

Critical Reasoning and Dialectical Argument: An Extension of Toulmin's Approach

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1. Introduction

Some thirty years ago, in his *Uses of Argument*, Stephen Toulmin decisively drew attention to the fact that formal logic was becoming increasingly remote from practical considerations having to do with the criticism and evaluation of arguments in use, and was developing "towards a condition of complete autonomy, in which logic becomes a theoretical study on its own, as far from all immediate practical concerns as is some branch of pure mathematics." [1] One implication of this trend, Toulmin noted, was that purely formal or analytic modes of argument had become the standard whereby all arguments were evaluated, with the result that practical arguments, when they were considered by logicians at all, were typically judged deficient by comparison with the pure analyticity of the syllogistic paradigm. [2]

In response to this development, Toulmin's own efforts were largely devoted to showing how deeply mistaken it is to take one type of argument—and a purely formal one at that—as the paradigm of all argumentation, and concomitantly, to developing a structural model for the analysis and assessment of practical

("substantial") arguments in their own right.

Toulmin's innovation centered on his development of a schema for the assessment of practical arguments with reference to a jurisprudential analogy rather than a purely syllogistic model, and we shall have occasion to briefly review the major components in his proposed scheme in the first part of this paper. What is especially noteworthy at this stage, however, is that although in the intervening thirty years, Toulmin's model has gained considerable currency in such fields as rhetorical theory, [3] decision-making, [4] and policy studies, [5] it seems to have had little influence, within philosophy, on the study of critical thinking, at least if the content of current texts on that topic are anything to judge by. [6] Within philosophy, the position is rather that the analytic model, which in its deductive and inductive forms Toulmin convincingly showed to be inadequate for the analysis and evaluation of practical argument, [7] is still the preferred standard for the assessment of all arguments.

Since Toulmin's critique of analytic models, and his replacement of them by a jurisprudential account of probative assessment seem to have dropped out

of sight so far as texts on critical thinking go, I review the major aspects of his position in the first part of this essay. But I keep my treatment of Toulmin's position here to the essentials for several reasons. For one thing, Toulmin's position is fully accessible, in its details, in its original formulation, and in addition, some good commentaries on it already exist.[8] The main reason is, however, that the principal purpose of the present essay is less to repeat Toulmin than to propose a dialectical extension of his position (Part II). Still, it is necessary first to briefly review Toulmin, since his position is both the starting point and structural foundation of the proposed procedural extension. The reasons why I consider this extension necessary are presented as the essay proceeds, but, briefly stated, they have to do with taking greater account of the dialogical context in which practical argumentation occurs, and with allowing for the progressive modification of initial positions as claims are subjected to counter arguments from another viewpoint.

It is hoped that this dialectical extension of the basic Toulmin model, which is still more thoroughly jurisprudential than the original, will make it even more relevant to the analysis and assessment of informal arguments in a wide variety of fields, inside and outside of philosophy.

II. The Toulmin Model

In the course of the five essays which comprise his book, Toulmin gives numerous reasons, from a variety of perspectives, for preferring a jurisprudential to a purely syllogistic model in the analysis of substantive arguments. I make no attempt to catalogue all these arguments here, but instead allude to a few main themes that tend to recur in the discussion (and even these I state in my own terms rather than as a verbatim account of Toulmin's position).

A first major consideration is that the

kind of certainty or necessity required of purely formal arguments is not just unattainable but also inappropriate both as a method of proof and as a means of validating substantive arguments. Given the nature of the case, the conclusions of practical arguments do not follow necessarily or with certainty, rather they are (at most) "probable" or "possible." [9] Indeed, the modal strength of substantive conclusions cannot be established *a priori*, but only in the course of the argumentative process itself (depending on such factors as the strength of the probative evidence provided in support of the conclusion and the kind of inference—rule "warrant," in Toulmin's terms—appealed to). It is very important to understand, however, as Toulmin seeks to establish, that this lack of necessity and certainty is not a defect of practical arguments, but an intrinsic feature proper to their specific character.[10]

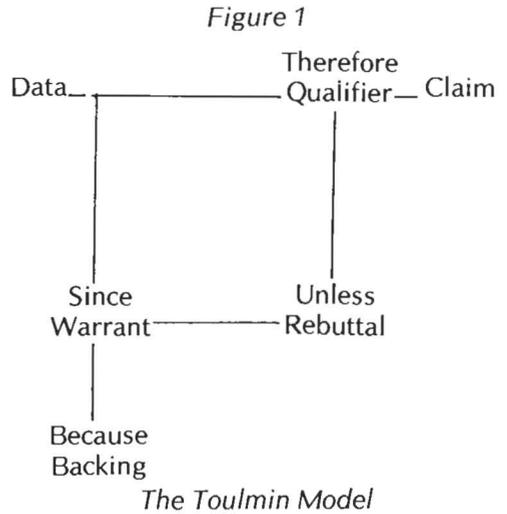
Related to this is the consideration that while a mathematical model is eminently suitable for formal logic, concerned as it is with (deductive) validity and the purely formal relations between propositions, it is correspondingly unsuitable for establishing the "soundness" of less-than-certain substantive arguments. In the practical domain, a good argument is not one whose (deductive) validity can be conclusively established, but rather one which, as Toulmin puts it, "will stand up to criticism, one for which a case can be presented coming up to the standard required if it is to deserve a favorable verdict." [11] And it is because a sound argument in practical contexts depends on the making of a good case for the claims advanced and on the production of appropriate evidential support for them that Toulmin argues the need to replace the traditional syllogistic model with a jurisprudential one.

Other considerations relevant to the adoption of a jurisprudential (over a syllogistic) model for the analysis and assessment of practical arguments have to do with the facts that (1) the factual (information) content of the proposi-

tions of an argument, which can be largely ignored in purely formal contexts, is very important in the evaluation of the soundness of substantive arguments; (2) there is a *field-dependent* aspect to the analysis of substantive arguments such that (a), as already indicated above, the relevant range of inference rules ("warrants") cannot be assumed *a priori* (as in formal contexts) but must rather be established and justified as part of the argumentative process itself, and (b) the kinds and levels of evidence appropriate to the particular domain under investigation must be justified argumentatively, since these cannot be assumed to be invariant between domains of inquiry (for example, the relevant standards may be quite different in ethics than in aesthetics), or even within the same domain at different time periods.[12]

The overarching merit of Toulmin's approach consists in showing, however, that although the criteria for assessing practical arguments are not absolute, certain, or completely invariant, this does not mean that such arguments lack structure or a method for their evaluation. To the contrary, Toulmin's analysis demonstrates that, the field-dependent characteristics of practical arguments notwithstanding, there is a clear interrelationship between the parts of such arguments, and a distinct series of phases may be specified for their evaluation.

Essentially, the Toulmin model consists of six elements—claim, data, warrant, backing, qualifier, and rebuttal—and consideration of these elements and their interrelations serves to clarify whatever intuitive sense we may initially have of the meaning and implications of a jurisprudential style of argumentation. As just noted, the guiding idea behind the model is the identification of a number of discrete (but interrelated) steps in terms of which the structure of practical arguments can be analyzed and their probative strength assessed.[13] Schematically, the model may be represented as in Figure 1.



Taken together, claim, data, and warrant constitute the core structure. Briefly stated, Toulmin uses the term *claim* to designate what is usually called the conclusion of an argument (e.g., "capital punishment should be abolished"). *Data* furnishes the evidence we have to go on in seeking to establish that claim (e.g., "capital punishment has no significant deterrent effect on serious crime"); and *warrant* specifies the kind of inference principle (or rule) that serves to authorize the "move" from data to claim. (As Brockriede and Ehninger put it: "as distinguished from data which answers the question 'What have you got to go on,' the warrant answers the question 'How do you get there.' Its function is to *carry* the accepted data to the doubted or disbelieved proposition which constitutes the claim, thereby certifying this claim as true or acceptable.") [14] Reference to this scheme provides a means for rendering the evidential support for a position explicit, since, in a manner reminiscent of the Socratic method of question and answer, data and warrant can be (successively) invoked to provide support for (or justify) the claim, if the claim is challenged.

In addition to these basic components, the Toulmin model also provides three important refining elements, namely, backing, qualifier, and re-

buttal. Here, *backing* consists of further evidence to support warrant (in much the same way that data and warrant themselves support the claim); this evidence can be drawn on and made explicit (and if necessary, itself argumentatively justified), if the warrant is not accepted at face value. The *qualifier*, attached to the claim, allows for registration of the degree of force ("probably", "possibly," etc.) which the claim is held to possess in virtue of the strength of the supporting data and warrant. Finally, *rebuttal* serves the important function of anticipating objections, counter-arguments, or limiting conditions pertaining to the claim and its evidential support (e.g., "as an ineffective deterrent, capital punishment should be abolished, unless the studies testing its deterrent function are (shown to be) unreliable or invalid"). In this way, as Brockriede and Ehninger observe, "rebuttal performs the function of a safety valve or escape hatch," recognizing certain conditions under which the claim will not hold good or will hold good only in a qualified and restricted way.

As has already been argued, this model has numerous advantages for the analysis and evaluation of practical arguments. But, as I now want to suggest, it has some limitations also, and these give rise to the need for the dialectical extension of the basic model which I propose below. As I see it, however, the limitations I mention do not detract from the effectiveness of the basic model as a *structural* model of the kinds and levels of evidential support needed to establish the conclusion of substantive arguments. They have rather to do with affording greater recognition to the dynamic and intersubjective character of the context of practical argumentation, and with the *procedural* adjustments to the model which this entails. Accordingly, my remarks are intended less as a direct criticism of the basic model than as a recommendation for extending its scope to accommodate (what I term) the dialectical context of argumentation.[15]

III. The Dialectical Approach

The Dialectical Context of Argumentation

Reflection on the dialectical context of argumentation suggests two major limitations inherent in the basic model, and the need for corresponding procedural adjustments to it.

In the first instance, the Toulmin model, though structurally adequate, suffers from the limitation that it only takes account of evidence or objections forthcoming from a single perspective or viewpoint. As the jurisprudential analogy that Toulmin appeals to itself suggests, most "real world" arguments take place, by contrast, in an interpersonal, dialogical context. As I intend it, however, the important point here is not that there must always be a second partner to the debate, but rather that to effectively establish its credentials, an argument must be able to actively withstand criticism, including counter-arguments, coming from another perspective. In other words, a well-established case should not just have strong evidential support in its own terms (though this is of course necessary to begin with) but should also be able to withstand the force of counter-arguments and objections. (Thus, for example, the case against capital punishment is most effectively tested if it withstands strong criticism from a proponent of capital punishment, in addition to presenting a strong case in its own right.) But while counter-arguments are, thus, important elements in the overall assessment of the strength of a case, the Toulmin model essentially confines itself to the analysis and assessment of evidence presented only from a single perspective (and in this sense, the model remains inherently Cartesian in character). Toulmin does, of course, acknowledge the possibility of rebuttal, but as he presents it, even rebuttal is anticipated from the (single) perspective of the advocate, and so lacks the dynamic force of criticisms coming from a wholly other perspective. To be tho-

roughly jurisprudential in character, the model, I suggest, must incorporate this other perspective—not vestigially (as in Toulmin's rebuttal), but as an independent source of counter-argument and evidence.[16]

My other major criticism, related to the first, is that a fully adequate model of practical argument must be *dynamic* in the sense of allowing for modifications of the positions initially advanced by the participants in the debate in the light of considerations that surface (only) in the course of the debate itself—as problem situations, claims, as well as their underlying assumptions and evidential support are “surfaced,” clarified, and assessed through mutual discussion and criticism. While this requirement takes on a special importance in political contexts, where the attainment of some kind of policy consensus may be part of the goal of the argumentative process, it is clear that it is an integral part of the process of the growth of knowledge through rational criticism in all argumentative contexts, for without it, obviously, no change in position could be anticipated once a claim has been asserted, regardless of the extent of conflicting evidence subsequently to come to light. But again, while Toulmin readily acknowledges that rebuttal modifies claims—and also criticizes the mathematical model for the time-invariant character of its claims[17]—his model does not incorporate a procedure whereby positions can be revised in a dynamic and ongoing way as new evidence comes in and underlying assumptions and evidence are surfaced in the (dialogical) course of the debate. In a word, the Toulmin model lacks a procedure for the modification and refinement of initial positions in the light of the critical assessment of evidence and counter-evidence which (progressively) surfaces in the course of the debate itself.

The dialectical extension of the basic model, here to be presented, seeks to correct these procedural shortcomings in the original, while preserving intact its essential structural features.[18]

The Dialectical Model: A Procedural Outline

The notion of dialectic has had a long and varied philosophical history. Several conceptually distinct senses of the term can be distinguished, and Plato, Aristotle, Aquinas, and Hegel are just a few of the more prominent philosophers who are associated with one or other of its usages.[19] Fortunately, our purposes here do not require that we separate the intertwined strands of the history of the development of this concept. Instead, we may content ourselves with a more intuitive and operationalized notion of dialectic than would suffice if historical scholarship were our principal aim.

At the same time, to the extent that historical precedents are involved here, appeal is most directly made to the senses of dialectic found in Plato and Hegel. For in these thinkers, as Kainz points out, “the rationale for a dialectical approach seems to be the awareness of constant and perhaps unavoidable *oppositions* with respect to certain issues, and the supposition that it might be possible to supersede these oppositions in some way, either by making them as explicit as possible; or by utilizing them to supply the necessary ‘tension’ providing an impetus to truth; or by seeing them as involved in a necessary system of negations evolving ‘under their own steam,’ to a great extent, towards certain final ‘syntheses.’ ” [20] At the very least, our model seeks to preserve a sense of the dialogical assessment of an issue, found in Plato, and also a Hegelian sense of the dynamic movement of a process which “overcomes” (or at least modifies) initial oppositions via the attainment of a kind of synthesis. And, again, in its application to argumentative contexts, this dialectical model relies on the structural features of the basic Toulmin model as the paradigm in terms of which the probative strength of arguments is to be assessed (via appeal to data, warrant, backing, etc.)

The proposed dialectical procedure

develops through the following stages. (As has been noted, its guiding idea is that, to establish its credentials, a claim should face active criticism from an opposing viewpoint, and be modified and refined as new evidence comes to light in the course of the debate.)[21]

1. A claim is made by the proponent of a position. This represents the thesis of the argument.

2. A counter-claim is advanced by an opponent of the initial claim. This represents the antithesis.[22]

3. Since no rational advance can be made simply on the level of opposing thesis to antithesis (or vice versa), the "burden of going forward with the debate" requires that advocates of the thesis and of the antithesis, respectively, elucidate their probative evidence in turn, and clarify the assumptions underlying their propositions. This is done, with reference to the Toulmin model, by uncovering the data, warrant, and backing which support the respective positions. (Discussion may, of course, also take place regarding the modal force of the qualifiers attaching to the claims.) The production of evidence and clarification of assumptions is clearly a progressive business, and several "exchanges" between the participants may be necessary to produce satisfactory levels of clarification.

4. So far the procedure is very like that specified in the original model, except that it provides for more than one participant. The innovative aspect of the procedure arises, however, in virtue of the fact that, to advance the debate, each of the participants must not only supply "straight" evidence for his own position, but must also address himself "squarely" to counter-evidence/objections raised by his opponent.[23] In performing the latter task, the participant under attack must either (a) rebut the objection (again by appeal to some level of evidential support for his own position) or (b), failing this, accept that the objection levelled must be sustained, and therefore, requires some (more or less extensive) modification of his initial claim. In the

extreme case, a devastating objection would gain a "winning" position for the objector.

Except in the limiting case just mentioned (where one participant is shown to have a wholly inadequate case and/or the other to have a winning position), the outcome of steps 1-4 is that each participant will have to acknowledge some necessary qualification or some limiting constraint (akin to Toulmin's rebuttal) on his initial claim. Far from representing a loss, however, this represents a gain for each side in virtue of the refinement the initial positions have undergone as a result of rational discussion and mutual criticism. Furthermore, each side will have gained a better understanding (and perhaps a degree of acceptance) of the merits of the other's position. Overall, a growth of knowledge will have resulted.

6. If the debate is not terminated at step 5, the respective modifications arrived at at this point become the starting claims for a reiterated round of discussion, which essentially repeats steps 1-5. Each such reiteration of the process will produce further refinement of the initial claims—and hence, a more rationally defensible position on each side—as well as greater understanding of the merits and fundamental assumptions of the opposing position. Because the modifications resulting at the end of each round of discussion (which form the starting point for the next round) are a product of the interaction of the (initially) opposing viewpoints (thesis and antithesis), they may appropriately be regarded as a kind of synthesis emerging from the initial opposition.[24]

7. The preceding steps are reiterated until one of the following outcomes obtains.

(a) Discussion is arbitrarily broken off. This, of course, is not a rationally justifiable termination point. But it is included here because it is often enough the way that "real life" discussions are terminated.[25] Even in this case, however, it may be anticipated that a better understanding of the

roots of the opposition and of the merits of the respective viewpoints will have been obtained in virtue of the round(s) of debate engaged in prior to its termination.

(b) Consensus is attained regarding the key issues in dispute. Consensus, with a view to action, is often the goal in policy-oriented debate. It should be noted, however, that (in whatever context) consensus is desirable as an outcome only if it is the result of a growth of knowledge achieved through rational assessment of the issues (in e.g., the manner specified in the preceding steps). By contrast, consensus attained through coercion or manipulation is particularly objectionable.

Sometimes in argumentative contexts it happens that a whole new framework for viewing the issues in dispute emerges as a result of discussion, assessment of evidence, and increased familiarity with the fundamental issues. This could be regarded as consensus or synthesis in the best (Hegelian) sense, since it renders the original opposition largely irrelevant—although in some cases it may also eventuate in a three-way dispute between advocates of each of the original positions and the new synthesis. (In theory of knowledge, for example, such a situation roughly seems to obtain between the respective proponents of object-centered, subject-centered, and “between” epistemologies.)

(c) Although consensus is not obtained, no further substantial objections or counter-arguments are forthcoming against the participants. This could be for several reasons, but most notably because either (i) one position is clearly recognized to be superior on the basis of the discussion that has already taken place, or (ii) each side has clarified its position as fully as is feasible (in response to challenges presented from the other side), and it is agreed that, while neither side has a clear “winning” position vis-à-vis the other, both positions (in their modified formulations) are now (fully) defensible (each in its own right and also against counter-objections from the other side).

This last outcome is possibly the most frequent in everyday, as well as philosophical and ethical disputes. Though consensus is not attained, the clear gain in such situations is (again) the refinement and greater defensibility of the positions as a result of rational debate and critical assessment of evidence and counter-evidence.

IV. Dialectical Argument: Concluding Remarks

The major advantages of this dialectical extension of Toulmin’s position—centering on the fact that the procedure affords maximum opportunity for evaluating an issue in the light of evidence from both sides, and where appropriate, modifying initial claims in the light of this evidence—have been sufficiently detailed in the preceding sections not to warrant further consideration here. It is appropriate, however, to append some concluding comments on the rationality of the dialectical model. Although this is a substantial issue in its own right, discussion of it here will have to be brief.

With regard to the rationality of the process, a central consideration is the one from which we started: in dealing with practical arguments, we cannot expect (nor should we want) the certainty or absoluteness either of methods of proof or of criteria of evaluation that pertain to purely formal arguments.[26] That, as we have seen, is why a jurisprudential rather than a syllogistic model is appealed to by Toulmin. And in terms of a jurisprudential analogy, the guiding standard (for both proof and evaluation) has to do with building (and defending) a *good case*. [27]

But while this is not the domain of absolutes, and a great deal of judgment is required, some ground rules can be laid down for the evaluation of such arguments. To begin with, there are the requirements that the participants in the debate (1) be consistent in their position-taking and in the way in which they develop their positions, (2) be pre-

pared to give appropriate evidential support for their claims,[28] and (3) be prepared to accept reasonable objections. In other words, in entering the debate, both parties incur a certain "burden of proof" and "burden of going forward with the debate." As regards the specifics of these requirements, the effort of the present paper has been to clarify them further in both structural and procedural terms. Still more specific questions can, of course, arise, such as, "how much evidence is enough to establish a case" or "how strong should a counter-argument be before a person is required to modify his position?" But, clearly, these questions cannot be answered in the abstract. As a heuristic principle one can, indeed, appeal to the notion of what any rational agent (or judge) would accept as evidence or as a sustainable objection, but this will only take one so far. Beyond that, there is an irreducible element of (informed) judgment involved, and an irreducible degree of field-dependence in the kinds and levels of evidence acceptable in specific situations and contexts.[29] In a word, although the ground rules of dialectical argument may be less absolute and less clearly definable than those of syllogistic reasoning, certain ground rules nonetheless exist. And, as Rescher points out, the consequences of failure to abide by these rules is quite drastic. "To break the rules of proper argumentation is, in the final analysis, to opt out of the enterprise of rational controversy. It reflects a failure of rationality through a refusal to abide by the rules that define what it is to make out a proper case in the context of reasoned discussion." [30]

In all of this, there is also a strong appeal to the notion of the growth of knowledge through rational criticism, in a somewhat Popperian sense.[31] Claims and their evidential support are severely tested in the light of counter-claims and counter-evidence from one's opponent. Only claims that survive this process are shown to be defensible—though, of course, they may again come under attack, if further

counter-evidence is subsequently forthcoming. Furthermore, in this context too, we learn by our mistakes, and recognition of the need to abandon or modify an initial position does not represent a failure, but rather a further growth in knowledge, as a result of which we achieve a better understanding of the scope and limits of our position.

Finally (although, again, this aspect of the model cannot be developed here), it should be noted that the model presented presupposes certain characteristics of the participants. At a minimum, for example, (as already intimated above) it presupposes both their sincerity and their willingness to be bound by the probative ground rules of a rational process. Ideally, also, the discussion context would have the characteristics of (what Habermas terms)[32] an "ideal speech situation," in which all participants have an effective equality of chances to assume dialogue roles and no coercion is exercised, except the force of the better argument.

Notes

- [1] See Stephen Toulmin, *The Uses of Argument* (Cambridge: Cambridge University Press, 1958 [paperback ed., 1964]), p. 2.
- [2] Cf. *Uses of Argument*, p. 145.
- [3] See, e.g., Wayne Brockriede and Douglas Ehninger, "Toulmin on Argument: An Interpretation and Application," *The Quarterly Journal of Speech*, 46 (1960), 44-53; Charles Larson, *Persuasion: Reception and Responsibility*, 2nd ed. (Belmont, CA: Wadsworth, 1979).
- [4] See, e.g., Richard Rieke and Malcolm Sillars, *Argumentation and the Decision Making Process* (New York: Wiley, 1975); Austin Freely, *Argumentation and Debate: Rational Decision Making*, 3rd ed. (Belmont, CA: Wadsworth, 1971).

[5] See, e.g., Richard Mason and Ian Mitroff, "Policy Analysis as Argument," *Policy Studies Journal*, 9 (1980-81), 579-85; William Dunn, *Public Policy Analysis* (Englewood Cliffs, N.J.: Prentice-Hall, 1981); Raymond Studer, "Normative Guidance for the Planning, Design, and Management of Environment-Behavior Systems" (mimeograph).

[6] For example, Toulmin is not mentioned in the index of the following (random) selection of texts on informal logic and critical thinking. Vincent Barry, *Practical Logic* (New York: Holt, Rinehart, and Winston, 1976); Jerry Cederblom and David Paulsen, *Critical Reasoning* (Belmont, CA: Wadsworth, 1982); Irving Copi, *Introduction to Logic*, 6th ed. (New York: Macmillan, 1982); David Crossley and Peter Wilson, *How to Argue: An Introduction to Logical Thinking* (New York: Random House, 1979); S. Morris Engel, *With Good Reason* (New York: St. Martin's Press, 1982); William Halverson, *A Concise Logic* (New York: Random House, 1984); Patrick Hurley, *A Concise Introduction to Logic* (Belmont, CA: Wadsworth, 1982); Howard Kahane, *Logic and Contemporary Rhetoric*, 4th ed. (Belmont, CA: Wadsworth, 1984); Howard Kahane, *Logic and Philosophy*, 3rd ed. (Belmont, CA: Wadsworth, 1978); Merrilee Salmon, *Logic and Critical Thinking* (New York: Harcourt, Brace, Jovanovich, 1984).

At the same time, it should be noted that Toulmin's arguments have had influence on at least some recent texts on critical reasoning. In this regard, see, for example, Douglas Ehninger, *Influence, Belief, and Argument* (Glenview, IL and Brighton, England: Scott, Foresman and Company, 1974); Stephen Toulmin, Richard Rieke, and Allan

Janik, *An Introduction to Reasoning* (New York: Macmillan, 1979); and Annette Rottenberg, *Elements of Argument* (New York: St. Martin's Press, 1985). (I am grateful to the editors of *Informal Logic* for drawing these texts to my attention.)

[7] See *The Uses of Argument*, e.g., p. 147: "So far as formal logicians claim to say anything of relevance to arguments of other than analytic sorts, judgment must be pronounced against them: for the study of other types of argument fresh categories are needed, and current distinctions—especially the crude muddle commonly marked by the terms 'deductive' and 'inductive'—must be set on one side." It goes without saying that Toulmin's point is not that formal logic should be eliminated, but only that its use should not be extended beyond its proper sphere of application.

[8] See especially, Brockriede and Ehninger's "Toulmin on Argument."

[9] As the quote cited in my introduction indicates, Toulmin takes pains to establish that the point of referring to the probability of practical conclusions is *not* to invoke the traditional distinction between inductive and deductive arguments; rather Toulmin argues that a strength of the jurisprudential analogy is that it undercuts the deductive/inductive distinction.

[10] Unlike some who came after him, Aristotle seems to have well understood the distinctive features of each kind of argument; for while in the *Analytics* he advocates the development of a formal science (*episteme*) of logic, in the *Ethics* he readily acknowledges the lack of certainty pertaining to practical arguments.

In the *New Rhetoric* (trans. John Wilkinson and Purcell Weaver; Notre Dame, IN: Univer-

sity of Notre Dame Press, 1969), Perelman and Olbrechts-Tyteca epitomize the need for such a distinction when they observe that "No one deliberates when the solution is necessary or argues against what is self-evident" (p. 1). Interestingly (though with debatable justification), these authors place the blame for the modern neglect of practical argument squarely on the shoulders of Descartes, on the grounds, as they put it, that it was this philosopher who made self-evidence and apodictic proof "the mark of reason" (p. 1).

[11] *The Uses of Argument*, p. 8.

[12] Cf. *The Uses of Argument*, pp. 15-17, 41-43. In raising the question of field-dependence the idea is not, of course, to suggest that the standards should be called into question every time a discussion arises, but rather that they are not entirely settled *a priori* (in, e.g., the way that the criteria of formal validity are), and must be justified if challenged.

[13] For a full account of the model and the logic of its development, see *The Uses of Argument*, pp. 94-145; the Brockriede and Ehninger article already cited provides a valuable analysis of and short commentary on the model.

Toulmin's position is not, of course, without its critics; in this regard, see, for example, J.C. Cooley, "On Mr. Toulmin's Revolution in Logic," *The Journal of Philosophy*, 56 (1959), 297-319; J.L. Cowan, "The Uses of Argument—An Apology for Logic," *Mind*, 73 (1964), 27-45; Peter Manicas, "On Toulmin's Contribution to Logic and Argumentation," *Journal of the American Forensic Association*, 3 (1966), 83-94.

[14] "Toulmin on Argument," p. 45.

[15] The sense in which I speak of a

"dialectical context" of argumentation will, I hope, become sufficiently clear in the following sections (without the need for additional explanation at this point).

[16] I would still like to maintain, however, that the debate could be conducted *in foro interno*, and that there need not literally be a second participant, provided the (single) inquirer can effectively take the point of view of the other for the purpose of actively subjecting claims to strong counter-argument and evidence.

[17] See *The Uses of Argument*, p. 183f.

[18] In proposing a dialectical extension of the Toulmin model, my thinking has been strongly influenced by the work of C. West Churchman (*The Design of Inquiring Systems* [New York: Basic Books, 1971], esp. Chaps. 7 & 8), Richard Mason and Ian Mitroff (e.g., "On the Structure of Dialectical Reasoning in the Social and Policy Sciences," *Theory and Decision*, 14 (1982), 331-50), and Raymond Studer and William Dunn ("Effects of Dialectical Decision Procedures on Policy Consensus" [mimeograph] on argumentation and decision-making in policy-related fields; by Habermas's writings on communicative competence and the redemption of disputed validity claims (for an account of Habermas's position, see Thomas McCarthy, *The Critical Theory of Jürgen Habermas* (Cambridge, MA: MIT Press, 1978); see too the references cited therein, and also Habermas's recent *Theory of Communicative Action*, 1, trans. Thomas McCarthy [Boston: Beacon Press, 1984], esp. Pt. I, Chap. 1); and by Nicholas Rescher's extended essay on *Dialectics* (Albany, N.Y.: SUNY press, 1977). As the editors of *Informal Logic* have kindly pointed out to

me, the influence of a dialectical approach to argumentation is also evidenced in, for example, the following texts: Arnes Naess, *Communication and Argument* (Oslo: Universitetsforlaget, 1966, esp. Chap. V); C.L. Hamblin, *Fallacies* (London: Methuen, 1970, esp. Chaps. 7 and 8); Jack W. Meiland, *College Thinking* (New York: Mentor, 1981, esp. Chaps. 3 and 4); John Woods and Douglas Walton, *Argument: The Logic of Fallacies* (Toronto: McGraw-Hill, 1982, esp. Chap. 6); Frans H. van Eemeren and Rob Grootendorst, *Speech Acts in Argumentative Discussions* (Dordrecht, Holland and Cinnaminson, NJ: Foris Publications, Dutch edition 1983; English translation 1984, esp. Chap. 4); Ralph H. Johnson and J. Anthony Blair, *Logical Self-Defense*, 2nd ed. (Toronto: McGraw-Hill, 1983, esp. Chap. 8); and Douglas Walton, *Logical Dialogue-Games and Fallacies* (Lanham, MD: University Press of America, 1984). In addition, the reader may wish to refer to the considerable European literature on dialectical argumentation, especially in, e.g., the work of E.M. Barth, Eric Krabbe, Paul Lorenzen, and Kuno Lorenz. None of these sources is, however, directly responsible for the specific kind of dialectical development I here propose.

[19] Howard Kainz, in a short but very insightful account of the history of the dialectic ("The Use of Dialectic and Dialogue in Ethics—A Reflection on Methodology," *New Scholasticism*, 56 (1982), 250-57), identifies ten usages of the term "dialectical." He also indicates the way in which several thinkers, including the four just mentioned, are associated with the history of its development.

[20] "The Use of Dialectic," p. 253.

[21] I cannot hope the procedure speci-

fied is exhaustive, but I have tried to incorporate its most essential features. I have also experimented with several diagrammatic representations of the process, but so far I have not found one that adequately represents it.

It should also be noted that the model could be developed to incorporate more than two participants; nothing essential would change; it would only become more cumbersome to articulate.

[22] In contrast to the *disputational* model to which Rescher devotes the opening chapters of his book on *Dialectics*, this model focuses on the case in which *both* thesis and antithesis are affirmed at the outset (even in the limiting situation in which debate takes place inside oneself). This distinction is not inconsequential because it carries the implication that there is probative symmetry (rather than probative asymmetry) between the participants from the outset (cf. Rescher, p. 18). Thus, neither party carries the "burden of proof" more than the other, and both equally share the "burden of going forward with the debate." (For an account of the standard use of these terms, see Douglas Ehninger and Wayne Brockriede, *Decision by Debate* (New York: Dodd, Mead, & Co., 1963), pp. 81-87.)

[23] This requirement is somewhat akin to what Rescher refers to as "the evidential burden of further reply in the face of contrary considerations"; of it Rescher says, "it embodies the imperative of 'advancing the argument' in a meaningful way, carrying the discussion beyond a particular stage of its development" (*Dialectics*, p. 27).

[24] The title, synthesis, is obviously most clearly justified if in the end (after, say, several rounds of de-

bate) the initial opposition between the positions is (completely) "overcome" and a kind of consensus attained (cf. 7(b) below). Yet there seems to be no good reason to deny the title to modifications short of complete synthesis. This is especially so, since complete synthesis may not be attainable, or even desirable, in all cases. If complete synthesis (or consensus) is attained, it marks an end of the debate.

- [25] It is also effectively the way that Plato's *Euthyphro* concludes.
- [26] Cf. Toulmin: "Analytic criteria, whether of conclusiveness, demonstrativeness, necessity, certainty, validity, or justification, are beside the point when we are dealing with substantial arguments" (p. 234).
- [27] Or "a probatively sound argument," as Rescher terms it (*Dialectics*, p. 58).
- [28] Cf. Rescher (pp. 77-78) with regard to these requirements.
- [29] I would not go so far, however, as to say with Pinto that "one cannot appraise an argument from a position one takes up *outside* the context of the dialectical interchange in which that argument occurs. One cannot appraise an argument in the role or office of neutral judge. Appraising an argument requires one to step *into* the dialectical interchange, become party to it, become a participant in it." (See R.C. Pinto, "Dialectic and the Structure of Argument," *Informal Logic*, 6 (1984), p. 19; emphasis in original.)
- [30] *Dialectics*, p. 78.
- [31] See, e.g., *Conjectures and Refutations*, 2nd ed. (New York: Harper, 1965). Popper himself does not, however, envisage a specifically dialectical development of knowledge (see *Conjectures*, pp. 312-35).
- [32] See his "Wahrheitstheorien," in *Wirklichkeit und Reflexion*, ed. H. Fahrenbach (Pfullingen: Neske, 1973), pp. 211-65; see too McCarthy's account of Habermas's position in *Habermas*, Chap. 4.

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