

critical review

Toulmin's Bold Experiment

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A Critical Review and
Appreciation of
An Introduction to Reasoning
by Stephen Toulmin,
Richard Rieke, and Allan Janik

I. INTRODUCTION

What would your first instinct be upon hearing of an introductory logic text that made virtually no mention of staples such as premise and conclusion, validity and invalidity, inductive and deductive arguments? You might think that it ought to be condemned to the flames as containing nothing but sophistry and illusion. But hold! Were you to follow that inclination, you would be missing out on an important and challenging text. Its name is An Introduction to Reasoning; its authors are Professor Stephen Toulmin and his cohorts, Richard Rieke and Allan Janik.¹

There have been precious few innovations in argument analysis since the time of Aristotle. Most logicians have been content to remain within the perimeter of the standard conceptual framework of logic, analyzing arguments into premises and conclusions; classifying them as either deductive or inductive, and upholding soundness as the ideal for deductive arguments. In the last 25 years, there are indications of changes underway that might serve to weaken the hold of the traditional framework. In another place, Professor Blair and I have attempted to identify some of these changes--most of them within the orbit of what we call "informal logic."²

The main stimulus for these changes has, it seems, been pedagogical. Students in the late 60s began to demand "relevance," and their logic teachers--at least some of them--were sensitive to these demands. Students wanted (sometimes for political reasons) an introduction to logic that equipped them to enter combat with real arguments--not the "Dick and Jane" variety found in so many logic primers.

For their part, we may presume that teachers were finding themselves increasingly uncomfortable teaching formal methods of analysis, and began to discover the enormous problems involved in the attempt to apply those methods to real arguments set in context of pressing social and political affairs. Some of them began to tinker around, and because the only avenue available to them were textbooks, it turns out that textbooks have played a significant role in the recent development of informal logic.³

Toulmin's text continues this trend, for it is obvious that pedagogical concerns have influenced him, too. In the Teaching Guide, he says:

This is little more than an updating of a part of the trivium of the time-honored liberal arts so as to meet the contemporary challenge to philosophers and educators, that is, to educate a generation of students whom Anthony Burgess has aptly described as having "experienced everything and read nothing." (TG, 1-2)

Although pedagogical goals have fuelled the engine driving recent experiments, it must be noted that theoretical issues have quickly emerged. Indeed, it has become evident that if informal logic brackets the canons of formal logic and addresses itself seriously to the task of analyzing and criticizing real arguments (as our pedagogical values demand), then we will find that we lack anything substantially new in two important areas: (1) the theory of argument and (2) the theory of criticism. So it is the strong interplay between pedagogy and theory that has invested informal logic with much of its vitality and growing appeal to logicians.

All this being so, it was with the greatest anticipation that I received, last spring, a copy of Toulmin's new text. Not only is he himself a highly respected philosopher, but his earlier monograph--The Uses of Argument--was one of few serious attempts in the literature of logic to address itself squarely to the adequacy of the traditional framework. That alone gives Toulmin at least partial claim to the title "the grandfather of us all." In that work, Toulmin wrote:

In tackling our main problems about the assessment of arguments, it will be worth while to clear our minds of ideas derived from existing logical theory, and seeing by direct inspection what are the categories in terms of which we actually express our assessments, and what precisely they mean to us. (6-7)

How terribly sane and insightful the thought! In effect, Toulmin was saying that it was about time that logicians became more empirical and looked more carefully at the problem of analyzing real arguments. His own proposal, forming the core of that work, was that we can best understand the process of critical assessment of arguments by means of a jurisprudential model rather than a mathematical one. In An Introduction to Reasoning, some 22 years later, Toulmin has undertaken the task of translating that proposal from a theoretical to a pedagogical setting.

In the intervening years, we have seen initiatives from other logicians who (whether knowingly or not) were rallying to the cry Toulmin had issued in The Uses of Argument. What he predicted there has come to pass, for at the end of his introduction, he wrote:

But of one thing I am confident: that by treating logic as generalized jurisprudence and testing our ideas against actual practice of argument assessment rather than against a philosopher's ideal, we shall eventually build up a picture rather different than the traditional one. (10)

Just such a picture has begun to emerge, although its outline and finer details remain blurry. Informal logic now finds itself in the very sort of situation Kuhn describes in The Structure of Scientific Revolutions. The old paradigm is losing, or has lost, its grip; several new ones have been developed; none has thus far managed to carry the day and win allegiance. It is in this context, I believe, that we must place Toulmin's text. Is this the new paradigm for which we have been searching?

I hope to be able to give this text the careful scrutiny it deserves, though I very much fear that I shall not succeed. For the reviewer must be in a position to appraise both the theoretical and pedagogical adequacy of the text, and I'm afraid I must admit to limits on both counts. To take the matter of pedagogy first, I must confess that I have not had the opportunity of teaching from this text and therefore have no solid basis for gauging its merits as a text; i.e., how do students respond to the text? what sorts of problems might one encounter in using it? On such questions, I shall have to pass, contenting myself with the hope that someone who is qualified will, in a future issue of the Newsletter, take them up. Then there is the matter of the conceptual framework Toulmin introduces, about which I make these preliminary observations. It is a radical departure from the traditional framework. It is fascinating, fresh, and anything but a rehash of the same old tired approach that has occupied centre stage for so long.

To give the reader some sense of what Toulmin is about, I shall quote three passages from the Teaching Guide:

Our conception of logic is based on the notion that reasoning is essentially a matter of dialogue rather than monologue, in which certain techniques come to be mastered. (1)

Among the most important consequences of the notion that reasoning is to be taken as a human transaction rather than as the analysis of arguments in terms of canons that establish their validity or invalidity for all time, is the correlative notion that argumentation (and indeed rationality itself) is an "open-textured" activity. Only in mathematics and formal logic do we encounter reasoning that can be said to reach a conclusion, a finally completed state. (2)

Because a Socratic approach is suggested throughout, it will be helpful to look at some possible topics of

discussion that can be stimulated in the opening session and carried throughout the remainder of the course. An Introduction to Reasoning aims at an articulation of the stages through which actual arguments and discussions go. (2)

These passages make plain that Toulmin has, quite self-consciously, attempted to develop an approach to logic that is, for all practical purposes, independent of the assumptions and concerns of formal logic. We cannot, I think, underestimate either the boldness or the significance of this experiment. Most texts in the recent batch of informal logic texts have, for all their merits, in one way or another retained significant elements or assumptions of the traditional framework, even when they have tried valiantly to overcome them.⁴ Toulmin has taken a different road, though one will surely see its philosophical antecedents in the writings of Peirce and Wittgenstein, to name but two. Although Toulmin does not say it explicitly, I think what he is providing us with here is a new paradigm for (informal) logic, some aspects of which are evident in the passages quoted. First, Toulmin has chosen to investigate reasoning and argumentation as processes (rather than as products) and so has devised a model for understanding them which is dialogical (rather than solipsistic) and dynamic (rather than static). Second, Toulmin has decided to look at the processes of reasoning and argument in law and science (principally), finding in them better analogues for how reasoning is developed and criticized than he believes can be found in the traditional analogates: geometry, mathematics, and formal logic.

Hence, the appropriate matrix for this review cannot be the conventional one: Is this a good introductory logic text? For built into that very question are a host of assumptions about what logic is! Instead, I propose that the right question to ask here is: How successful is this text in attempting to develop a new conception of what logic is, and how to go about the task of analyzing and criticizing arguments?

Yet to answer this question, the reviewer (and here I finally return to the matter of my limits) must have the benefit of both time and practice. I have the benefit of neither.

A final problem faced by the reviewer (it seems there is no end) is that this is a big text (337 pages) of very broad scope. I shall have to be selective in my remarks. The very least that I can do, at this point, is to give the reader a rough idea of the shape of the whole. Then I shall burrow in.

An Introduction to Reasoning has four parts. Part I is the "General introduction," containing the opening chapter. Part II, the core of the text, presents what Toulmin calls "the basic pattern of analysis." It contains six chapters, each of which comes with exercises designed to allow the student to apply what he or she has read in the chapter. Part III is titled "Rational assessment," and consists of 4 chapters dealing with various aspects of criticism. The largest of these is Chapter 11, "Fallacies," about which I shall comment in some detail. Part IV shows how the basic pattern is applied in different

fields. Chapter 13 deals with legal reasoning; Chapter 14 with argumentation in science; Chapter 15 with aesthetic arguments; Chapter 16 with decision making in management and business; and Chapter 17 with ethical reasoning.

Here then is the plan for the review. In Section II, I begin with a brief discussion of Chapter 1 and then take a detailed look at each of the elements in the pattern of analysis. In Section III, I will focus on Toulmin's theory of criticism as set forth in Part III of the text. In Section IV, I present my answers to the questions I have said constitute the appropriate matrix for this review.

II. TOULMIN'S THEORY OF ARGUMENT (PARTS I & II)

A. Chapter 1: Reasoning and its goals

The first chapter aims "to sharpen the student's perception of just what it is to give reasons" (TG, 1). It begins with five examples of reasoning drawn from different areas, after which Toulmin asks:

What does it mean to ask if someone's statement or argument or advice is sensible or well reasoned, sound or logical? . . . What do these demands for "good reasons" and "sound arguments" amount to? And how are we to judge this kind of goodness and soundness? That is what this book is all about. (4)

An engaging and effective start, I thought.

The topics dealt with in the rest of the chapter not only serve the aim declared above but also lay the foundation and indeed set the tone for the rest of the book. They are:

- "The varied uses of language," in which Toulmin distinguishes between the instrumental and the argumentative uses of language, thereby putting some limits around the need for "giving reasons."
- "Reasoning varies with situations," which makes the fundamental point that the kind of reasoning that is appropriate varies from context to content.
- "Reasoning as a critical transaction," which presents the idea of reasoning as one whose essential locus is "a public, interpersonal or social one," (9) and of reasoning as "not a way of arriving at ideas but rather of testing ideas critically" (9).
- "The structure of arguments," which makes the point that arguments, or trains of reasoning, are constructed out of their constituent parts.
- "Some definitions," in which Toulmin presents his definitions of argumentation, reasoning, argument and rationality.
- "The forums of argumentation," which again emphasizes that arguments have different forums and must be judged accordingly.

Before moving on, I want to call attention to two commitments of Toulmin's approach that emerge in this first chapter. The first is Toulmin's position on standards (or criteria) of assessment. He says:

So reasoning involves dealing with claims with an eye to their contexts, to competing claims, and to the people who hold them. It calls for critical evaluation of these ideas by shared standards; a readiness to modify claims in response to criticism; and a continuing critical scrutiny both of the claim provisionally accepted and of any new ones that may be put forward subsequently. (9)

I like Toulmin's emphasis here, but the reference to "shared standards" was both intriguing and perplexing. For shortly after this passage, Toulmin writes:

One of the central questions in our whole inquiry will be, indeed, just how far, and in just what respects, we can hope to state general or universal standards of judgement for telling the validity, relevance, and strength or weakness of "reasons" or "arguments"; just how far, and in what respects, these standards will inevitably vary in time or differ according to the context and circumstances of judgement. (10)

The question of whether or not there are universal standards for the evaluation of arguments is a crucial and vexing one for the theory of logical criticism. Between the lines here, I thought I detected a hint of relativism--the view that there are no universal standards of criticism, that all standards are context-dependent. With equal justice, such a view might also be called pragmatism. In any event, Toulmin returns to the question of standards several pages further on:

While certain very broad rules of "rational procedure apply to arguments in all these forums, many of the more specific rules of procedure (or "due process") that govern arguments in one area are relevant only to, say, the proceedings in a law court rather than a scientific meeting, or the other way around. One of the main aims of this book will in fact be to show the difference between:

- Those universal ("field-invariant") rules of procedure that apply to rational criticism in all fields and forums, and
- Those particular ("field-dependent") rules that are appropriate in law, or science, or business, but not everywhere. (15-16)

And so Toulmin's theory of criticism shades into his theory of argument. That there are both field-invariant and field-dependent standards or rules clearly presupposes that arguments can, without insuperable difficulty, be parcelled out to various fields. Should this presupposition prove to be implausible, Toulmin's theory of argument and his theory of criticism alike will be in some jeopardy.

Thus, two important commitments have emerged in this first chapter. The first, belonging to the theory of argument, is that arguments can be assigned to fields. The second, belonging to the theory of criticism, is that some standards are field-invariant, while others are field-dependent. We shall want to monitor future developments with these principles in mind.

B. Chapters 2-7: The basic pattern of analysis

What Toulmin refers to as "the basic pattern of analysis" is described in a nutshell in Chapter 2, and then discussed step-by-step in the chapters that follow. The pattern has six "elements": the claim (Chapter 3); the ground (Chapter 3); the warrant (Chapter 4); the backing (Chapter 5); the modality (Chapter 6); and possible rebuttals (Chapter 6). I shall be looking closely at each of them, for clearly Toulmin's novel approach will stand or fall largely on the attractiveness of the pattern of analysis. In particular, I shall be keeping two questions in mind. First, are the elements clearly explained? Second, is the pattern flexible enough to be universally applicable? Anything less than strong affirmatives means trouble for his theory of argument.

Claim. By this term, Toulmin means "an assertion put forward publicly for acceptance" (29). In the dialectical situation, the claim is implicitly linked to the next element in the pattern--the ground(s). Hence the claim plays roughly the same role in Toulmin's schema that the conclusion plays in the traditional one. (Toulmin's rejection of the term "conclusion" has an ideological basis, about which more later.) Since the claim stands at the core of the argument, and since arguments (as we have seen) are to be assigned to various fields, it is no surprise that Toulmin holds that claims differ from one field to the next. The procedures required to make good on them differ accordingly.

One can pose questions about Toulmin's conception of a claim. What precisely counts as an assertion? What happens to what would be called, in the traditional schema, an implied conclusion? Will Toulmin have to swallow "implied assertion"? But I do not think these are major problems. Perhaps more to the point would be to note that the section on ambiguous or unclear claims (31-32) was elliptical. In analyzing arguments, one is often confronted by a passage where the conclusion or claim is unclear. It is my experience that what students need are some substantial pointers about how to clarify (and indeed identify in the first place) muddled or ambiguous statements. While it is true enough that context will often help clarify (as Toulmin says), I believe an excursus into the nature and the theory of meaning would serve the aims of argument analysis better still.

Grounds. By this term, Toulmin means to refer to "statements specifying particular facts about a situation relied on to clarify and make good the previous claim" (33). This category is meant to capture what would, in

the traditional schema, be termed the evidence or support for the conclusion; i.e., the premises. It seems to me that there are several problems with this way of looking at the supporting cast.

First, it seems that grounds are, by their nature, factual. Not only the above text, but others as well, support this interpretation:

The term "grounds" refers to the specific facts relied on to support a claim. (33) (emphasis added)

Q's demands for grounds is . . . a request for A to put into the discussion some body of specific "facts of the case" that can be agreed upon as a secure starting point acceptable to both sides and so "not in dispute." (33) (emphasis added)

Unless Toulmin's conception of fact is extraordinarily elastic, this requirement seems unduly restrictive. What happens to arguments in which one normative claim is put forth as support for another? Consider the following example:

Girls should never touch alcoholic liquors. The reasons are obvious. It is for them to steady the young men, and so maintain their dignity, their beauty, and their intelligence.⁵

On the traditional model, the third statement is the premise supporting the first statement as its conclusion. On Toulmin's model, the first statement is the claim, but can the third be categorized as its ground? Can it be interpreted as stating specific facts? Only if we allow for a most liberal interpretation of that category can the statement be construed as a ground.

Second, some of the statements adduced by Toulmin as examples of grounds do not seem to me to fit his definition. Consider this example:

Just compare them (the Oakland Raiders) with the opposition. None of the other teams has such a combination of offensive and defensive strength. (32)

Can this last statement be viewed as one which gives specific or particular facts? If we're talking football, the following statements strike me as more suitable candidates:

Oakland allowed the fewest points per game of any team in the N.F.L.

Oakland allowed the least yards per game of any team in the N.F.L.

Oakland had the best 3rd down efficiency rating of any team in the N.F.L.

Toulmin's candidate strikes me as one or two dialectical jumps above the "facts of the case." It is a characterization or interpretation of them. No doubt, such a statement might be offered as evidence for some other claim. But can such a statement be categorized as a ground, given Toulmin's definition?

Third, what happens to arguments whose evidence consists in counterfactual conditional statements? I do not know how Toulmin proposes to handle such objections, though he is not unaware of the problems involved in set-

ting on the grounds:

Not all of the things that A initially offers as "facts" need strike Q as unquestioned "facts" also. . . . As a result, a substantial amount of time may be spent in the early stages of any argument, going over the material initially offered by A as his supporting "facts," for Q must satisfy himself which of A's grounds he must indeed accept as data. (33-34)

Evident in this passage is the influence of the jurisprudential (or dynamic) model, and the time has come to say more about it.

The jurisprudential model. Although Toulmin does not here refer to his model as jurisprudential, still it is the same pattern as was presented in The Uses of Argument, where he made a strong case for dumping the geometrico-mathematical model that had dominated logic for so long and replacing it with one patterned on the process of argument found in legal discourse. Such a shift has, as we are now seeing, a number of consequences. One is the new pattern of analysis. Another is that the context of argument will naturally be dialectical⁶ and greater emphasis will be paid to the process of argumentation. Thus, in the text, Toulmin unveils his pattern of analysis as a series of transactions between A, the assertor, and Q, the questioner.

There are clear pedagogical gains in this shift. Students can witness and become part of the process of argumentation. They learn what sorts of questions it is appropriate to ask, and at what stage. They develop an appreciation of argumentation as an ongoing process, where claims can be modified and revised in light of criticism. They come to understand that criticism is an integral part of the process, not the enemy. All of this is preferable to the idea that an argument is a one-shot, winner-take-all affair.

But there are problems, too. First, dialectical interchanges between Q and A will usually be public only in the restricted sense of being available to anyone within earshot. Yet Toulmin has said that the essential locus of reasoning and argument is public, interpersonal and social:

Wherever an idea or thought may have come from, it can be examined and criticized "rationally" . . . only if it is put into a position where it is open to public, collective criticism. (9)

Those who take the argument-as-product as their focus and try to teach students how to analyze and criticize arguments have no such tension to resolve. The argument on the Opened page of the New York Times is by its very nature public--an objective entity there for anyone who cares to read and/or lock horns with. But in engaging with that argument, the reader or critic will not have the benefit of having shared in the process that led up to the formulation of the argument. Which brings me to the second problem. There are all sorts of moves open to one who is part of the process that will not be available to one confronted with only the distillate of that

process--the argument itself. In we're part of the process, we can ask the arguer to clarify her claims; or restate her grounds; or add to, subtract from or expand upon her statements. But when we've only got the argument itself to go on, none of this is possible.

Perhaps I can illustrate better what I'm driving at here by turning briefly to the Exercises for Chapter 3. There are 20 passages, calling for the student to, among other things, identify the claim and the grounds given for it. The first 10 examples are straightforward enough; the second 10 are more difficult, perhaps because they have the virtue of being real (as opposed to artificial) examples of arguments. However, because the text has not really prepared them for handling any but the most streamlined of arguments, I think students may find the last 10 examples difficult and frustrating. Toulmin has said nothing about the problem of weeding extraneous material (what I call "clutter") from the argument, nor about deciding precisely what the claim is and how best to formulate it. Partly, one is inclined to believe, these lapses are the result of his having employed the dialectical model. For if Q has any doubts, he or she can ask A just what the claim really is, and just which statements A takes to be grounds. But when the scene shifts, and Q is the student working on, let us say, #13, a product awaiting scrutiny, then frustration sets in.

Let us, then, look at #13, which I shall reproduce here:

Business doesn't draw up a contract with government; it tries to get the best deal it can in an increasingly coercive society. There is no such thing as voluntary planning. It compels somebody to do something he otherwise wouldn't do.

[Objection from Skeptic magazine interviewer]:

What if we vote for it?

It's still coercion. You can call it Nazism, or you can call it Communism. You vote away my minority rights to disagree; I don't find that anything but coercion. Majority rule is coercion if it tramples on minority rights.

Robert M. Bleiberg, Editor Barron's in an interview with Skeptic magazine

This is the very sort of passage that is likely to give students fits. Just what is Bleiberg's claim? It might have helped had Toulmin given us some information about the context in which this passage occurred. Indeed, the failure to do so seems a serious oversight on the part of someone whose approach places such emphasis on context. Without such information, it is difficult to decide which of Bleiberg's many claims is to be taken as the focal point. Is it: "There is no such thing as voluntary planning?" Or: "Business doesn't draw up a contract with government?" Or: "Majority rule is coercion if it tramples on minority rights?" If we knew the drift of the conversation leading up to this excerpt, we might better be able to decide what Bleiberg's point was, and, indeed, whether this excerpt even qualifies as an argument in the first place.

Here is Toulmin's analysis from the Teaching Guide:

Claim: Business is subject to government coercion.

Grounds: All government planning with regard to the economy amounts to coercion and can be compared with totalitarianism.

I have reservations about Toulmin's interpretation, but let's grant that this is an argument. Bleiberg did not, as far as I can see, assert that "Business is subject to government coercion." He may have made statements which implied or are equivalent to it, but he did not make that assertion. Yet Toulmin defines a claim as "an assertion put forward publicly for general acceptance." Perhaps Toulmin can get around this by amending the definition of a claim. Even still, it is not at all clear to me that Bleiberg's intent here was to establish that big business is (as a matter of fact) subject to government coercion. It seems rather more plausible to take Bleiberg to be using that fact as a point of departure on the road to claiming that this situation is tantamount to Nazism or Communism. I was also bothered by Toulmin's rephrasing of Bleiberg's statements. Why rephrase, unless it is necessary to do so in order to bring out the meaning more clearly? For such rephrasing runs the risk of distorting the arguer's position, while conferring no apparent benefits.

Well, reasonable men and women may well disagree with one another about the analysis of any given passage. Toulmin realizes this. In the Teaching Guide, he says [I preserve the capitalization]:

IT IS IMPORTANT TO EMPHASIZE THAT THE CONCEPTION OF LOGIC UPON WHICH AN INTRODUCTION TO REASONING IS BASED DOES NOT ADMIT OF FINAL "CONCLUSIONS" TO ARGUMENTS, NOR DOES IT HOLD THAT THERE ARE ANY UNIQUE "SOLUTIONS" TO PROBLEMS INVOLVING REASONING PRACTICE. THE ANALYSES IN THIS BOOK ARE NOT THE ONLY POSSIBLE ONES: EACH OF THEM REPRESENTS ONE AMONG MANY POSSIBILITIES. WE PRESENT THEM AS CONVENIENCES TO THE INSTRUCTOR. (4-5)

While I admire the forthrightness of this declaration, I must yet admit that I find myself distressed at not being able to fathom how he arrived at his analysis of the above passage! Toulmin is surely right, however, in stating that we cannot expect unique solutions in informal logic. Admit this, and you are on the slope to a pernicious species of relativism, unless you are prepared to declare on what basis one analysis is better than another. The problem is thorny enough to make one hanker for the rarefied climes of formal logic--almost!

Warrants. Of all the elements in Toulmin's schema, the warrant is the one I had the greatest problem understanding. The intuitive idea seems clear enough, but (as I will try to show) Toulmin's rather breezy style of exposition creates some of the confusion. Then, too, this is the element that departs most radically from the traditional schema, thereby forcing one to look at the structure of arguments in a different light. That takes

some getting used to. Grounds, after all, may be readily compared to premises, and claims to conclusions. But there is no counterpart for the warrant. I will, therefore, first attempt to set out as clearly as I can what Toulmin means by the term, and then present my difficulties with it.

Simply stated, a warrant is a link between the grounds and the claim. Toulmin writes: "Put colloquially, the question at the level of the warrant is not, 'What do you have to go on?' but 'How do you get there?'" (44). The warrant then justifies passage from the grounds to the claim.

It is tempting, but mistaken, to think of a warrant as nothing more than a formal rule of inference. Toulmin addresses this point explicitly in the Teaching Guide (it would produce needless confusion to deal with it in the text):

The rules of inference appealed to in formal logic (modus ponens, for example) are designed to guarantee merely the "formal consistency" of the premises and conclusion, in an argument whose structure has been set out in the manner required, but the warrants that serve as "rules" for connecting data and claims in our present analysis are intended to insure the substantive soundness of the steps in question ("From smoke, you may infer fire"). So substantive warrants are both more specific and concrete in their content and also more open to challenge than formal rules of inference. (17)

At the very least, Toulmin thinks that there is a categorical difference between warrants and the rules of inference of formal logic. In this, I think he is right.

It is also tempting to think of a warrant as nothing more than a missing or suppressed premise, conditional in form, whose antecedent contains the data or grounds, and whose consequent contains the claim. I doubt that Toulmin would accept this view, but I'm not sure (given what he says about warrants and some of his examples) that he can forestall it. Let us see.

Toulmin first introduces the term in Chapter 1:

(W1) Steps from grounds to claims are "warranted" in different ways in law, in science, in politics, and elsewhere. The resulting warrants take the form of laws of nature, rules of thumb, engineering formulas and so on. But in a practical case, some appropriate warrant will be needed if the step from the grounds to the claim is to be trustworthy. (26)

Here warrants are spoken of as steps. They are also (by implication if not direct statement) field-dependent; i.e., restricted in scope to some specifiable field or rational enterprise. And it is further clear that what makes something a warrant is its function rather than any intrinsic feature.

To further verify this most recent point, one has only to notice the variety of descriptions Toulmin has given of warrants. In Chap-

ter 4, he introduces them this way:

(W2) Now the questioner asks for warrants, that is, statements indicating the general ways of arguing being applied in each particular case and implicitly relied on as ones whose trustworthiness is well established. (43)

He then goes on to make all of the following claims about warrants:

(W3) Such a general, step-authorizing statement will here be called a warrant. (44)

(W4) A license to argue from grounds to conclusion (45)

(W5) The questioner, Q, must now inquire about the general rule or procedure that the assertor, A, is relying on in presenting the step from G to C as a trustworthy step. (44)

(W6) Many kinds of general statement authorize the inferences by which different collections of specific information . . . are put forward as rational support for the claim. (53)

In the Teaching Guide we find these statements about warrants:

(W7) . . . the strength of reasoning depends upon the rules or "warrants" that stipulate just what kinds of information are relevant to answering questions about the subject in hand. (TG, 17)

(W8) . . . warrants . . . serve as rules for connecting data and claims (TG, 17)

(W9) Warrants are rules that enable us to "make sense" of situations. (TG, 18)

(W10) Warrants are often merely assumed tacitly--or, as we say, "taken for granted."

This medley of descriptions might be confusing to someone who is trying to master the meaning of a familiar term, here being put to special use. (W2), (W3), and (W6) all characterize warrants as general statements; (W5), (W7), (W8) and (W9) all describe warrants as rules; (W4) refers to a warrant as a license; and (W10) introduces the notion of an assumption. One suspects that, in the long run, all of these descriptions may prove quite compatible. In the short run, however, the sheer variety is more likely to engender confusion than understanding.

Toulmin may indeed be aware of this point, for he says:

Historically speaking, the term has always had close associations both with the notion of a license or permit and also with that of a warranty or guarantee. (45)

Whether this usage note can provide the much-needed unifying thread for Toulmin's various statements about warrants remains to be seen.

Let us look at some examples of warrants. The first one Toulmin produces is this:

(1) Wherever there's smoke, there's a fire. (44)

About this statement, Toulmin says:

This last statement has the effect of authorizing the step from G (the smoke) to C (the fire). We can in fact read it as meaning, "Wherever smoke is visible, it can be concluded that there is fire also." (44)

This translation gives me pause. It is well known that any general statement can be given that sort of reading, and hence is potentially a warrant. But what's to prevent us from giving singular statements the same sort of reading? Thus "Ronald Reagan is the 40th President of the United States" can be read as meaning "Wherever Ronald Reagan is visible, it can be concluded that there is the 40th President also." And if this move is allowed, then warrants need not be general statements or rules at all.

Before looking at additional examples, I need to mention one important point about warrants: they are field-dependent. This is clear both from the way that Toulmin has introduced the notion, and from passages like this one:

Wherever a fully established and articulated body of knowledge exists . . . we commonly find such warrants recognized and put to use. In other fields, however, it may be harder to articulate all the warrants employed in argument, in the form of laws, rules or principles. (49)

In looking at the examples, it will be useful to keep these two questions in mind. First, which of the many descriptions of warrant does this example fall under? Second, what field does the warrant belong to?

(2) If a woman is seen walking down the street with a man whom her husband does not know, it may be concluded that she is having a clandestine affair with that man. (45)

This is a general statement in the sense of (W2), but it is difficult to assign it to any field.

(3) [Toulmin refers to] a general formula that relates the breaking strain of a girder to its shape and dimensions (47)

No problems with the field here: engineering. And (3) seems covered by (W6).

(4) Anyone who leaves a car in a metered parking space without putting money in the meter can be found guilty of an offense. (48)

This statement sounds as much like a warning as it does an inference ticket. Toulmin cites it as an instance of a warrant from the field of law.

(5) It is unjust to expect your wife to give up her spare time to babysit without ever taking a turn yourself. (49)

This is cited as an instance of a warrant from ethics. It is a normative ethical claim, but it lacks the generality that one expects of a warrant.

- (6) Pallor, lethargy, and a low fever often means viral or bacterial infection, or exhaustion from overwork, or, in a few cases, neurotic stress. (50)

This is a piece of medical knowledge, one supposes.

- (7) This particular combination of pallor, low fever, lethargy, etc., which Dr. Bernard's experience enables him to recognize, generally means (i.e. entitles us to have some confidence in inferring) a virus infection. (51)

The field, once again, is medicine, but the highly specific nature of this claim makes it difficult to fit it under any of the descriptions offered by Toulmin.

- (8) Anyone who seeks to work only at what is rewarded is not conscientious. (52)

Toulmin produces this example as a warrant from the field of psychology. But it seems to me rather to be a tautology, or analytic truth.

Still somewhat confused, I thought it advisable to work through the Exercises for Chapter 4, which require the student to identify the warrants appealed to in the arguments. In order to save space, I shall not reproduce the original argument here, but warn the reader that he or she will not be able to follow the discussion without the example.

Example #1. Toulmin and I came up with quite different warrants here:

(Toulmin) A society that conducts its public affairs in the style of a surrealist painting can be regarded as worse than totalitarian.

(Johnson) When the leading persons of the government, the party and the armed forces are coerced, then such a society can be called a terror-society-- something worse than being called totalitarian.

I am not sure what field either of these alleged warrants belongs to. The difference in our formulations may, in part, stem from some disagreement over the grounds. Toulmin has focused on the second paragraph of the example, whereas I have focused on the third. I believe my focus is more appropriate since (a) grounds are supposed to be factual in character and (b) the third paragraph seems more factual than the second; i.e., it would be easier to substantiate. Hence our different ways of formulating the warrant here seem to be traceable to variant interpretations of how the argument works.

Example 2. Once again, Toulmin and I agree about the Claim but disagree about the grounds, which will naturally affect the formulation of the warrant. Here is Toulmin's view:

Many conscientious, energetic individuals do not get ahead. The great minds of the world have not been able to assist them. (TG, 20)

I agree with this, but would add:

Astrology takes account of the complex structure of the human soul, whereas other social and economic formulas do not.

In fact, I do not see how Toulmin can justify omitting this statement as a ground, since it is clearly meant to support the claim.

This is how we each formulated the warrant:

(Toulmin) If conscientious individuals fail financially and if the great minds of the world cannot find some solution in ordinary economics, then those who seek financial success ought to try astrology to find a way to financial security. (TG, 20)

Mine is even more cumbersome:

(Johnson) If conscientious individuals fail financially and if the great minds of the world cannot find some solution in ordinary economics, and since astrology takes account of the complex structure of the human soul, whereas other social and economic formulas do not, and since the solution to financial problems requires an understanding of the complex structure of the human soul, then those who seek financial success ought to give astrology a try.

Neither warrant is easily identified as belonging to any field and neither seems readily classifiable as either a rule or general statement.

Example #7. I found Toulmin's analysis of this very unsatisfactory, for it seems to distort the original argument. Once again, the problem lies in how the grounds (and hence the warrant) are to be formulated. Here is Toulmin's version:

Larry J. Hillis bought eleven new Uniroyal steel-belted radials, all of which cracked and split. (TG, 21)

The original text of the argument reads quite differently:

"All the time with the tires it has been the same problem," Hillis wrote, "cracking and splitting around the rims, rounding on the edges and wearing improperly." (55)

This is further clarified by the lead-in:

One blowout three days after he bought the car; two more replaced within 12,000 miles; four tires cracked and split in the sidewalls and rim. (55)

So apparently only four of the eleven tires cracked and split in the sidewalls and rim-- a quite different state of affairs than Toulmin's version suggests. A more accurate formulation would be:

Larry J. Hillis bought eleven new Uniroyal steel-belted radials, seven of which proved to be defective.

But this is not all, for the original also contains this information:

He (Hillis) insisted that he kept the tires "properly inflated and rotated, balanced and aligned."

Fully-expressed, then, the grounds would be as follows:

Larry J. Hillis bought eleven new Uniroyal steel-belted radials, seven of which proved to be defective. Hillis took proper care of the tires.

Again differences in the ways the grounds are formulated will spawn different warrants:

(Toulmin) When an individual buys a lot of new tires from one manufacturer, all of which turn out to be defective, the manufacturer must be at fault.

(Johnson) When an individual buys eleven new tires from one manufacturer and takes proper care of them and seven turn out to be defective, the manufacturer is at fault.

I must admit that it is not clear to me how far the differences between Toulmin's warrants and mine are to be explained by different interpretations of what is being argued and how far by my difficulties in understanding the very concept of a warrant. But let me try to bring this section to a close by mentioning, once again, the main difficulties I have encountered.

Toulmin's explanation of the concept of a warrant is loose rather than tight. He gives us a number of different descriptions of, or ways of looking at, warrants which may all be compatible but whose unifying thread is not apparent. Some of the examples are not easily sorted out under any of the available descriptions. These problems may be only expository in nature.

I think this is not the case with the idea that warrants are field-dependent. Many of the warrants Toulmin cites as examples do not seem to be to belong to any identifiable field. But this only raises another problem. What is to count as a field? Law and science qualify, of course. Does astrology? Does common sense? Does philosophy? And what happens when, as is often enough the case, an arguer provides grounds from different fields (cf. Example 2 on page 25)? Obviously no one warrant will suffice to link the grounds with the claim, unless the already nebulous concept of a field is to be extended to allow for super-fields!

Well, these are problems I would gladly embrace, if only it were clear that Toulmin's new schema pays big dividends. But that is far from clear. If one looks carefully at the warrants Toulmin provides in the Teaching Guide for the exercises, one cannot help but be struck by the fact that 7 out of 10 of them (i.e., #2, #3, #4, #5, #6, #7 (arguably), and #10) turn out to be the sort of "if . . . then" conditional proposition that a quasi-deductivist would supply as missing premises in reconstructing the argument using the traditional schema!⁷ That is bad enough, but matters are worse still. Toulmin gives very little advice about how to go about formulating warrants. In recent years, however,

informal logicians still operating more or less within the traditional schema have made some strides in handling missing premises. They have, for example, articulated the Principle of Charity, which requires that the critic be scrupulous not to overcommit the arguer when filling in missing premises. Not only does Toulmin say nothing whatsoever about this important principle, but his own examples contain repeated violations of it, as we have seen. A new paradigm may well be expected to cause changes in the very nature of what is seen as a problem. In this case, we seem to be confronted with the loss of a problem (missing premises and how to formulate them), but I am not sure that its disappearance should be construed as a step forward.

Backing. The next element in the pattern is the backing for the warrant. The dialectical situation is this: A has made a claim for which grounds have been produced. Q has challenged A's move from G to C. In response, A has adduced warrant, W. But, as Toulmin says, "warrants are not self-validating" (58). Q may rightly seek justification for the warrant in either of two directions:

1. "Is that warrant reliable at all?"
2. "Does that warrant really apply to the present specific case?" (58)

To answer either of these questions is to provide the warrant with its backing.

The relationship between a warrant and its backing is close:

A warrant and its backing are related in very similar ways in many different contexts of argumentation. But the kinds of substantive considerations that actually support our warrants vary greatly between different enterprises and fields of argument: in scientific, medical and legal arguments, in discussions about sport, art or business, in abstract discussions of pure mathematics, our warrants derive their foundation and authority from backing of quite different sorts. (62)

Again we see the influence of the assumption that arguments can be sorted out into different fields, though it must be clear that discussions about sport constitute a field in a very different sense than do abstract discussions of pure mathematics. Since the concept of backing is so closely tied with the concept of a warrant, I shall say no more about it here.

Modality. The fifth element in Toulmin's pattern is the modality, or modal qualifier. By this term, Toulmin means "phrases showing what kind and degree of reliance is to be placed on the conclusions, given the arguments available to support them" (69). The modal qualifier indicates how strong the arguer thinks the connection is between the grounds (plus warrant and backing) and the claim. Examples of modal qualifiers are words and phrases such as: "necessarily," "certainly," "presumably," "in all probability," and "for all we can tell."

Toulmin shows how modal qualifiers operate in fields such as law, medicine, and science, but insists (and rightly so) that modals play an important role in everyday arguments as

well:

Whatever other differences there are between the modes of argumentation appropriate to our different activities and enterprises, we frequently have occasion

1. To present our claims tentatively, without staking our whole credit on them.
2. To put them into debate in an uncommitted way, merely for purposes of discussion.
3. To treat them as serious but conditional conclusions.
4. To offer them simply as a good bet.

As a result, the relevant modal qualifiers . . . have a part to play in all kinds of arguments. (74)

This is well said, though the last statement is weaker than one made earlier: "In a word, every argument has a certain modality" (70). Toulmin's position here is probably best construed as one which prescribes an ideal rather than describing what is the practice. In my experience, modals show a relatively low incidence of occurrence in everyday arguments. People generally do not say what sort of strength their evidence is meant to provide for their claims. It would be better if they did. Surely one of the purposes of an introductory logic course is to acquaint the student with the use and the importance of modal qualifiers. Toulmin's text does an excellent job on this count and deserves much credit for its fine presentation of this much-neglected facet of argument analysis.

Rebuttals. The last element in the pattern is the rebuttal; that is, the mention of "the extraordinary or exceptional circumstances that might undermine the force of the supporting arguments" (75). These may be built into the argument to indicate what sorts of conditions might vitiate it. I have no problems with this idea, and found Toulmin's presentation both innovative and lucid.

The question of how far one should go in qualifying one's claims is not something Toulmin believes can be given a fixed answer. Rather it is a matter for pragmatic choice:

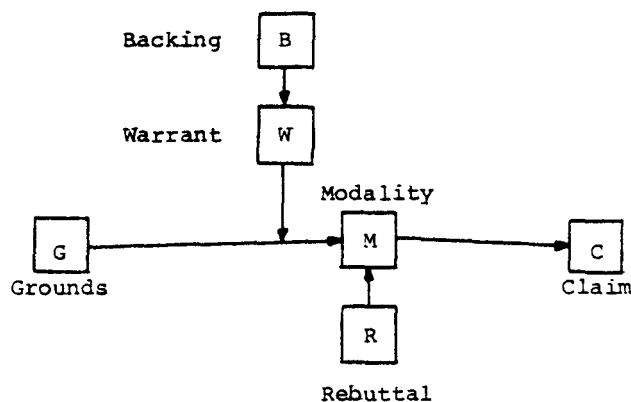
To avoid an excess of small print, we must spell out at sufficient length the kind of exceptions, exclusions and other rebuttals that limit the force of our arguments. To avoid gobbledygook, we must prevent the recital of exceptions from getting too long. . . . Where is the line to be drawn? That decision can be made only when we know enough about the audience (laymen or attorneys), the forum of argumentation (law court or office) and the general purpose of the particular discussion in question. (81)

Notice that here Toulmin has switched gears and is speaking not so much of the analysis and criticism of arguments as of their construction. One of the best features of Toulmin's approach is that it is serviceable in both departments: analysis and construction. Those instructors who, like myself, have become convinced that introductory logic courses

should deal with both departments will very much appreciate this feature of Toulmin's text.

Of course, students will have to be advised that skill in argument construction forces one outside the realm of logic proper; they will need to have both an adequate grasp of the issue and a sufficient supply of information. The Exercises for Chapter 6 will help underscore these points. Students will find it difficult to formulate possible rebuttals to arguments without some working knowledge of the issues. For example, the rebuttal to the claim that water should be thrown on burning materials to extinguish them is: "Throwing water on burning oil is very dangerous, for it will spread the fire" (TG, 30). The average person should know this, but the point is that logic will not confer this knowledge.

All of the elements are now in place, and the chart below shows how one would diagram an argument using this pattern of analysis:



Given grounds, G, we may appeal to warrant, W (which rests on backing, B), to justify the claim C--or, at any rate, the presumption (M) that C--on the absence of some specific Rebuttal or disqualification (R). (78).

C. Summary

To bring this part of the review to a conclusion, I shall state what I take to be the cardinal features of Toulmin's theory of argument along with my reservations about them. In essence, Toulmin's theory of argument has three components:

- A) The conception of reasoning and argumentation as dialogical and pragmatic in character rather than static and syntactic;
- B) The new schema or pattern of analysis for arguments, whose elements are these six: claim, ground, warrant, backing, modality, and rebuttal;

C) The assumption that each and every argument can be assigned to some specific field or enterprise.

B) and C) reinforce one another, since many of the elements in the schema (notably, warrants and backing) are intelligible only under the assumption that arguments are field-related.

About A: I think it is high time that someone tried this experiment. As I stated in Section I, our conceptions of logic and argumentation have undergone very little expansion or revision since the time of Aristotle. The reign of the geometrico-mathematical model has gone virtually uncontested. Indeed, it has if anything been strengthened by the rise to prominence of mathematical logic, following Frege's pioneering work. The philosophical assumptions behind the old logic have been subjected to vigorous challenges in the philosophical works of Peirce, Dewey and Wittgenstein, to name but a few. Close connections between the assumptions and ideals of traditional logic and the perennial specter of skepticism have been noted by many, Toulmin among them. We may like to think that logic, since it is only an instrument, is free of ideological or metaphysical influence. But that is an illusion, it seems to me. Hence it is healthy to have Toulmin actively promoting a new conception of reasoning and argument (and logic) within the matrix of this experiment. Indeed, Toulmin notes how the old terminology reinforces the ideal behind the old logic:

We have stated the elements of our analysis independently of the traditional terminology of formal logic (premise-conclusion, for example), not merely to set our mode of analysis apart from the traditional one, but also to emphasize that what we are doing involves a different conception of logic from either syllogistic or symbolic logic. These latter have more in common with each other than they do with the sort of analysis we are developing. Thus we speak of arguments as "supporting claims" rather than as "leading to conclusions," because the nature of claims is such that they can be reformulated. The term conclusion suggests the reaching of an end point, rather like the quod erat demonstrandum of the geometers. (TG, 8)

Aside from the few reservations mentioned earlier (pp. 14-18), this aspect of Toulmin's approach works well.

About B: There are two questions that must be asked in evaluating the success of Toulmin's new pattern of analysis: B1): Is the pattern viable? Are its elements clearly conceived and explained in the text? B2): Is the pattern adequate? Can it be applied to all sorts of arguments?

Throughout Section II of this review, I have indicated the problems I have encountered in attempting to understand some of the elements of Toulmin's schema, principally (though not exclusively) with warrants. Part of the problem may lie in Toulmin's rather breezy style of exposition, but I am not sure

that this is the whole problem. Then, too, I had some troubles with his conception of grounds, which seemed to me too restrictive. My answer to B1) then is that there are grounds for wondering whether the pattern is viable, but I would not want to make any final judgement until Toulmin has had a chance to tighten some of the conceptual screws.

I have rather more serious doubts about whether the pattern can be applied to all sorts of arguments. These come from two different directions. First, the sort of argument that Toulmin chooses to illustrate his pattern is streamlined; that is, it is short and has very little internal complexity. So it is not clear to me how this pattern will be deployed in the analysis of what I call, following Kahane⁸, extended arguments. It seems to me that it will be both awkward and tedious to attempt to decipher the structure of, say, a 5,000 word editorial using this pattern and method of diagramming. Perhaps it will be possible to decompose such extended arguments into smaller, more manageable chunks which can then be digested by the pattern. But should the tail wag the dog? Since, as I have argued elsewhere, the analysis of extended arguments must be viewed as the primary target,⁹ it seems desirable to devise a procedure for dealing with them in their integrity. So Toulmin's pattern runs into some problems here.

The other doubt I have about the universal applicability of the pattern dovetails with reservations I have about C)-- the assumption that arguments can be assigned to fields. I shall cite an argument which is, I think, quite typical of the sort found in everyday discourse, but to which it is difficult to apply Toulmin's pattern.

In the 1980 elections, Californians had to vote on Proposition 10, which would have limited drastically the places where people could smoke in public. The debate was heated. Here is a typical argument presented in favour of the Proposition:

Californians should vote for Proposition 10 because (1) the medical evidence is clear that smoking represents a health threat to non-smokers and (2) it is clear to anyone who knows smokers that they will not themselves freely choose to limit their smoking and (3) such a proposition would entail minimal costs.

In the first place, I find it difficult to assign this argument about a social and political issue to any specifiable field. Perhaps this is because Toulmin never says precisely what counts as a field. He gives examples like law, medicine, science, and engineering. He uses cognate terms like forum of argumentation, rational enterprise, and context. But so far as I can tell, he never gives a precise definition of any of these terms. Since so much of Toulmin's approach depends upon the concept of a field, the failure to define it carefully seems to me a serious lacuna.

Second, as to the analysis of this argument, there is no problem with the claim or the grounds. But is there to be one warrant, or

three? If one, then I fail to see how that warrant can be located within any specifiable field. Suppose, then, that we connect each ground to the claim with a warrant of its own. How would the warrant for (1) be formulated? We might suggest:

Whenever there is a health threat to members of the public, there should be a law protecting members from that threat.

What field underwrites this warrant? Similar questions will, I believe, arise as warrants for (2) and (3) are fleshed out. But there is another, potentially more serious, problem. In this particular argument, it seems to me that none of the grounds is meant to function independently of the rest. The arguer is relying on their cumulative weight. Hence any attempt to tie the grounds individually to the claim will result in a distortion of the argument. And so we are back to the first, but equally unsatisfactory, alternative of attempting to formulate some one warrant that will link all three grounds to the claim. But I doubt that this can be done, for here we have an argument which straddles several fields (speaking loosely), crosses over borders, and is otherwise geographically messy. Yet the very fact that this argument seems to me quite typical of those found in everyday argumentation causes me to have real reservations about the universal applicability of Toulmin's pattern. For the assumption on which the model rests depends for its credibility on a concept (field of argument) for which Toulmin has not provided a satisfactory elucidation.

For the reasons indicated, therefore, I must conclude that Toulmin's theory of argument, as intriguing and exciting as it may appear to be, faces some severe challenges before it can be deemed successful. *

EDITORS' NOTE

This is the first part of Professor Johnson's critical review of An Introduction to Reasoning. The second and final part will appear in the next issue of ILN (iii. 3).

analysis of examples

Two analyses of examples appearing in ILN, ii/Supplement (June, 1980) have been received. They are printed below. We will continue to print such analyses throughout the year, as they arrive and as space permits, and we emphatically reissue our invitation to readers to submit their own critiques of these or other examples from the Examples Supplement.

THE ARGUMENT

A retired deputy inspector of the New York Police Department wrote the following letter in November 1978 to the New York Times in response to a Times editorial about discrimination against homosexuals:

I am in complete agreement with the last paragraph of your November 10 editorial on discrimination against homosexuals as a generality. However, unless a specific exception is made relative to "on the street" police work, we might be opening Pandora's box.

It is a well-accepted fact in police administration that recruitment of stable personnel is hampered by the inability of science to determine an adequate psychological test. In order to prevent the employment of an unstable police officer, with all its concomitant woes, every effort must be made to recruit only those whose personality traits fit within the parameters of normalcy, whatever that might be. Throughout the years, the news has been replete with instances of recruitment failures in this area. No one has yet been able to determine what kind or degree of pressure will trigger a flawed personality.

Unless we are ready to accept homosexuality as totally normal, we must consider it as being at least a flawed personality trait. Other flawed personality traits, if known to the recruiter, have been suffi-