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Understanding Legal Argument

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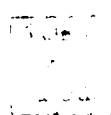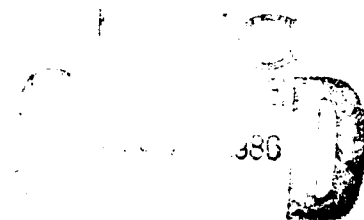
UNDERSTANDING LEGAL ARGUMENT

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2

ABSTRACT

Although argument in law has occurred for hundreds of years, it remains a difficult concept to define. We would like to model the process an attorney undergoes when he argues for a given case; the context he works in, the techniques he utilizes, and the goals he strives for. To begin to understand this phenomena we must first examine the nature of argument in itself; why and how it occurs. Only within that framework can we begin to look at the specialized field of legal argument. At that point we can delineate categories or types of legal argument, what we might call meta-level dialectic strategies, specific tactics, and general argumentation tools an attorney might find useful. We shall conclude with thoughts toward an AI model and its interaction with other elements of a complete legal reasoning system.

1. INTRODUCTION

"The lawyer aims at victory, at winning the fight, but not always at aiding the court to discover the facts. He does not want the judge or jury to reach a sound educated conclusion, if that decision is likely to be against his client's best interests. Ideally, scientific or logical laws would exist for determining rationally the persuasive effect of the lawyer, judge, witnesses, or messages. However, no such laws exist. We can never be certain exactly what will happen in a specific courtroom. No set of rules has been developed to guarantee the lawyer's success in persuading a particular jury to a specific course of action." [Applbaum & Anatol 74]

Such are the problems confronting us when we attempt to understand legal argument. The goal of this research is an attempt to characterize and provide a framework for argumentation as it occurs in the legal domain. With that characterization in hand, we will look at how this component might be developed to interact with a legal reasoning system, such as HYPO [Ashley & Rissland 85]. Although several efforts within the artificial intelligence community have been made to model argumentation and legal reasoning, none have approached the level of clarity and depth of understanding necessary in legal dialectic. The research presented here has, for the most part, excluded any work done in AI. We have instead focused on discussions and models presented by scholars of argument, rhetoric, and law in an attempt to provide a comprehensive and pragmatic view of the problem. Although dissension exists even amongst this group as to the actual nature of legal argument, enough common underlying themes exist in the research to allow us to make a confident characterization of the problem.

It is generally agreed that legal argumentation is a complex process which consists of many distinct elements including problem definition, fact interpretation, and data retrieval [Ashley & Rissland 85]. This research, however, is concerned with the methods an attorney uses to structure the results of these processes into a cohesive, logical, and persuasive presentation. Successful communication of this information should result in an affirmative acquiescence by the critic. The means to this end are numerous. It is imperative that analysis of these means begin with a discussion of both the context in which the argument resides and the purpose for which it exists.

2. THE NATURE OF LEGAL ARGUMENT

Legal argumentation may best be thought of as a communication process. The attorney attempts to express the relevant facts and applicable rules of a case to the judge and jury in such a way that they will agree with his point of view. Although the facts and rules remain constant, different sets of critics may have contradictory interpretations of the information. How can this seemingly irrational process be explained? The answer may be partly accounted for by studying the very foundations of argument. The argumentation process is, in general, a complex and specialized system. It may be best explained and defined by examining the purpose for which it exists in a given context. People debating on a street corner about who will win the World Series, lawyers involved in passionate advocacy before the Supreme Court, and a mathematician constructing a proof of a theorem are all engaging in argument, however, the techniques they use and the goals they seek vary. Logical and rhetorical views of argument are at the extreme ends of the spectrum.

The logical view of argument may be likened to a mathematician developing a proof. The soundness of the proposition lies in its validity. It is either right or wrong; there are no intermediate levels of correctness. The logician is concerned with the form and structure of the argument. This study is done without consideration of audience appeal. It is assumed that a correct logical formalization of the proposition constitutes proof and, therefore, acceptance. The crux of this system lies in proofs by deduction and induction. A deductive proof, for example, is valid if the argument has premises that necessitate a given conclusion. In short, the logical relationships among the statements in a proposition form the basis of the logical view of argument.

The rhetorical view of argument subsumes many of the concerns of the logical, however, the basis for soundness is vastly different. The rhetorician is most interested in audience response to propositions. Valid logical arguments are sought, not in terms of their structure and form, but rather in consideration of how well they convince an audience to adhere to a given proposal. Whereas the logician will be most concerned with the analysis of a single argument, the rhetorician will study the interaction of many arguments in determining their persuasive appeal; the rhetorical standard of assessment. Consequently, arguments will not be judged right or wrong, they will be considered strong or weak. Deductive and inductive proofs are acceptable tools in the rhetorical view only if they further strengthen the appeal of the argumentative discourse. The rhetorical view of argument is, however, far more complex than this discussion might suggest. Scholars of rhetoric also study questions about the reasons for argument, where argument occurs, how it occurs,

etc..., but this level of description will suffice for our current needs.

Legal dialectic, as a specialized field of argument, must be placed somewhere in this continuum. In ancient times, the study of rhetoric was central to many fields, especially law. As the *study* of law changed over the years, the separation of it from rhetoric grew more distinct. However, its use in the *practice* of law remained strong. Even now, scholars argue over the use and importance of rhetoric in law. As Rieke and Sillars point out,

> "At one extreme are those who believe that truth (the correct or just decision) is 'found' through a logical analysis of established legal principles in combination with the 'facts' of the case at hand; at the other extreme are those who believe that the 'decision' (not necessarily truth or justice) will be granted to those whose arguments are the most persuasive, and so-called facts and principles will be adjusted to accomodate that decision." [Rieke & Sillars 83]

This radical difference in belief lies in the distinct separation of theory and practice of law. Teachers of law, in an apparent attempt to preserve both the sanctity of jurisprudence and traditions of formal law training, stress the study of statutes, judicial opinions, and legal philosophy. Practitioners of law, viewing law as essentially a communiation process, realize the need to effectively and persuasively present their case to an audience. Hence, these rhetorical and communication skills are imperative to the practitioner. The formal training is no less important, but it is not enough. (A more thorough analysis of this issue can be found in [Rieke & Sillars 83]) Regardless of the reasons for this division, the apparent necessity for some rhetorical analysis is present. If this is the case, then the role of the audience becomes crucial. Since the audience in legal argumentation is a very specialized group, it is possible, in fact imperative, to develop a user model that can be used in developing effective argument strategies.

3. JUSTIFICATION AND JUDICIAL COMMUNICATION

The audience in legal argument, at the appelate level, is the judge. He interprets the information presented by the attorneys and renders a decision based on some criteria. That criteria, whatever it may be, becomes the focal point of the rhetorical analysis of legal argument. The valid argument in the eye of critic is the persuasive argument in the eye of the proponent. However, in any domain with a critic, we

6

cannot reasonably expect the judge to maintain a "tabula rasa" mentality, where his decision is presumably based only on the propositions presented to him during the course of an argument. In that case, the criteria is merely the validity and soundness of the propositions forwarded. Unfortunately, this simplistic, perhaps perfect world exists in theory only. We must, therefore, attempt to account for any external factors that may motivate the critic to rule in a certain way.

It is generally accepted that people often interpret events in terms of their own goals. Research by Bain [Bain 84] has indicated that this type of "subjective interpretation" is prevalent in much of legal reasoning and decision-making. Rational, totally unbiased reasoning is difficult when intuitions, beliefs, and values must be accounted for on the part of the critic. As Jerome Frank explains,

> "There is a sense in which judging of all kinds begins with a conclusion more or less vaguely formed; a man ordinarily starts with such a conclusion and afterwards tries to find premises which will substantiate it. If he cannot, to his satisfaction, find proper arguments ... he will, unless he is arbitrary or mad, reject the conclusion and seek another."
> [in Jones 76]

Surprisingly, this claim has often been best exemplified by justices of the highest court in the land. Justice "Burger," as explained by Woodward and Armstrong, "would often write short dissents or concurrences to opinions scheduled to come down the following week. These short opinions were his gut reactions, often angry in tone. They expressed his notion of right and wrong, of common sense - his real political philosophy." [in Hennen 81] A more extreme example comes from Raoul Berger, who pointed out that in the 1950's landmark Brown v. Board of Education cases, Justice Felix Frankfurter "had made up his mind from the day the cases were taken that segregation must go!" [in Parker 81] This is not to suggest that in all cases the outcome of the trial is decided a priori. As Frank pointed out, if the expectations of the critic are not met he must reject or reform his previous hypothesis. Parker, however, concludes that, "Although not all cases exhibit this [realist perspective] characteristic, one can conclude that the "real" reason for decision (which is of paramount importance to the philosopher) may be irrelevant to the critic of the opinion, who must assess the written and spoken words as a species of rhetoric." [Parker 81]

If we take the previous theory of judicial decision-making at face value, it would seem that attorneys are confronted with an unreasonable task. We must remember, however, that the judge is held accountable for his rationale. In many cases, this rationale will be explained in the judicial opinion. Critical examination of the opinion can yield insight into both the nature of subjective interpretation and the effectiveness of various argumentative strategies by lawyers. The latter insight, which

is more beneficial to this research, will discussed shortly, but it is important to briefly discuss the former. Overall, the rhetorical view is supported. Hagan argues,

> "One evidence of the rhetorical nature of court decisions is the function they perform. They are written not as investigative enterprises leading to the conclusions drawn by the justices, but as means of justifying decisions previously arrived at. If well done, they help assure the public and other courts that decisions are not based on pure whim or prejudice. They show that there are rationale for decisions." [Hagan 76]

Attempts have been made to categorize the nature of argument in judicial opinions; mostly by scholars of argument and rhetorical criticism. Parker [Parker 81] points out that three approaches have traditionally been used: intuition, formal logic, and quasi-logical. The first two should be clear from previous discussion. The latter, quasi-logical, refers to a "loose" system of formal logic that combines elements of the other two approaches. The research is inconclusive, though. A best guess is that the analysis in judicial opinions forms a category that cuts across all three traditional viewpoints. Paramount to this research is the fact that all evidence indicates little reliance upon formal logic systems, thereby furthering the previous notion that a rhetorical, communicative approach must be taken to construct effective argument strategies for the lawyer.

One other seemingly less important characteristic of subjective interpetation has great implications for this research. Judges will not only be predisposed to a certain verdict for which they seek justification, but they will seek this justification in certain forms. They will, in essence, anticipate the arguments the lawyers are likely to make; not in terms of structure, but in terms of type or category. Two distinct classes of categorization have been analyzed. The first approach, taken by Dicks [Dicks 76], is an attempt to group the arguments in law according to the classical system of stasis or stock issues. This system has four classes; questions of fact, definition, quality, and objection. It is interesting to note that this classification is not specific to jurisprudence, but it is relevant to legal dialectic. In law, questions of fact usually entail a question of existence; whether an action, motive, or behavior occurred. Definition refers to the matching of fact and a legal precept. For example, does the established fact that one person aimed a gun at another constitute a crime. Questions of quality will only occur when the previous two categories have been established. The argument then focusses on, for example, the possibilty of mitigating factors. The final component, objection, occurs in Dicks' system when there are questions of legal process. Dicks concludes that this system allows "a fairly complete cataloguing of all issues and arguments." The classification has a major limitation, however. Dicks explains, "We can discover that most of the argument was in the stasis of fact, but we cannot explain why. We are also unable to determine the impact of any particular issue or argument on the jury." In other

8

words, we can identify, in this system, the type of most arguments presented, but we have difficulty providing heuristics or measurements of effectiveness for their use at a given time. A category system specific to law was analyzed by Jones [Jones 76]. His specific catalogue was a hybrid of others previously discussed to classify justification in judicial opinions. The system has eight components:

1. CONSTITUTIONAL INTENTION refers to the intention of the framers.

2. HISTORY applies to decisions based on historical information.

3. PRECEDENT is the use of applicable preceding cases.

4. ADAPTIVE is applicable when there are no precedents available for the current situation and the court must "adapt" to this new situation.

5. CURRENT USAGE is similar to adaptive except that the unique situation has been dealt with by other areas of government or by the states.

6. LITERAL MEANING refers to the test that common men will be able to read the law and interpret it in the same way as the court.

7. DEPRECIATION emphasizes reestablishing the present system contrary to a previously arrived at decision.

8. PRAGMATICS focusses on the practicality of questions of policy.

Jones studied this system with respect to a series of Supreme Court cases by reviewing the briefs of the lawyers and the opinions written by the court. Like Dicks, Jones was able to successfully identify the use of all categories in the arguments presented by both advocate and critic. Unlike Dicks, we are able to draw some conclusions about why certain arguments are made. This allows us to begin to hypothesize about potentially effective rhetorical argument strategies.

The identification of types of relevant arguments is the first step in dealing with subjective interpretation. In a sense, it puts attorney and judge on common ground. The question of their use remains to be answered. After categorizing the arguments, Jones found that the lawyers tended to present arguments in all of the categories when, as he points out, "justices need only a few justifications to establish their decision." Presumably, any single argument or small subset of them would be sufficient to "prove" their case. In fact, each justice in this study only utilized a small set of the justification categories in their opinions. The lawyers, realizing that the justices may each be predisposed to a certain verdict and, therefore, are seeking justifications for those expectations, much present as broad an analysis as possible in

the hopes of "hitting upon" the key issue. This implies making arguments in as many categories as possible. The justices not only made arguments in a subset of the justification classes, they each also used a different group. Certainly in some cases the lawyers will be familiar with the tendencies of a judge and can restrict their argument somewhat. Usually, and certainly if we are dealing with a computational model, this will not be the case. This awareness will allow the development of some surprisingly simple rhetorical argument strategies.

Argument strategies, as defined by Dicks, are "broad plans which determine how an advocate will adapt the presentation of his analysis ... to heighten the persuasive impact." [Dicks 81] These meta-level dialectic strategies, as explained earlier, are a part of a comprehensive rhetorical plan that is concerned with the interaction and presentation of single arguments. The form and use of a single proposition, which shall be referred to as argument tactics, will be discussed later. Based on our notions of judicial communication, it is possible to construct several strategies that effectively recognize and deal with subjective interpretation. It is not necessary for the strategies to explicitly handle this phenomena; indeed, this point is critical if we are to discuss potential machine applications. Rather, the mere structure of these items implicitly recognizes their importance. The first strategy, convergence, refers to establishing several independent lines of justification that all lead to the same conclusion. The aforementioned study by Jones indicated the practicality of this strategy. All attorneys in that survey made arguments from each of the justification categories although it was logically unnecessary. This strategy accrues several advantages. To begin with, we increase the likelihood of making the justification sought by the critic. More importantly, a persuasive case is made by the advocate. Perelman expounds,

> "If several distinct arguments lead to a single conclusion, be it general
> or partial, final or provisional, the value attributed to the conclusion
> and to each separate argument will be augmented, for the likelihood
> that several entirely erroneous arguments would reach the same result is
> very small." [Perelman & Olbrechts-Tyteca 69]

Finally, the argument is strengthened from a logical point of view. If many distinct lines of analysis can be developed that all point to the same conclusion, several independent arguments can still support the conclusion should the adversary successfully refute one or two of them. One potential danger must be guarded against when utilizing this strategy. The temptation is great to make as many arguments as possible, regardless of their strength. Weak arguments, made only for the sake of "more is better," should be avoided since, Perelman explains, "making them [weak arguments] raises the serious presumption that he [the speaker] has no better arguments available, or even that there are no others. Without realizing it, a speaker who advances weak arguments may destroy other stronger arguments which

10

might have spontaneously entered the hearer's mind." [Perelman & Olbrechts-Tyteca 69] The second strategy, that of **fullness or breadth** of argument, refers to the expansion of a single argument within itself, with other arguments, or the interweaving of several distinct propositions. Again, the strategy is not utilized because of particular logical reasons, but rather for the persuasive appeal. Increased amplitude of a single argument tends to strengthen its validity in the hearer's mind through shear repetition. Several arguments working together makes the case appear as a logical, cohesive unit thereby increasing its viability. For example, one might refute a point of the adversary, explain the faulty reasoning behind the proposition, and attack other points based on implications of the irrationality. The third strategy deals with the importance of **refutation**. The rhetorical analysis operates in the world of the probable. The critic must make a decision between the choices presented to him. The overriding goal of the attorney must be to make his alternative the best option available to the judge. If both adversaries attempt to only strengthen their own case without rebutting the other, the final decision will have to be a subjective one on the part of the critic. This is certainly not the ideal approach. Therefore, refutation becomes an equally important concern. The final strategy, maintaining **consistency**, is not specific to any of the issues just presented, however, it is a, if not the prime consideration of any argument process. Propositions at some level or in some category should not be forwarded if they are contrary to or weaken other arguments. This would not only destroy the individual arguments but, more importantly, would significantly lessen the persuasive appeal of the presentation as a whole in the mind of the critic. Consistency must be an overriding concern at all levels, thus, it should be thought of as a stategy. With these meta-level strategies for argument interaction in mind, we can begin to discuss the form and types of specific arguments.

4. ARGUMENT TACTICS

Tactics in legal argumentation refer to single or small groups of propositions that may be used offensively (to strengthen one's position) and defensively (to weaken the position of the opposition). The discussion of these tactics will involve a combination of logical and rhetorical considerations. Although the first sets of tactics presented have been forwarded in the context of legal dialectic, they are, in fact, generally applicable to most fields of argument. In addition, tactics in argument involving the use of examples and analogy will be delineated. These types of argument are prevalent in the use of leading cases or precedent; theoretically, the basis of most legal argument.

Rissland [Rissland 84] has identified six argument tactics or "moves" that are useful in manipulating hypothetical cases in legal argument. However, these moves, as indicated above, are relevant to argument in any of the categories of justification prevalent in law. The work of Rissland will be extended to include some rough heuristics that might be utilized to indicate the applicability of a move in a given situation. This is a necessity if a comprehensive model of legal argument is to be developed. The first move, **bolstering**, refers to the addition of facts to strengthen the proposition. It is primarily an offensive maneuver. Bolstering can always be done if the data or evidence is available. However, if refutation of the opposition is difficult, bolstering becomes essential as it is then imperative to prove as strong a case as possible. Mooting is a tactic than involves introducing data or arguments that make another point or proposition irrelevant. This tactic will usually be used defensively or as a tool of refutation by indirectly defeating an argument of the adversary by making it inconsequential. It may also be utilized to preempt likely moves by the opponent by destroying the grounds on which they will be based. The next tactic, **shifting**, involves moving the argument to different grounds, again by the introduction of facts or arguments. Shifting may be used offensively to move the basis for argument to grounds on which a strong case can be made and bolstered. Defensively, argument should be shifted if the current relevant grounds of dispute allow a damaging case to be made by the opposition. **Obfuscation** is essentially a "trick" tactic that is designed to confuse the opponent. This move attempts to add facts or arguments that obscure the relevant details of the case and, therefore, move the adversary into inconsequential grounds. It may be used defensively as shifting to throw the opponent off the track of strong arguments, or offensively as an attempt to gain a basis for arguments from the spurious propositions of the opposition. In **focusing**, facts and arguments are made to emphasize certain issues in the case. Primary consideration must be given to these points, and the emphasis of them will, hopefully, exclude other subsidiary points that might confuse, weaken, or complicate the proposition. Further, the defensive use of this tactic will act like shifting, where minor points in the issue at hand can provide a basis for attack by the oppposition. The final tactic in Rissland's scheme, **minimizing exposure**, is a purely defensive move intended to remove facts that will provide likely points for opposition arguments. It is similar to a defensive use of shifting where an attempt is made to preempt a potentially damaging argument, expect that the grounds are not *ignored* as in shifting, but are *deleted*, in some sense, from the relevant issues of the dispute. The crucial point in the use of these tactics is their dependence on data. It is not possible to a priori determine which tactics should or will be used. The available evidence coupled with an analysis of the case determine the applicability and necessity of a given tactic.

A second set of tactics has been forwarded by Dicks [Dicks 81]. These tactics were derived by identifying and grouping patterns of argument as they actually occurred during the course of a trial. In addition, the tactics were grouped into two categories: forensic and deliberative strategies. The former pertains to the rhetorical

argumentation in law that we normally expect to occur, given the previous discussion. The latter class, deliberative strategy, is relevant when questions of policy exist above and beyond the specific case. This category exists given the context of the trial, however, the tactics are generally independent of any meta category and they will be discussed as such. The first tactic presented by Dicks, focus, is similar to the one forwarded by Rissland. However, the emphasis in this system is on the rhetorical value of the tactic. Here, focussing refers to the accentuation of certain items in the case in an attempt to persuade the critic that they are the most relevant and, therefore, should form the basis of the decision. Logically, as was delineated in the previous system, these elements will likely be the areas where the strongest case can be made. The judge, however, must be convinced of the importance of these grounds. Itemization, the second tactic in Dicks' system, is strictly rhetorical. It refers to an unemphasized listing of all the relevant items in an issue in order to persuade the critic that the area has been thoroughly researched with all evidence pointing to the same conclusion. This is similar to the strategy of argument convergence at a different level. The third tactic is the general idea of refutation, attacking the arguments of the opponent, various means of which have already been discussed. The next tactic, suppression, is posited with respect to the use of evidence in legal argument. This tactic simply suggests that certain data should be prevented, or at least limited, from disclosure during the course of a trial if it is damaging or biased against the case. Description is similar to itemization except that it applies to a delineation of the characteristics of a single issue, concept, object, or situation. It is essential to promote a clear and fully understood analysis of the case. The final tactic, vilification, refers to the presentation of the opposition as intentionally evil. It is primarily a rhetorical argument if it is only pursued to obtain a damaging characterization of the adversary in the mind of the critic. However, it can serve as a logical argument if, for example, the opponent's case is based upon the premise that the accused is essentially a good person incapable of a malicious act. Again, the construction of applicability heuristics for these field independent tactics requires context specific information.

These general tactics will be applicable to most, if not all, types of legal argument. However, additional techniques to deal with some specialized forms of argument, examples and analogy, must be examined. These propositional types are paramount to the use of leading cases; the principle of stare decisis. Although arguments involving precedent are not the exclusive basis for legal decision rendering, they are undeniably important. If we assume the primary rule of justice to be "those who are essentially similar should be treated alike" [Perelman 63], then relevant prior decisions must be scrutinized. Roscoe Pound explains the importance of precedent,

> "The chief cause of the success of our common-law doctrine of precedents as a form of law is that it combines certainty and power of growth as no other doctrine has been able to do. Certainty is insured

within reasonable limits in that the court proceeds by analogy of rules
and doctrines in the traditional system and develops a principle for the
cause before it according to known techniques. Growth is insured in
that the limits of the principle are not fixed authoritatively once for all
but are discovered gradually by a process of inclusion and exclusion as
cases arise which bring out its practical workings and prove how far it
may be made to do justice in its actual operation." [in Golding 84]

In general, three different argumentative uses for previous cases can be analyzed; to
establish, modify, or reject a rule. The first use, establishment, refers to two distinct
processes. The attorney may argue that the case in the dispute at hand can be
characterized as intrinsically similar to prior cases, hence, the rule found in those
cases should be applied to the current situation. In addition, the current dispute
may be argued as completely distinct from any previous decisions and, therefore, a
new rule must be constucted to adapt to this new situation. Rule modification is
applicable when the given facts are somewhat similar to previous rulings and can be
grouped accordingly if the rule is changed slightly. Finally, argument for rule
rejection may occur if the dispute concurrs with prior cases in most instances, but is
anomalous in some characteristic that is significant enough to render the rule
impractical. These somewhat abstract notions will become more lucid as specific uses
of argument by example and analogy are examined.

Arguments by example can serve two purposes in legal dialectic. The first use
is as a form of generalization. Examples are designed to establish rules and, in fact,
the principle of stare decisis relies heavily on this notion. Levi [Levi 48] claims that
case to case example-based reasoning forms the basis of legal reasoning. The
process, he argues, involves constructing a rule based on a description of a prior case
and applying it to a similar new case. The steps in this method include finding a
similarity between cases, detailing the rule of law in the first case, and applying this
rule to the new case. This idea, although announced as arguing by example, is
intrinsically similar to analogical reasoning. This will not be the case in all domains.
However, factors inherent in jurisprudence dictate this similarity. We have also
ignored an analysis of the individual steps in this process. For example, "finding"
the similarity between cases can be a complex task. At this level the concern lies
more in a general use of these techniques and the discussion will focus on that
point. Examples may also be used as a form of refutation in all types of legal
argument. Counter examples are "'exceptions' to the rules or the cases that overturn
a rule." [Rissland 84] These situations, many times cases, must be similar at some
level, with a contrary outcome. Most often a single counter example will be
sufficient to defeat or at least significantly reduce the impact of the opposition's
claim.

14

Analogical reasoning, although prevalent in law, is one of the least structured forms of argument. Some authors have gone as far as to label it a fallacy, not because it is irrational reasoning, but because it is weaker than other traditional forms of argument, such as deductive reasoning. A general logical structure of this tactic can be viewed as reasoning from the existence of some similarities to the presence of another similarity. We have already discussed various applications and uses of analogical reasoning. It is now necessary to establish means by which a strong analogical argument can be made. This goal will be accomplished by viewing methods of refutation specific to analogies. If these potential weaknesses are identified and accounted for as one's own analogy is developed a sound proposition may be forwarded. The first tactic in refutation deals with the number of similarities claimed between two objects. One may argue that there are not enough corresponding elements out of the relevant universe to justify the objects being termed analogous. There is no ideal number of matches to be sought; much is dependent on the structure of the items themselves. This is one example of the ill-defined nature of analogical reasoning. Paradoxically, it cannot be claimed that all properties of the objects are similar because this implies the objects are identical, not analogous. The next mode of refutation involves a direct attack on the similarities. In other words, the strength of the argument claiming a pair of properties to be homologous is disputed. It is not necessarily imperative to question every match, again, if enough are weakened, there may not be enough left to support the claim. Further, "dysanalogies" may be argued as a mitigating factor. This refers to items in the objects that are decidedly not similar; they are unshared properties. If the strength or number of these dysanalogies is great enough the objects cannot be viewed as analogous, although they may indeed have several corresponding properties. These tactics all involve a dispute, on some level, of the observed similarities between two objects. One may also construct arguments that acknowledge analogous objects, but then manipulate these instances to derive contrary rules or conclusions. The first tactic of this type roughly utilizes a rule of symmetry. If it is argued that a prior object A is analogous to the current instance B, then one should be able to argue the reverse, that B is analgous to A. This notion may appear futile, however, in many situations, the same propositions cannot rationally be applied to result in the same claim. More importantly, a rough translation of the law of transitivity may be applied. This involves the use of a third object C that can be claimed as analogous to A and B given the prior arguments. However, the rule or conclusion implicit in C will be contrary to the one applicable in A. Consequently, the very same analogy argues for contradictory conclusions. If this dilemma cannot be resolved, the argument cannot be accepted. The means utilized to specifically develop any of these tactics will vary, however, a common base structure for their construction must be considered.

5. THE STRUCTURE OF ARGUMENT

We now move to the final level in the analysis of argument. Discussion of argumentation must provide an elemental description of the structure of a single proposition. The model we shall utilize is one presented by Stephen Toulmin [Toulmin 58]. The Toulmin model is one of the most widely accepted formalizations in existence as it is applicable to all fields of dialectic. Despite some criticisms (the most serious is that no mechanism formally guarantees the validity of a claim - for more see [Willard 83]), it will be more than sufficient for our needs. Besides providing a framework for the construction of arguments, the breakdown it provides allows analysis and criticism of propositions to occur at several levels.

Argument, as seen by Toulmin, is defined as "movement from accepted data, through a warrant, to a claim." The components data, warrant, and claim together represent the necessary features of an argument in this model. Data is simply the evidence or grounds from which an argument is based. The data must be either obviously present or strongly implied to insure a substantive basis for the proposition. The claim is the conclusion reached by the argument. It may serve as either the final position in the argument or as an intermediate step that will be used as data in the next argument. The warrant is the crucial element in the model. It represents the *leap* from data to claim. In its simplest form, we could logically view data, warrant, claim as:

$$P(a) \quad \& \quad [P(x) \rightarrow Q(x)] \quad \longrightarrow \quad Q(a).$$

The warrant can be much more complex either in itself or when considered in conjunction with the backing component. The components backing, rebuttal, and qualifier represent the optional pieces of the Toulmin model. It is these features that allow the model a great deal of flexibility and give it advantages over other formalisms. Backing is support for the credibility or correctness of the warrant. It may consist of a single item or another entire argument. The rebuttal allows arguments to be made conditionally. It recognizes factors under which the claim may not be supported or will be qualified in a restricted way. It also enables the preemption of certain attacks by limiting the scope of the claim. Finally, the qualifier assigns a probability or degree to the claim. For example, the qualifier might take a quantitative form such as "probably," "usually," or "possibly." This view of the structure of argument offers two primary advantages over other forms. The first is the creation of a mechanism, the backing component, that requires the establishment of grounds for a warrant rather than allowing it to be uncontestable or assumed. The second advantage is that the process of argument can be broken down into a system of components that can be viewed, analyzed, and disputed at

several distinct levels. It is this advantage that will be used to identify general argument tactics for analysis and refutation. An equally important use of this model, however, will be as a guide to the construction of strong arguments. All tactics that may be used in attacking an adversary should be considered when developing arguments as a preemptive measure.

The importance of refutation has already been viewed at several levels. Analysis of the propositions of the opponent using the Toulmin structural description will provide even more. The process must begin with an understanding of the argument. Scriven [Scriven 76] details the initial steps that must be taken:

1. Clarification of the MEANING of the argument as a whole and of each component.

2. Identification of the CONCLUSIONS that are both explicitly stated and implicitly implied.

3. Creating the actual STRUCTURE of the argument.

4. Finding the unstated ASSUMPTIONS that are indirectly implied.

5. Analyzing the INFERENCES.

Criticism can be developed in all three of the required components (we shall not consider the optional items at this point). The data or fact portion of the system must be scrutinized at the level of existence. The relevant data, as was previously mentioned, must be obvious or strongly implied to guarantee validity. In addition, if any other unstated assumptions are present, their existence must be verified as well. The warrant is the essence of the argument and it must, therefore, be carefully analyzed. This component is open to two major points of attack. The first, as with the data, is a question of existence. If the warrant takes the form of another entire argument, the analysis starts over with the backing proposition. More important is the use of the warrant as the inferential "leap" from data to claim. The logical implication, perhaps established in the backing component, must be established to guarantee the claim is, in fact, a logical conclusion. Finally, the conclusion must be explored. If the initial analysis produced unstated conclusions, they must be viewed in terms of consistency with the elements of the current argument and the other propositions of the adversary. In addition, any conclusions stated can serve as data for other potentially contradictory or damaging arguments. As a last step, the conclusions reached are always open to direct attact, most often by counterexample. This is by no means a full account of all considerations that must be made. However, the general analytic tools at this level, questions of the use of the components of the model and of the stated and unstated implications, form the basis for most of the criticism.

6. AI AND ARGUMENTATION

Research in artificial intelligence has only recently begun to deal with analyses of argumentation. The intent of this section is not to criticize the approaches taken, but rather to explain their inadequacies in the field of legal dialectic. Argumentation is highly field-dependent at various levels and any attempts to develop cognitive models for a specific domain must pay close attention to the needs of the given field. However, some specific items of general applicability will be useful in the construction of a framework for legal argument.

Work by Birnbaum, Flowers, and McGuire at Yale University [Birnbaum et. al. 80, 81, 82] has been concerned with the structure of single propositions, the connection between several related arguments in a discourse, and tactics using this structure that are similar to the ones presented in the last section of this research. Important features of this project are the notion of an "argument molecule" to represent the core unit of an argument, the "argument graph" which links corresponding elements of propositions, and the idea of "opportunistic processing," where much of the formulation of a response is done during the actual understanding of the statements in the discourse. The structural breakdown offered by this research is similar to the required components of the Toulmin model. However, the advantages afforded Toulmin by use of the optional items is lost in the use of the argument molecule. Furthermore, the focus of the Yale project is the general domain of a two-person dialectic. Argument with a critic, as has been delineated in this research, necessitates the development of higher level strategic moves. The level of processing in this model occurs at what might be considered the lowest general step in the argument hierarchy.

Reichman [Reichman 81] has ignored the structural level of argumentation understanding and tactics and has instead focused on the high level strategic concerns involved in discourse. Her model emphasizes conversational aspects involved in argument discourse such as moves to explain, support, callenge, or present. Again, the aim of this research ignores many of the necessities of argument with a critic, as explained earlier. The elements and moves of discourse analysis, however, would prove beneficial in examining oral legal argument as it might occur during a trial. The development of arguments involved in a legal brief, however, would not involve such concerns.

The final research to be discussed is the only one to be concerned with specifics of legal argumentation. The work by McCarty and Sridharan on the TAXMAN project [McCarty & Sridharan 82] proposes a model of legal reasoning in the domain of corporate tax law. The thrust of the project is the development of

the "prototype-plus-deformation" scheme for knowledge representation. Based on this representation, they forward a "cognitive model of the process of legal argument." The argument process centers on the notion of reducing and inducing the coherence of propositions developed by each party. McCarty claims that disagreement in law occurs in the classification of cases, roughly the justification of precedent, and that the basis of legal argument is in the "transformations" used by each side to classify cases according to their own needs. The model, in terms of legal argument, is decidely imcomplete. The strategies that deal with elements of rhetoric and judicial communication are again not approached. The rheotrical viewpoint of argument mandates looking at the interaction and use of all arguments in the presentation. This level of processing must be first and foremost in effective argument development. The process suggested in TAXMAN is also more interested in the type of the conflict rather than the form. Both are imperative at some level. Finally, we must question the claim that conflicting transformations are the basis of legal argument. Precedent is only one of the categories suggested in earlier portions of this research. An attorney should forward arguments of as many different types as possible. Precedent is imporant, but it must not be viewed as the primary mode of analysis.

7. TOWARD THE AI MODEL

We shall conclude with a brief discussion of some necessary considerations in the development of an artificial intelligence model for legal argumentation. These issues include a description of the system task, a characterization of the reasoning process utilized, control and guidance of the system, and the definition and interaction of the various components of the module. In addition, this module, as was alluded to earlier, is only one piece of a legal reasoning system. Coordination with modules concerned with definition, interpretation, and data retrieval will form an integral portion, and, in fact, should partially define the way in which the argument unit is developed. This discussion must begin with a description of the purpose of the system.

Although the process of legal argumentation has been viewed thus far as a complete, distinct module, the purposes for which it is utilized may vary. These utilizations include generating a brief given an initial fact situation; reading, recognizing, and understanding the arguments in the opponent's brief and suggesting appropriate responses; developing relatively unstructured sets of arguments; and as a tool for studying differences in and effectiveness of various argument strategies. The

feasibility of specific applications will be somewhat dependent upon the capabilities of other components; particularly the natural language interfaces necessary in text generation and language understanding. The argument module will implicitly recognize the system task by altering its operational goal. For example, if the system focuses on formulating responses to the arguments of the opposition, the argument module must primarily utilize strategies and tactics to attack and weaken those propositions with little attention paid to goals involving the development of a complete presentation. However, those very same goals would be of primary concern given the task of preparing a brief. At some level, the same reasoning processes are being used, but the manner in which they are constructed necessarily varies.

The argument module itself can be viewed in terms of three distinct processes roughly based on the levels of description presented earlier in this paper. These components, the strategic level, the tactical level, and the structural level, will be discussed in more detail shortly. At this point, however, we will attempt to characterize the general reasoning and control processes inherent in the argument module. Legal dialectic, as was noted earlier, cannot depend wholly upon deduction as a mode of proof. Although deductive arguments will appear at certain levels in the processing, it can't be used to generally characterize the reasoning. This claim was made in respect to the type of structures developed. Many forms of argument, including that found in law, must be viewed as an instance of nonmonotonic reasoning when the development process as a whole is viewed. The set of facts, evidence, arguments, and assumptions will not, and cannot be expected to remain constant. Several examples will support this claim. Facts and evidence, as we have previously noted, can be manipulated in many ways to enhance one's position. Specific tactics can be utilized to dismiss, suppress, or minimize particular portions of data in a given instance. In other words, the very grounds from which all propositions are based is rarely a static set. In addition, certain seemingly rational arguments cannot be forwarded if they are inconsistent with the overall thrust of the proposal. Finally, the use of leading cases, examples, and hypotheticals can drastically alter the assumptions from which one operates. The utilization of these forms of argument certainly shifts the focus of the conflict at some level and, in many cases, will render other previously relevant assumptions moot. System control also poses some interesting questions. We will, in fact, find that the characterization of control varies between the levels in the module. The strategic level is essentially goal-driven. The goal, in preparing the case, must be to win; or, more precisely, to present as persuasive a case as is possible. Specific strategies were constructed earlier with this need in mind. These strategies are generally applicable and are independent of specific circumstances in any context. However, the means by which these goals are fulfilled, the task of the tactical level, are wholly dependent upon the current, relevant fact situation. The heuristics presented for the use of individual tactics are based on this notion. The control at this level, therefore, can be viewed as essentially data-driven. These ideas will be obvious as we briefly describe the processing in each level.

The strategic level is basically the top-level controller of the argument module. Using the aforementioned strategies inherent in judicial communication, this process should provide a set of operational goals that must be satisfied by the lower levels. In addition, it serves as a system monitor, particularly in the case of maintaining consistency in the overall proposal. The overriding objective must be the creation and presentation of a cohesive, consistent, and persuasive case. The tactical level is, perhaps, the most interesting for several reasons. First, the data-driven nature of this process necessesitates a thorough delineation of application heuristics. The matching of available data with these heuristics should not, however, be too restrictive. In a sense, these guidelines should point out all reasonably relevant tactics for a given set of facts. It will be the job of the strategic level to properly assimilate them according to the goals of convergence, fullness, refutation, and consistency. Most important, however, will be the interaction of this process with other components of the legal reasoner. Presumably, access to data-base searches, case-based reasoners, and data interpretation modules will be through the tactical level. The imperative issue involves the form of this communication. Does the argument module guide the other components in their processing through a series of data requests?; does this level only utilize what is given to it?; or does the communication involve some combination of both modes of operation? This question remains unanswered given the current research. The processing of the structural level will vary according to the context of the entire system. It is at this level that individual propositions are analyzed in terms of their "atomic" components. If the primary function of the system lies in brief generation or argument suggestion and evaluation, this component will be utilized mainly to construct sound, logical propositions. However, if the system is involved in analyzing adversary arguments in order to develop apropriate responses, the structural level will bear much of the processing burden. The propositions must first be broken down and analyzed in terms of a structural description and then scrutinized for potential attacks based on logical inconsistencies or invalid constructions. These results will then be passed on to the other levels for higher level refutation considerations. While these descriptions are decidely incomplete, the purpose at this point in time is only to suggest possible means of system construction and analysis and, more imporantly, to identify some of the crucial questions that require further research.

8. CONCLUSIONS

This paper has discussed a framework for viewing and understanding legal argumentation. The goal is the delineation of the methods an attorney has at his disposal when he argues for a given case. The process can be analyzed in three distinct levels: the strategic level, where the context and goals of the dialectic are

accounted for, the tactical level, where various propositional types are developed in both form and use, and the structural level, where the necessary basis for sound arguments can be constructed.

In addition, initial thoughts towards imperative considerations in the construction of an artificial intelligence system to model this process have been detailed. Previous AI research in the fields of law and argument is insufficient to meet the needs of pragmatic, complete legal dialectic. The argument module, though, is only one necessary component in a comprehensive legal reasoning system, however, many of the general underlying assumptions and considerations will apply across all the distinct units. It is hoped that this type of research will lead to the development of practical intelligent tools that can be beneficially utilized by the artificial intelligence and legal communities.

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24

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1 - 81

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