind of conversational logic is needed for this purpose. Conversational logic is the framework of argumentation needed to evaluate arguments when two parties reason with each other. Unlike deductive and inductive logic, the standards of good reasoning used in conversational logic are based on how an argument was used in the context of a disputation.

In chapter four of their textbook on legal logic, Robert Rodes and Howard Pospesell<sup>1</sup> venture beyond the formal structure of propositional and predicate logic to teach the textbook user how to analyze arguments used in the context of a disputation. Their first rule for conducting a disputation is that it is "not enough for the parties to bring forward their own arguments. They must answer the arguments brought forward by their opponents."<sup>2</sup> How such a bringing forward of arguments and answering to arguments should take place is partly a matter of propositional and predicate logic, but in certain important respects it goes beyond this semantic framework. It is a matter of how arguments have been used for some purpose in a context of disputa-

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<sup>1</sup> ROBERT E. RODES, JR. & HOWARD POSPESEL, PREMISES AND CONCLUSIONS: SYMBOLIC LOGIC FOR LEGAL ANALYSIS (1997).

<sup>2</sup> *Id.* at 209

tion. Can a logician give any useful advice to those involved in legal disputations on how to use and evaluate arguments correctly in such a context? It used to be thought not, but now I hope to show that it can be done.

Much work has already been done in the pragmatics of disputation, and the problem confronted by this paper will be to see how this work could be extended to legal argumentation in a North American perspective. The pragmatic approach to disputation seems to be more of a European than a North American tradition, and is based most notably on the works of Chaim Perelman and Lucie Olbrechts-Tyteca,<sup>3</sup> Else M. Barth and Erik C. W. Krabbe,<sup>4</sup> Frans van Eemeren and Rob Grootendorst,<sup>5</sup> Robert Alexy,<sup>6</sup> and L. Jonathan Cohen.<sup>7</sup> However, this approach is also based on the fundamentally important work of the Australian logician Charles Hamblin<sup>8</sup> on the structure of formal dialectical systems, the continuing work of his former student Jim Mackenzie,<sup>9</sup> and on the dialectical logic of plausible reasoning of Nicholas Rescher.<sup>10</sup> I am not sure whether Jaakko Hintikka counts as European or North American, but his work on dialogue models of argumentation, for example, should definitely be cited here as well.<sup>11</sup> Finally, the pioneering work of J. Paul Grice<sup>12</sup> on the pragmatic logic of conversational arguments also needs to be mentioned.

The particular problem of applying this work on disputation to legal argumentation is that of analyzing the interactive framework of argument use, which I will call "the fair trial." There are many differ-

3 CHAIM PERELMAN & LUCIE OLBRECHTS-TYTECA, *THE NEW RHETORIC* (John Wilkenson & Purcell Weaver trans., 1969).

4 ELSE M. BARTH & ERIK C.W. KRABBE, *FROM AXIOM TO DIALOGUE* (1982).

5 FRANS VAN EEMEREN & ROB GROOTENDORST, *SPEECH ACTS IN ARGUMENTATIVE DISCUSSIONS* (1984).

6 ROBERT ALEXY, *A THEORY OF LEGAL ARGUMENTATION: THE THEORY OF RATIONAL DISCOURSE AS THEORY OF LEGAL JUSTIFICATION* (Ruth Adler & Neil MacCormick trans., 1989).

7 L. JONATHAN COHEN, *THE PROBABLE AND THE PROVABLE* (1977).

8 C.L. HAMBLIN, *IMPERATIVES* (1987) [hereinafter HAMBLIN, *IMPERATIVES*]; C.L. HAMBLIN, *FALLACIES* (1970) [hereinafter HAMBLIN, *FALLACIES*]; C.L. Hamblin, *Mathematical Models of Dialogues*, 37 *THEORIA* 130 (1971) .

9 Jim Mackenzie, *Four Dialogue Systems*, 49 *STUDIA LOGICA* (1990); J.D. Mackenzie, *The Dialectics of Logic*, 94 *LOGIQUE ET ANALYSE* 159 (1981) .

10 NICHOLAS RESCHER, *DIALECTICS: A CONTROVERSY-ORIENTED APPROACH TO THE THEORY OF KNOWLEDGE* (1977); NICHOLAS RESCHER, *PLAUSIBLE REASONING* (1976) [hereinafter RESCHER, *PLAUSIBLE REASONING*].

11 JAAKKO HINTIKKA, *THE INTERROGATIVE MODEL OF INQUIRY AS A GENERAL THEORY OF ARGUMENTATION, COMMUNICATION AND COGNITION* (1992).

12 J. Paul Grice, *Logic and Conversation, in THE LOGIC of GRAMMAR* (Donald Davidson & Gilbert Harman eds., 1975).

ent kinds of legal arguments used for many different purposes on many different occasions, but the trial is centrally important as a legal institution. When arguments are used in a trial, whatever specific type of trial it may be and whatever may be the particular jurisdiction, can we judge whether such arguments are correct or incorrect with respect to how they have been used as part of the trial procedure? This question, I hope to show, can be answered affirmatively, if we can classify the fair trial as a normative model of argumentation that has a definite goal, and that has argumentation structures that are the means of realizing that goal.

#### I. NORMATIVE MODELS OF ARGUMENTATION

The remarks that follow do not contain a description of disputation in any actual legal system, or a description of any actual system of procedural rules for argumentation in dialogue; rather, they provide a normative model that represents a logical idealization of the properties that such a system ought to have if it is to achieve its goals in an efficient way. Such a system makes good use of argumentation, is logically consistent, and avoids fallacies and other logical difficulties. The normative model given is much simpler than the real system of law in any given jurisdiction at any given time. It is a kind of abstraction that may be taken to represent some features of realistic legal argumentation in particular respects, but will deviate in other respects from the argumentation used in real cases. Therefore, it is best to think of it as an idealized model which represents one view of how legal argumentation ought to be analyzed and evaluated from a logical point of view. On the other hand, the model is tied to reality to some extent in that it is based on the kind of reasoning that is used in everyday argumentation, presumably the same kind of reasoning a jury would use when reaching a decision on how to rule in a particular legal case.

Legal reasoning generally operates on presumptions, meaning that a proposition is accepted as true, or not accepted as true, on the basis of whether it is justified or not by other propositions that are accepted as true. This second class of propositions, the ones that do the justifying, is called the evidence. Something is evidence if it seems to be true, if it follows from propositions that seem to be true, or if it can be tested (by the tests accepted at any given time). This definition of evidence is a skeptical one, implying that evidence is generally defeasible in nature. That is, the weight of evidence in favor of a proposition can be stronger or weaker, but even if it is very strong, it may later turn out to be defeated by the introduction of new evidence.

A dispute may arise about whether a particular proposition is true or not, or should be accepted as true or not. Where the dispute needs to be resolved and cannot be resolved by any non judicial means, the dispute may then go to trial. Central to the fair trial is that there is a conflict of opinions that should be resolved in a dialogue where both sides bring forward the strongest evidence to support their contentions. The arguments on both sides are allowed to interact so that each can criticize the arguments put forward by the other. The basic idea is that the arguments on both sides should be tested out in a dialogue where each side brings out the arguments it believes to represent its strongest evidence supporting its contention. While both sides should be free to bring out this evidence, the evidence brought out should be relevant in the sense that it really bears on the issues contended at the trial. In determining the outcome, the trier (the judge or jury), who has followed all the argumentation on both sides throughout the whole trial, can make its decision based upon a burden of proof that was agreed on before the trial started.

The two most important components of legal logic are the concepts of evidence and the fair trial. Both of these ideas are hard to define because they are vague and subject to interpretation and because they are constantly being subjected to testing and interpretation by legal trials and new developments. Therefore, we can have different theories or models-oversimplified pictures-of what these things are or how they should be viewed. These theories are meta-legal constructs that represent philosophical interpretations of what the theorist thinks that legal argumentation should ideally be like. Thus, the theories themselves are subject to dispute. It is particularly tricky to construct and evaluate a theory of evidence, because what you are using to evaluate the theory is (presumably) evidence for or against the theory. But in the case of legal evidence this circularity is not so much of a problem because the theorist is only trying to give a definition of a particular kind of evidence-legal evidence-based on considerations of a more general nature that are not exclusively legal, but are also meta-legal and philosophical.

Before going on to study in depth the concepts of evidence and the fair trial, we need to outline the types of arguments, or so-called argumentation schemes, used both in legal argumentation and in everyday argumentation outside legal contexts. But first, it is necessary to outline other recent developments in argumentation theory. In the pragmatic approach to the evaluation of argumentation, arguments are judged on how they are used in a particular case to contribute to the goal of the dialogue in which the argument is embedded. That is, the pragmatic presumption is that for every argument used in a given

case, the argument was used by one party as part of a goal-directed dialogue with another party. In other words, every argument used in a particular case has a context of use. That context of use is called a dialogue (or conversation), and the argument needs to be evaluated with respect to how it was used in the context of the dialogue it was (supposedly) a part of in the given case.

But what kind of goal-directed structure is a legal disputation? The kind that is typified by the fair trial? A legal disputation has a structure that is highly adversarial and is comprised of varied procedural rules to which the participants are bound. To determine what kind of general structure this might be, we have to turn to an examination of the types of dialogue that have been studied.

## II. TYPES OF DIALOGUE

The new pragmatic approach to argument evaluation is called dialectical in the ancient Greek sense,<sup>13</sup> implying that every argument has a proponent and a respondent who engage in a so-called dialogue, or goal-directed type of conversational exchange, in which the argument is being used by the proponent for some purpose. Although the two parties are contesting with each other in an exchange that is partly adversarial (or agonistic, meaning that they are struggling with each other to try to be victorious over the other), they are also supposed to be collaboratively taking part in an orderly exchange that requires cooperation and the following of rules, or so-called maxims of polite discourse.<sup>14</sup> According to the Gricean Cooperativeness Principle (CP), each party must make moves that are appropriate for the stage of the dialogue that the conversation is in: "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."<sup>15</sup> According to van Eemeren and Grootendorst, a dialogue of the kind they call a critical discussion (see below) has four stages: an opening stage; a confrontation stage, where the issue is defined and agreed upon; an argumentation stage, where the arguments are put forward and criticized by both sides; and a closing stage.<sup>16</sup> An argument that is appropriate (correct, relevant, non-fallacious) at one stage, might be judged quite differently when it has been used at another stage of a dialogue exchange.

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13 See HAMBLIN, *FALLACIES*, *supra* note 8, at 55 .

14 See Grice, *supra* note 12, at 67.

15 *Id.*

16 See VAN EEMEREN & GROOTENDORST, *supra* note 5 .

In other words, it is not just the reasoning used in argumentation—the chain of valid or invalid inferences in the argument—that is the whole story of how the argument should be evaluated (as used in a given case). What is also important is how that chain of reasoning was used to make some point in the context of a dispute (dialogue). One can appreciate this pragmatic aspect of argument evaluation by considering the concept of relevance. An argument that was relevant at one stage of a dialogue may fail to be relevant at another stage of the same dialogue. The relevance of an argument in a dialogue is very much relative to the prior moves in the dialogue to which the argument was supposed to respond. Relevance is also determined by the goal of the dialogue. The dialectical nature of such a pragmatic concept of relevance was already indicated in the pioneering account of conversational argument.<sup>17</sup> Many of the kinds of argumentation associated with traditional fallacies, like the *ad hominem* argument and various appeals to emotions, are in fact arguments that, when they are fallacious, are so in virtue of a failure to be dialectically relevant.<sup>18</sup> In such instances, the same argument could be relevant in one context of dialogue, but irrelevant as used in another dialogue. A good example is the use of an *ad hominem* argument to attack an arguer's credibility. This type of argument can be relevant in some cases, as used in cross-examination of a witness in a court of law, while in other cases it is irrelevant.

An important general factor in evaluating arguments pragmatically is that an argument can be quite correct or reasonable as used in one type of dialogue, but fallacious when used in a different type of dialogue. In other words, there are different types of dialogue that can function as contexts for the use of argumentation. According to the normative framework, there are six basic types of dialogue of this kind.<sup>19</sup> It is not that six is the magic number, or that there can be no other types of dialogue other than these six. But judging from the investigation of fallacies and other phenomena pertaining to the evaluation of argumentation in everyday conversational exchanges, the evaluation of an argument generally tends to reduce to a consideration of some combination of a subset of this set of six types of dialogues.

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17 See Grice, *supra* note 12.

18 See DOUGLAS WALTON, A PRAGMATIC THEORY OF FALLACY 16-17 (1995).

19 See *id.* at 98-129; see also DOUGLAS N. WALTON & ERIK C.W. RABBE, COMMITMENT IN DIALOGUE 66 (1995).

### TYPES OF DIALOGUE

<b>TYPE OF DIALOGUE</b>	<b>INITIAL SITUATION</b>	<b>PARTICIPANT'S GOAL</b>	<b>GOAL OF DIALOGUE</b>
<i>Persuasion</i>	Conflict of Opinions	Persuade Other Party	Resolve or Clarify Issue
<i>Inquiry</i>	Need to Have Proof	Find and Verify Evidence	Prove or Disprove Hypothesis
<i>Negotiation</i>	Conflict of Interests	Get What You Most Want	Reasonable Settlement
<i>Information-Seeking</i>	One Party Lacks Information	Acquire or Give Information	Exchange Information
<i>Deliberation</i>	Dilemma or Practical Choice	Co-ordinate Goals and Actions	Decide Best Course of Action

One has to be careful in using these models of dialogue to be clear that the goal of the dialogue as a whole is different from the individual goals of each of the participants in the dialogue. Generally, the main factor in evaluating any argument is how well it contributes to the goal of the dialogue as a whole. According to one framework, an argument as used in a given case is fallacious if it was used in such a way that it blocks or goes against the goal of the type of dialogue of which it was supposed to be a part.<sup>20</sup> So it is the goal of the dialogue as a whole that is the uppermost factor in evaluating an argument as correct or incorrect, weak or strong.

In the first type of dialogue, called the persuasion dialogue, the one party, called the proponent, has a particular proposition designated as her thesis, and her goal is to prove this proposition by means of the kinds of arguments accepted as persuasive in the dialogue. The goal of the other party can be of two sorts, depending on the type of critical discussion. In the one type, the respondent's goal is achieved if he raises enough of the right sort of questions to throw the success of the proponent's attempted proof into doubt. In the other type, the respondent's goal is more difficult to achieve. The respondent's goal is to prove a thesis that is the opposite (negation) of the proponent's thesis, thereby proving that the proponent's thesis is false. What kinds of arguments are accepted as persuasive in this type of dialogue generally? For an arguer's argument to be persuasive, it must have as its

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<sup>20</sup> See WALTON, *supra* note 18, at 15.

conclusion the thesis of the other party, and it must have as premises only propositions that are commitments of the other party.<sup>21</sup>

The most familiar type of persuasion dialogue is called the critical discussion by van Eemeren and Grootendorst.<sup>22</sup> The goal of the dialogue in a critical discussion is to resolve the initial conflict of opinions that is at issue in the dialogue. The critical discussion has eight rules which can be paraphrased as follows:<sup>23</sup>

- (1) parties must not prevent each other from advancing arguments;
- (2) an arguer must defend her argument if asked to do so;
- (3) an attack on an arguer's position must relate to that position (and not some other position);
- (4) a claim can only be defended by giving relevant arguments for it;
- (5) an arguer can be held to his implicit premises;
- (6) an argument must be regarded as conclusively defended if its conclusion has been inferred by a structurally correct form of inference from premises that have been accepted by both parties at the outset of the discussion;
- (7) arguments must be valid or be capable of being made valid by the addition of implicit premises;
- (8) formulations must not be unduly vague or ambiguous.

Violations of these rules of collaborative critical discussion are identified by van Eemeren and Grootendorst with informal fallacies. For example, committing the *ad baculum* fallacy would be seen as a violation of Rule (1), which forbids parties from using force to try to prevent the other party from advancing arguments.<sup>24</sup>

The critical discussion is classified as a subtype of persuasion dialogue.<sup>25</sup> The main reason is that in a critical discussion the dialogue is only successful if the conflict of opinions is resolved by showing that the argumentation of the one party is successful, while that of the other party is not. But in many instances of persuasion dialogue, for example in a philosophical discussion of a controversial issue, the dialogue can be successful if real light is thrown on the issue for both participants. In other words, even if the conflict of opinions has not been resolved, and even if it is not the case that the one party is the winner and the other is the loser, in many instances of persuasion

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21 For more on what commitments are, see text accompanying notes 28-30

22 VAN EEMEREN & GROOTENDORST, *supra* note 5.

23 *id.* at 184-293.

24 *See id.*

25 *See* WALTON, *supra* note 18, at 100.



dialogue the dialogue can be successful by showing that the argumentation of the one party is successful while that of the other party is not.

In such a persuasion dialogue, the dialogue can reach its goal if the maieutic function of giving birth to new ideas has been achieved. In the maieutic function, probing arguments used in a dialogue exchange clarify a participant's commitments and strengthen her arguments. Not only does she see how these arguments need to be refined and qualified in order to avoid the objections that can be brought against them by an able opponent, but she also sees the weaknesses in them.<sup>26</sup> When the maieutic function is fulfilled, an arguer not only gains deeper insight into her own commitments, but she also gains insight into the reasons why the other party is committed to his thesis. By means of the strong arguments used by both sides in a successful persuasion dialogue, the positions of both sides are tested out and refined, even if the issue is not resolved.

To better understand persuasion dialogue, and the other five types of dialogue, it is necessary to define the concept of an arguer's commitment. According to Hamblin, each participant in a dialogue has a set of propositions called a "commitment store," and propositions are inserted into this store, or deleted from it, as the dialogue proceeds.<sup>27</sup> The idea is that the participant begins with a commitment to proving her thesis in the dialogue, and then as the dialogue proceeds, and the participant makes a certain type of move, propositions will be inserted into the store, or deleted from it, in accord with the type of move. For example, if a participant makes a move asserting the truth of a particular proposition, she then becomes committed to that proposition at the next move. As the dialogue proceeds, the commitment store represents a kind of ideal model of the arguer's position, the collective set of propositions that represent her point of view or stance on the issue. All six types of dialogue cited here are organized around the fundamental idea of the commitment store of the participants. In Hamblin's scheme of things, the commitments of a participant in a dialogue are always on view to all the participants in the dialogue, and these commitments strongly influence how the dialogue proceeds, and how the aims of the participants are fulfilled or not.<sup>28</sup> Any argument, if it is to be successful, must always be based on the commitments of the other party.

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<sup>26</sup> See WALTON & KRASSE, *supra* note 19 .

<sup>27</sup> See HAMBLIN, FALLACIES, *supra* note 8 , at 257 ; *see also* HAMBLIN, IMPERATIVES, *supra* note 8, at 229-32 .

<sup>28</sup> See HAMBLIN, IMPERATIVES, *supra* note 8 , at 229 .

In persuasion dialogue, the participants must be fairly free to retract commitments if they wish to do so without penalty. By contrast, in the inquiry type of dialogue the participants are not generally free to retract commitments as the dialogue goes along. Indeed, the central purpose of the inquiry is to verify a commitment by very strong evidence, so that, in principle, there should never be any need to retract a proposition. The goal of the inquiry is to prove that a particular proposition is true (or false), or alternatively, to prove that it cannot be proved as true (or false). The defining characteristic of argumentation in the inquiry is the property of cumulateness, meaning that once a proposition is accepted as "verified," or "established" as true at any point in the inquiry, it is never retracted at any succeeding point. The inquiry can be modeled as a tree structure where the nodes in the tree represent "evidential situations," or points at which sets of propositions are verified.<sup>29</sup> As argumentation proceeds up the tree, from its root along a branch, the set of propositions that are verified gets larger and larger, but none of the propositions are ever retracted.

The inquiry is an ideal model of reasoned argumentation, but a lot of people ask at this point whether scientific argumentation is (or should be) an inquiry. Those philosophers, like Pascal and Descartes (Enlightenment guys) who answer yes to this question are called foundationalists. The foundationalist view of scientific research was popular, not to say dominant, during the time of logical positivism. But this view has been under severe attack by postmodernist thinkers for some time, and it does not seem to be as widely accepted as it once was.

Euclidean geometry is a good example of scientific argumentation that has been cast into the format of an inquiry. Conclusions drawn can only be based on axioms, or premises already proved as following from these axioms by the truth-preserving rules of inference (deductively valid rules). An example of an empirical inquiry would be an official government investigation into an air disaster, where the aim is to assemble all the relevant evidence, and draw only conclusions that can be verified on the basis of this evidence. I understand there are specific legal rules governing different kinds of official inquiries, and it would be an interesting project to study and classify these different types of inquiry, using the inquiry type of dialogue structure as a model.

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<sup>29</sup> See Saul Kripke, *Semantical Analysis of Intuitionistic Logic I*, in *FORMAL SYSTEMS AND RECURSIVE FUNCTIONS* 92-113 (J.N. Crossley & M. Dummett eds., 1965).

The purpose of negotiation dialogue is not to prove the truth of a proposition, but to "make a deal" by trading off concessions so that you can get what you want most, and the other party can get what it wants most. The confrontation in the negotiation dialogue is set by a conflict of interests between the two parties. There are some goods or interests—normally financial in nature, but it could be something else, like prestige, that is at stake—and neither party can have all these interests to itself. So the argumentation pertains to the dividing up of the interests. There is a large literature on negotiation, including a journal exclusively devoted to it. It is not necessary to describe it further here, except to warn the reader that the general aim and methods of arguments used in negotiation dialogue are distinctively different from those of persuasion dialogue, even though the same types of arguments are used in both types of dialogue.

The goal of information-seeking dialogue is the transfer of some information from the one party to the other. One familiar kind of example is the celebrity interview, where an interviewer asks a celebrity questions designed to reveal information that would be of interest to the viewers. Another kind of information-seeking dialogue that is becoming more and more familiar to all of us is that of using a computer retrieval system to search through a data base. Even though one participant is a computer program, the sequence of questions and replies can insightfully be viewed as what we call a type of dialogue. Computer science is now in fact following this usage, where a software program is described as an "agent" that can engage in different kinds of dialogue, like negotiation, with a user of the system. This branch of "Artificial Intelligence" (AI) is called argumentation in multi-agent systems.<sup>30</sup>

While persuasion dialogue is directed towards finding out whether a proposition is true or not, deliberation is directed towards actions and its purpose is to find the most prudent course of action from a given set of choices available in a particular situation. The confrontation stage of deliberation is set by a dilemma, a given situation in which only two (or some small number) of choices of how to proceed are available, and the agent has to decide to take the one option or the other. The kind of reasoning typically used in a deliberation is called practical reasoning, or what Aristotle called practical wisdom (*phronesis*), which is a goal-directed, knowledge-based, action-concluding kind of reasoning in which an agent is aware of its external situation and the consequences of its actions as they affect that

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<sup>30</sup> See Michael Wooldridge & Nicholas R. Jennings, *Intelligent Agents: Theory and Practice*, 10 THE KNOWLEDGE ENGINEERING REVIEW 115-152 (1995).

situation. Practical reasoning is a dynamic, case-based kind of reasoning that changes with incoming information, and typically uses defeasible argumentation of a kind that is subject to default occasionally.<sup>31</sup>

Eristic dialogue is an agonistic or adversarial type of dialogue where each party hits out at the other party, and tries to humiliate them or make them look foolish or incompetent. The most familiar subtype of eristic dialogue is the quarrel. In the quarrel, both parties have deep grudges or complaints that they have harbored for a long time, of a kind that would not be appropriate to express overtly in normal, polite conversation. But then the quarrel suddenly "bursts out" on some provocative occasion, and both sides "spill their feelings out." Typically, the conversation lurches from one topic to another, and the most common type of argumentation is the *argumentum ad hominem* or personal attack. Relevance, of the kind necessary in a persuasion dialogue for example, is not much in evidence in the quarrel. A domestic quarrel, for example, may start out with a dispute about one party's failure to take out the garbage, but then suddenly the subject may change to concentrate on some annoying mannerism of the one party that is unrelated to the garbage issue.

Initially the quarrel doesn't seem to have anything to do with logic at all, and modern logic has pretty well ignored it. But, the quarrel is extremely important in studying many of the informal fallacies, such as in the *ad hominem* fallacy mentioned above. Both Plato and Aristotle were very well aware of eristic dialogue and the importance of it in studying sophistical reasoning. Both had a strong apprehension about the degeneration of what they called dialectical argument (a productive kind of argumentation) into "antilogic" or sophistry, representing a kind of counterproductive argumentation that can be used to deceive people by virtue of its superficial resemblance to dialectical argumentation. At any rate, eristic dialogue is an important type of dialogue to be aware of, even if the lessons of it are mainly negative.

The classification of dialogue into the six basic types cited above is not, in any sense, complete. But starting with these six types, other familiar kinds of dialogue exchanges where argumentation is used can be classified as mixed types. For example, the forensic debate, of the kind often organized by college debate teams, can be classified as a mixture of persuasion dialogue and eristic dialogue, organized as a contest, with rules and judges. Political debate, of the kind that takes place in a legislature or parliament according to rules of procedure

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<sup>31</sup> See DAVID S. CLARKE, JR., PRACTICAL INFERENCES 3-6 (1985)

moderated by the "speaker of the house," can be viewed as a kind of persuasion dialogue that also has eristic elements.

Another phenomenon that is important to know about is the *dialectical shift*, or change of context from one type of dialogue to another during the same sequence of argumentation. For example, the making of a threat during a persuasion dialogue (an inappropriate type of move in that type of dialogue) may indicate a dialectical shift to a negotiation type of dialogue. Dialectical shifts are indicated by linguistic clues in the discourse in a case. Not all dialectical shifts are illicit. For example, in a parliamentary debate, the dialogue may shift from persuasion dialogue on some issue, like a debate on a particular housing bill, to an information seeking type of dialogue, where information about the current costs of housing is brought in. The shift in this kind of case could help the persuasion dialogue by making it more informed on the particulars of the issue.

### III. RELEVANCE

One of the most important things about the pragmatic perspective on evaluating argumentation is that relevance of argumentation is seen in a dialectical way. An argument is relevant if it contributes to the realization of the goal of the dialogue of which it is supposed to be part. Each type of dialogue has an issue posed at the confrontation stage, and an argument is relevant in that type of dialogue if it bears on that global issue. A corollary of this pragmatic way of defining relevance has already been noted above. An argument can be relevant in one type of dialogue, but might be irrelevant in another types of dialogue. For example, as observed above, an argument that appeals to a threat might be relevant in a negotiation type of dialogue. But the very same argument could be irrelevant if it is used in a persuasion type of dialogue.

Traditionally relevance in logic was used as a wastebasket category to dismiss an argument as "fallacious" when no other reason could be found for rejecting the argument. But the problem was that relevance was never really defined in a clear and useful way. The problem with this approach is that if someone is accused of committing a fallacy of relevance, say when using an *ad hominem* attack that does not really bear on the issue, he can always claim it is relevant *in some sense*, where relevant may mean something like "important to me."

But what is important for the purposes of applied logic is not just relevance, in such a broad and general sense, but a narrower pragmatic notion of *dialectical* relevance, meaning that something is relevant only if it contributes to a dialogue in which argumentation in a

given case is taking place. In this dialectical sense, questions and other moves can be judged to be relevant or irrelevant, as well as arguments themselves, although very often it is arguments that one is centrally concerned with.

Judging the relevance or irrelevance of an argument in a given case is always conjectural and is a judgment that is very much a function of the dialectical context of a case. You have to get a grasp of how an argument is being used in context, judging from what you know of the context of the case. Of course, this context may not be completely known, or it may not be known at all, in some cases. Typically, the argument to be evaluated may be in midstream. So to judge whether it is dialectically relevant or not, you (as a critic) have to try to extrapolate the argument forward, to estimate whether it has the potential to bring forward some evidence that would support (or at least be part of a proof that would prove or disprove) the claim on one side or the other of the issue of the conflict of opinions that the dialogue seeks to resolve.

In other words, the idea of dialectical relevance harks back to the ancient idea of Hermagoras and classical *stasis* (or status) theory.<sup>32</sup> The idea was that in a dialogue there is a global issue, a pair of propositions that represents a conflict of opinions that is controversial. A move in argument is relevant if it helps to resolve this conflict by bearing on one or the other of the propositions at stake in the dialogue. "Bearing on" means that it can be used to give weight of evidence either for or against one of these propositions.

What do we mean when we say that to be dialectically relevant an argument must "extrapolate forward" towards the goal of the global issue of a dialogue? This notion of extrapolating forward can be modeled using a commonplace technique in AI called "forward chaining." Forward chaining is the linking together of a series of subinferences so that the conclusion of one inference also functions as a premise in the next one. The resulting sequence of inferences can be modeled using the technique of argument diagramming.<sup>33</sup> A graph - a kind of flow chart of the sequence of argumentation - is constructed. In a dialectically relevant argument, the last proposition in the sequence is the arguer's thesis that was supposed to be proved in the dialogue as a whole. Hence, dialectical relevance is a global and contextual notion that is a function of how an argument is used in a

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32 See MARCUS FABIVS QUINTILIANUS, *INSTITUTIO ORATORIA* vol. III, bk. VII, ch. 10 (H.E. Butler trans., Loeb Classical Library, Harvard Univ. Press 1986).

33 See DOUGLAS N. WALTON, *ARGUMENT STRUCTURE: A PRAGMATIC THEORY* 78-108 (1996).

given case to make the right sort of point that is supposed to be made in that type of dialogue.

Already lawyers will wonder whether dialectical relevance in a critical discussion is the same kind of relevance that figures so prominently in the rules of evidence. In broad outline, it seems that the two notions are comparable. In a critical discussion, an argument is relevant if it can be used to support or detract from the plausibility of one of the propositions at issue in the initial conflict of opinions. The notion of relevance defined in the *Federal Rules of Evidence*<sup>34</sup> initially seems quite comparable, but when the exclusionary clauses are introduced, these rules depart from dialectical relevance. But before comparing similarities and differences, some remarks need to be made about the trial generally as a framework in which argumentation takes place.

#### IV. THE FAIR TRIAL AND THE WITCH HUNT

The hypothesis put forward here is that the argumentation used in a fair trial is best modeled logically in the framework of the subtype of persuasion dialogue known as the critical discussion. As noted above, the goal of a critical discussion is to resolve a conflict of opinions by means of using logical reasoning that brings forward and tests the strongest arguments on both sides. In persuasion dialogue generally, the dialogue can be successful even if the conflict is not resolved. But in the legal trial, a forcing of the decision is effected by the initial distribution of the burden of proof at the confrontation stage. What provokes a trial, in our system, is an allegation that cannot be dealt with in some process of dispute resolution other than a court. In a criminal case, the standard of proof required is proof beyond a reasonable doubt, and this burden is placed on the prosecution. The defense, to win, has only to put the prosecution's attempt to prove into doubt. So the prosecution's proof either meets the standard or it does not. If there are doubts, the proof of guilt is judged to fail. Hence the system is designed to come to a conclusion, to resolve the initial conflict of opinions one way or the other. So the trial is successful only if it fulfills this goal. Otherwise it is a "mistrial."

It seems a reasonable hypothesis then that the fair trial can be modeled as a critical discussion, a type of persuasion dialogue. There are two sides, the prosecution, which has a thesis to be proved, and the defense, which must oppose this attempt at proof. So far so good. The trial does seem to be a kind of persuasion dialogue, in this re-

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<sup>34</sup> See *infra* Part V.

spect. But in another key respect, the trial is different from the critical discussion. In a critical discussion, each of the two arguers tries to persuade the other to accept his or her thesis. Their efforts at persuasion are directed at each other. But in a trial the two arguers aim their efforts of persuasion at a third party—the trier—which may be a jury or judge. So here is a fundamental difference between the persuasion dialogue generally and the fair trial. It is up to the jury to decide the outcome in a trial. The opposing attorneys can, and should, use any arguments that will persuade the jury to accept their contentions, or at least use any arguments allowed as relevant, or not otherwise excluded by the procedural rules as determined by the presiding judge.

It seems then that while the trial does have some features of the persuasion dialogue, it also has some distinctive features that make it different from the model of the persuasion dialogue. The main difference is that there are three parties involved, not just two. The other differences concern the way that the third party decides the outcome. The jury deliberates, and then decides, on the basis of that dialogue, which side won and which side lost the trial. Thus, the fair trial is more complicated in some ways than the persuasion dialogue, as it involves persuasion and much more.

The best way to come to understand the logical features of how the fair trial should work as a normative framework in which arguments are evaluated is to contrast it with an opposing normative structure of dialogue called the witch hunt. The witch hunt has ten defining characteristics:<sup>35</sup>

- (1) pressure of social forces that drives the argumentation forward powerfully;
- (2) stigmatization of the accused, making a defense difficult or even impossible;
- (3) climate of fear;
- (4) resemblance to a fair trial;
- (5) use of simulated evidence (as opposed to real evidence);
- (6) simulated expert testimony;
- (7) nonfalsifiability characteristic of the simulated evidence;
- (8) reversal of polarity (or shifting of burden of proof, meaning in a criminal trial that the accused would have the burden of proving his innocence);

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<sup>35</sup> See Douglas N. Walton, *The Witch Hunt as a Structure of Argumentation*, 10 ARGUMENTATION 389 (1996).



- (9) non-openness, meaning that the argumentation is onesided, and the prosecution argument is not really open to refutation; and
- (10) use of the loaded question technique.

These characteristics form a cluster of properties such that if enough of them are present in a given case of a tribunal, the tribunal may be classified as a witch hunt. Numbers (1), (2), and (3) are the initial conditions that make the witch hunt possible. Number (4) gives the procedure apparent legitimacy, and numbers (5), (6), and (7) describe the "evidence" used to support the argumentation. In the inquisitorial witch hunts in the middle ages, the accusation made tended to be of a fuzzy kind, like "being in league with the devil," a charge that is difficult or impossible to refute by empirical evidence. But evidence to support the accusation was not hard to come up with. Any kind of indicator, like being old or smelly or "weird" could be used as evidence to support the accusation. Something called "spectral evidence" was visible only to the accuser. Finally, numbers (8), (9), and (10) are the methods used in the evaluation of the evidence in the witch hunt.

The Inquisition is not really a single example of a witch hunt. It is a kind of mythic concept that covered many (typically) religious kinds of tribunals over many centuries in which heretics were punished on the grounds that they were non-believers in church orthodox dogmas, going as far back as the fourth century. But many specific witchcraft trials could be cited, including those in the European witchcraze of the sixteenth and seventeenth centuries. Other examples of witch hunts that can be cited are the Salem Witchcraft trials of 1692 and the McCarthy tribunals of the 1950s. In all these cases, we have what looks on the surface like a fair trial, but was in fact a kind of pseudo-trial designed to support the interests of a well-organized group who used the procedure as a method of enforcing adherence to a cause riding on a groundswell of public enthusiasm and fear. By forcing the accused to either "recant," "see the light," and become "re-educated," or face a severe penalty, like being burned at the stake-or nowadays, losing one's job-the witch hunt was used as a device to influence the balance of power during a time of turbulent social conflict.

In a fair trial the accusation-the charge to be proved or disproved-must be of a kind that can be supported or refuted by real evidence. So the notion of evidence is central to the idea of a fair trial, and the fair trial must be an open sort of procedure that gives both sides an opportunity to bring forward the relevant evidence to

support its side. It must be open, in certain respects, and two-sided, even though it should not be open to all arguments.

The fair trial can be thought of as a kind of persuasion dialogue in which both the proponent and the respondent attorneys, the prosecution and defense, have a designated proposition they must prove to win or be successful in the disputation. But there are a lot of other rules and requirements laid over this underlying framework. What both parties must use for this purpose is called "evidence" in law, and that is defined by rules of evidence, which vary from place to place.

To sum up, the fair trial can be thought of in two ways. Positively, it can be thought of as a kind of persuasion dialogue. But it is not exactly the same as a persuasion dialogue, because there are three distinctive parties involved. Negatively, the fair trial can be thought of as not being a witch hunt. To put this characteristic in a positive way, the fair trial must be an open and balanced forum for the introduction and evaluation of evidence where the defendant has a fair chance to give evidence of a kind that could be used to show that the allegations of the accuser are not supported by a strong enough argument of the kind that should be needed to prove the accusation. The first characteristic of the fair trial is that it involves the use of logical argumentation in which the contentions of two sides are opposed. The second characteristic is that there needs to be a forum in which both arguments can be heard and fairly judged. The rights of both sides to put forward the best case they can need to be respected. In particular, the trial should not just be an unbalanced witch hunt. The defendant should have some real possibility of finding and presenting sufficient evidence to persuade the trier that the contention of the other side has not been proved.

#### V. EVIDENCE

What constitutes evidence depends on how the evidence is supposedly being used to prove something for some purpose. Scientific evidence is supposed to be reproducible, meaning that the observation or empirical data upon which the evidence was based should be open to re-observation by a second party, who will then get the same result that was reported in the first instance. Much legal and historical evidence is not of this type, but rather is based on the testimony of a witness, often reporting a singular event, or in other words one that cannot be repeated. So legal evidence and scientific evidence are different. But both are legal evidence in some broad sense of the word. The common law of evidence has evolved into a set of rules for determining what constitutes legal evidence.

What is (supposedly) scientific evidence can become legal evidence, in a trial, but when looked at as legal evidence it is based on expert testimony. There are (disputed) criteria that determine when scientific evidence should count as legal evidence in a trial. In short then, scientific evidence has inherently different criteria for what should count as evidence than legal evidence, and both sets of criteria are determined by the methods of argumentation in use in science or law. But still, both are evidence in the sense that both kinds of argumentation are based on a premise of some sort of presumed observational report of some finding and on inferences drawn from that supposed finding. Both are evidence in a broad sense of that term.

The rules of legal evidence have evolved through a long tradition in which Bentham and Wigmore were the two leading theorists.<sup>36</sup> The culmination of this process is the set of rules currently used in the United States. According to the *Federal Rules of Evidence* (FRE), the purpose of the FRE is "that the truth may be ascertained and proceedings justly determined."<sup>37</sup> So the FRE has two goals. One is the determination of the truth. The other is the procedural fairness of that determination. The second aspect clearly admits a pragmatic element in the concept of legal evidence embodied in the FRE. These rules are based broadly on a philosophy of common sense empiricism in the tradition of Locke, Bentham and Mill, reflected in the conception of evidence of Wigmore.<sup>38</sup>

Relevance in the FRE is defined in Rule 401, where "relevant evidence" is defined as "evidence having any tendency to make the existence of any fact that is of consequence to the determination of the action more probable than it would be without the evidence."<sup>39</sup> The "action" is the allegation being tested by the trial. It is the proposition that is at issue in the trial, the proposition that is supposed to be proved or not by the trial. So this definition of relevance appears to be quite comparable to the basic notion of relevance in a critical discussion. But one question needs to be sorted out. What does "more probable" mean?

The idea of probability here should be interpreted not in the modern post-Enlightenment Pascalian sense of statistical probability, but in an acceptance-based sense of plausibility.<sup>40</sup> To say that a proposition is plausible is to say that it seems to be true, based on some-

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<sup>36</sup> See WILLIAM TWINING, THEORIES OF EVIDENCE: BENTHAM AND WIGMORE 1-18 (1985).

<sup>37</sup> FED. R. EVID. 102.

<sup>38</sup> See TWINING, *supra* note 36, at 109-67.

<sup>39</sup> FED. R. EVID. 401.

<sup>40</sup> See COHEN, *supra* note 7, at 2-4, 310-23.

body's impressions or supposed observations, or it is consistent with other propositions that are accepted is plausible, or it has been tested and supported by the outcome of the test. This criterion is essentially that of Carneades (second century B.C.).<sup>41</sup> This ancient idea of plausibility has different properties from the statistical notion of probability. To say that a proposition is plausible is to say that there is some weight of evidence in favor of accepting it, a weight of evidence that can be raised or lowered by new evidence that can come in. Inferences (deductive, inductive and presumptive) can be drawn from plausible propositions used as premises. The general rule of plausible reasoning advocated by Nicholas Rescher is the least plausible premise rule: in a deductively valid inference, the plausibility of the conclusion should be brought up to the plausibility level of the least plausible premise in the inference.<sup>42</sup> But whatever set of rules for plausible reasoning are used - and in the field of AI, there are many sets of such rules - plausible inference should be seen as representing a kind of reasoning that is inherently different from deductive and inductive reasoning. Different rules and standards of acceptance are appropriate, because plausible reasoning is inherently presumptive in nature, and its root notion of burden of proof is different from that of the other two kinds of inference. By means of plausible reasoning, a proposition is (tentatively) acceptable in a dialogue if one party in the dialogue brings it forward as an assumption, and the other party does not bring forward any evidence against it that would show that it should not be accepted at this point in the dialogue. A plausible assumption of this sort should always be regarded as open to defeat at some future point in the dialogue, because new evidence could come in that shows it is false. The burden of proof for such a proposition, it should be noted, is distributed in a way that is inherently negative in nature.

To reiterate then, according to the FRE, evidence is relevant if it makes the "action" to be determined, the proposition that is supposed to be proved (or disproved), more plausible or less plausible. This definition seems quite similar to the idea of relevance in a critical discussion, of a kind that might take place in everyday argumentation (outside the legal framework). But the similarity only goes so far. According to Rule 403 of the FRE, relevant evidence may be excluded "if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury, or by consid-

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<sup>41</sup> See BENSON MATES, *THE SKEPTIC WAY: SEXTUS EMPIRICUS'S OUTLINES OF PYRRHONISM* (1996).

<sup>42</sup> RESCHER, *PLAUSIBLE REASONING*, *supra* note 10.

eration of undue delay."<sup>43</sup> It is this excluding or "prophylactic" function of relevance in common law that makes this notion of relevance seem suspicious to outside observers.<sup>44</sup> What is evident is that the legal notion of relevance in the FRE departs from the extra-legal notion of relevance in the critical discussion by virtue of these special legal rules of exclusion. It was Bentham who was most noted for his advocacy of natural argumentation in law, and his opposition to "artificial" rules of exclusion that are used to bar evidence as "irrelevant."<sup>45</sup> As more exclusionary rules are added in, the legal notion of relevance comes to resemble the logical (dialectical) notion less and less, or to depart from it more and more on what evidence is considered to be relevant in a given case.

Still, there does seem to be a strong resemblance between the concept of relevance in the critical discussion and the concept of relevance in the legal trial. There is enough of a resemblance to encourage the hypothesis that the legal concept of relevance embodied in the FRE is basically the same (at least, in its roots) as the concept of relevance in the critical discussion type of dialogue outside the law. From the viewpoint of those theorists who think that legal argumentation is basically the same, in its underlying structure, as the kind of argumentation used in everyday extra-legal discourse, this hypothesis is very encouraging. It suggests a new way of working out models of inference for analyzing and evaluating legal argumentation that is much more promising than the deductive and inductive models that have dominated legal logic in the past.

## VI. ARGUMENTATION SCHEMES

An important aspect of relevance is the determination of the probative value of an argument in relation to the general claim to be proved in a case. At the initial stage of the presentation of the evidence in a trial, for example, it may be hard to judge whether some argument will turn out to be relevant in the end or not. Such a determination can be made only by projecting the argument forward, and asking how it could be used in a longer chain of argumentation that aims towards the claim to be proven, and affects its plausibility value. What is important here is the probative function of the argument, and how it could be used to prove something. Many different kinds of arguments can have a probative function.

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43 FED. R. EVID. 403.

44 See MIRJAN R. DAMASEA, EVIDENCE LAW ADRIFT 55 (1997).

45 See TWINING, *supra* note 36, at 47-52.

In addition to the deductive and inductive types of inference usually featured in logic textbooks as representing the forms of argument, twenty-five so-called argumentation schemes or presumptive forms of inference have been defined.<sup>46</sup> Presumptive reasoning is a form of argumentation that has to do with practical decisions in situations where exact knowledge is insufficient to yield a decisive solution to the problem. Presumptive reasoning is based on burden of proof in a dialogue and is a defeasible kind of reasoning that is open to default and revision. The following list comprises the twenty-five presumptive argumentation schemes:<sup>47</sup>

- (1) argument from sign;
- (2) argument from example;
- (3) argument from verbal classification;
- (4) argument from commitment;
- (5) circumstantial argument against the person;
- (6) argument from position to know;
- (7) argument from expert opinion;
- (8) argument from evidence to a hypothesis;
- (9) argument from correlation to cause;
- (10) argument from cause to effect;
- (11) argument from consequences;
- (10) argument from analogy;
- (13) argument from waste;
- (14) argument from popular opinion;
- (15) ethotic argument;
- (16) argument from bias;
- (17) argument from an established rule;
- (18) argument from precedent;
- (19) argument from gradualism;
- (20) causal slippery slope argument;
- (21) precedent slippery slope argument;
- (22) argument from vagueness of a verbal classification;
- (23) argument from arbitrariness of a verbal classification;
- (24) verbal slippery slope argument;
- (25) full slippery slope argument.

This list is not meant to be complete. Many of these forms of argument were recognized by Perelman and Olbrechts-Tyteca,<sup>48</sup> and they cited many other forms as well. Actually, the identification and

<sup>46</sup> See DOUGLAS N. WALTON, ARGUMENTATION SCHEMES FOR PRESUMPTIVE REASONING 46-110 (1996).

<sup>47</sup> See *id.*

<sup>48</sup> See PERELMAN & OLBRECHTS-TYTECA, *supra* note 3, at 193-410.

classification of these everyday types of argument, traditionally called "topics" (*topoi*) goes back to Aristotle's *Topics*,<sup>49</sup> a book on dialectical argumentation that covers hundreds of these topics used in disputes. But the first modern treatment of argumentation schemes to present a useful account of these forms of argument was that of Arthur Hastings.<sup>50</sup> An account that is both comprehensive and useful is that of Manfred Kienpointner.<sup>51</sup> These forms of argument are plausibilistic in an ancient sense well known to Plato, Aristotle, and other philosophers of antiquity.<sup>52</sup> The word "probable," often used to describe this kind of reasoning, is misleading ever since the advent of the science of statistical reasoning. Plausible reasoning is default reasoning based on generalizations concerning what is normally the case (subject to exceptions) in a given situation.<sup>53</sup> To say that something is plausible means that it seems to be the case, and therefore that it can tentatively be accepted as true because it has a weight of evidence in its favor. But such a conclusion is warranted only provided that, in the larger body of evidence available, there is no stronger weight of evidence against accepting it. What has only recently been learned is that these familiar kinds of plausibilistic inferences do have definite forms as arguments.

It is not too difficult to see how these presumptive forms of inference are basic to evaluating everyday legal argumentation. For example, argument from testimony is a subspecies of argument from position to know. So is argument from expert opinion, another form of argument that looms large in evidence law, and in argumentation used in trials. The example of argument from expert opinion is typical of how these presumptive argumentation schemes work. Traditionally treated in logic textbooks as a fallacy, this form of argument is best evaluated in a given case by examining the question-reply sequence of how the expert's expressed opinion was used in a dialogue by a proponent to make a point to support her side of the case. What is important is to know the right critical questions to ask, and to observe how or if they were asked and replied to in a given case. Lawyers are already familiar with the argumentation skills needed for the suc-

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49 ARISTOTLE, *TOPICA* (E.S. Forster transl., Loeb Classical Library, Harvard Univ. Press 1939).

50 See Arthur C. Hastings, *A Reformulation of the Modes of Reasoning in Argumentation* (1962) (unpublished Ph.D. dissertation, Northwestern University) (on file with author).

51 See MANFRED KIENPOINTNER, *ALLTAGSLÖGIC* (1992).

52 See Michael Gagarin, *Probability and Persuasion: Plato and Early Greek Rhetoric*, in *PERSUASION: GREEK RHETORIC IN ACTION* 46-68 (Ian Worthington ed., 1994).

53 See RESCHER, *PLAUSIBLE REASONING*, *supra* note 10.

cessful cross-examination of an expert witness. The importance and legitimacy of appeal to expert opinion has also been emphasized in the use of expert systems in AI and the application of this technology to all kinds of uses.

At any rate, enough has been said to indicate the importance of presumptive reasoning and the need to evaluate it pragmatically in law. Deductive and inductive reasoning have been so strongly emphasized in logic for over two thousand years that the pragmatic study of presumptive reasoning has been given little serious attention at all.

#### VII. FALLACIES

The traditional informal fallacies are arguments that are quite often reasonable, as used both in legal contexts<sup>54</sup> and in everyday argumentation, but tend to be arguments that are of a presumptive and defeasible sort that can, in some cases, be abused. As noted above, the fallacious argument has been used to subvert or block the goals of a dialogue, instead of moving the dialogue forward. Prominent examples are the *ad hominem*, or argument against the person, the appeal to expert opinion, and various appeals to emotion, like the appeal to pity. These arguments can be reasonable and appropriate in some cases in legal argumentation, while in other cases they are irrelevant. In such cases, they can be powerfully distracting and prejudicial arguments that ought not to be considered relevant, and, if they have been used, need to be handled with care.

The whole branch of logic called informal fallacies needs to be rethought, and the common kinds of arguments associated with fallacies need to be judged and analyzed in the pragmatic framework sketched out above, as opposed to the traditional frameworks of deductive and inductive logic. This field of fallacy study is very much applicable to legal argumentation, and there is much work to be done in this area. Not only the use of character in *ad hominem* argumentation, but also the whole topic of relevance and many other traditional kinds of fallacies as well, need to be studied as they are used in legal cases in trials. Expert testimony is an entire area requiring much more work of a logical nature. The pragmatic evaluation of the appeal to expert opinion as a type of argument is another area needing attention.

Critical thinking textbooks of the kind used in the undergraduate curricula in universities already use legal examples, and some law schools already realize that skills of argumentation and logical reason-

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<sup>54</sup> See Kevin W. Saunders, *Informal Fallacies in Legal Argumentation*, 44 S.C.L. REV. 343 (1993).



ing are central to the methodology of law as a discipline. But I think an improvement can be made by joining together the teaching of logic in these two curricula. Critical thinking textbooks could use more legal examples, and for this purpose, a data base of interesting legal cases illustrating problems of argument evaluation needs to be built up. Students are often initially inclined to dismiss fallacies as trivial errors. But legal case studies can show that fallacies and other logical difficulties really are quite important in cases where a lot of money is at stake. One side of the problem is that law schools do not presently put a priority on logic. The other side is that university courses on critical thinking cannot afford to specialize too much on cases and examples that are mainly of interest to pre-law students. Somehow this gap needs to be filled by finding the right balance in how logic is taught. The materials are there for solving the problem, but it will require research on fallacies and legal reasoning, as well as improving how these matters are taught. Robert Rodes' and Howard Pospesel's new book<sup>55</sup> is one big step towards these goals, but my argument is that extending their chapter on the pragmatics of disputation in the direction indicated is another required step if legal practitioners are to be convinced that logic can be centrally useful to them.

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55 RODES & POSPESEL, *supra* note 1.