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STEPHEN THOMAS' MIN'S FUNCTIONAL ANALYSIS  
OF LOGIC AND ETHICS AND ITS RELATION TO  
RHETORIC.

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STEPHEN TOULMIN'S FUNCTIONAL ANALYSIS OF  
LOGIC AND ETHICS AND ITS RELATION TO RHETORIC

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STEPHEN TOULMIN'S FUNCTIONAL ANALYSIS OF  
LOGIC AND ETHICS AND ITS RELATION TO RHETORIC

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## INTRODUCTION

"Rhetoric," contended Aristotle, "is an offshoot of dialectic and also of ethical studies."<sup>1</sup> From the time of this statement until the present, the relationship of dialectic and logic<sup>2</sup> to rhetoric has been one of the central issues in debates over rhetorical theory. The two arts or sciences, as different theorists classify them, have variously been perceived as the open hand and the closed fist of the same body, as parent and offspring, and as mutually exclusive categories. With each new view of this relationship, fundamental changes have taken place in rhetorical theory.

What is true of the disputed place of logic in rhetoric is also true of the relation of ethics to its offshoot. Some have regarded

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<sup>1</sup> Aristotle's Rhetoric and Poetic, trans. W. Rhys Roberts (New York: Modern Library, 1954), 1356<sup>a</sup>.

<sup>2</sup> The distinction between logic and dialectic which was clear in the works of Aristotle seems to have become blurred in rhetorical theory since his time. In fact, references to "dialectic" in both the fields of rhetoric and philosophy are relatively infrequent in current literature.

rhetoric as amoral,<sup>3</sup> and others have argued that its sole purpose is to enable one to discover the "good and to influence others in the direction of truth and justice."<sup>4</sup> The relationship of both logic and ethics to rhetoric seems to vary with the general philosophical position of the rhetorician who is speaking.

Perhaps the reason for this difficulty is that Aristotle approached the study of rhetoric from the philosopher's point of view and could categorize it in relation to a logically consistent view of all known fields of knowledge, and his followers could not. To him, logic was the method of science, dialectic the method of solving philosophical problems, ethics "the science dealing with individual conduct," which "shades off into Politics (a broader subject), which deals with the conduct and activities of men in groups,"<sup>5</sup> and rhetoric the discovery of the available means of persuasion to be used with popular audiences. In much of the past and present debates over the place of reason and ethics in rhetoric, no such overall understanding is present. --

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<sup>3</sup> Everett Lee Hunt, "Plato and Aristotle on Rhetoric and Rhetoricians," Studies in Rhetoric and Public Speaking in Honor of James A. Winans (New York: Century Co., 1925), 52.

<sup>4</sup> Ralph T. Eubanks and Virgil L. Baker, "Toward an Axiology of Rhetoric," Quarterly Journal of Speech, XLVIII (April, 1962), 162.

<sup>5</sup> Explanatory note in The Rhetoric of Aristotle, trans. Lane Cooper (New York: D. Appleton-Century Co., 1937), 5.

The purpose of this study is to suggest that a group of contemporary philosophers have developed a method of analysis which should help rhetoricians clarify these relationships and that these professional philosophers have produced conclusions which should be of value to rhetorical theory.

The philosophers in question are not members of a particular school nor do they all share the same conclusions.<sup>6</sup> They do, however, seem to agree on the nature and purpose of philosophy and share a similar methodology. For purposes of this study they will be referred to as "analytic philosophers" in general and "functional analysts" in particular.<sup>7</sup>

In a study of this nature to examine all of the works of the men who comprise this group would be impossible. A general examination of the origin, method, and inclination of the analysts coupled with a detailed study of the works of one of its representatives would, however, be possible and productive. Therefore, this study will explore analytic

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<sup>6</sup> This view is developed in Gilbert Ryle's "Taking Sides in Philosophy," Philosophy, XII (July, 1937), 317-32, and Stephen Toulmin's "Logical Positivism and After or Back to Aristotle," Universities Quarterly, XI (August, 1957), 335-47.

<sup>7</sup> The term "analytic philosophy" is an extremely broad one and defies brief and precise definition. A working definition for the purpose of rhetorical analysis will be one of the goals of the section of this study devoted to the history and method of philosophical analysis. Within the larger family of analytic philosophy one branch, "linguistic" or "functional" analysis, will be emphasized.

philosophy in general and the works of Stephen Toulmin in particular in an attempt to discover a new way of viewing the relationship of logic and ethics to the field of rhetoric.

Two reasons lead to the choice of Professor Toulmin. First, two of his works, i. e., The Uses of Argument<sup>8</sup> and An Examination of the place of Reason in Ethics,<sup>9</sup> seem to apply more directly to the problem at hand than do those of his colleagues. Second, a pattern which he developed for the "layout of argument" has already been adjudged valuable by some rhetorical theorists.<sup>10</sup>

Throughout this study, the point of departure will be rhetorical. The student of philosophy would probably wish to go into great detail in an examination of various primary sources in analytic philosophy, such as those of Wittgenstein<sup>11</sup> and Moore,<sup>12</sup> and to make value judgments

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<sup>8</sup> (Cambridge: University Press, 1958).

<sup>9</sup> (Cambridge: University Press, 1950).

<sup>10</sup> See Wayne Brockriede and Douglas Ehninger, "Toulmin on Argument: An Interpretation and Application," Quarterly Journal of Speech, XLVI (February, 1960), 44-53; Austin J. Freeley, Argumentation and Debate: Rational Decision Making (San Francisco: Wadsworth Publishing Co., 1961), 115-18; and Halbert E. Gulley, Discussion, Conference, and Group Process (New York: Henry Holt and Co., 1960), 160-62.

<sup>11</sup> Ludwig Wittgenstein, Tractatus Logico-Philosophicus (London: Routledge and Kegan Paul, Ltd., 1922).

<sup>12</sup> George Edward Moore, Principia Ethica (Cambridge: University Press, 1903).



regarding the differences of opinion among the various exponents of analytic philosophy. Time and the purpose of this study do not, however, allow for such an exhaustive analysis of the finer points of analytic philosophy. For this reason, only a general history and summary of the methods and conclusions of this movement taken from qualified secondary sources will be presented as an introduction to the specific views of Stephen Toulmin.

Perhaps the most productive of these sources are The Revolution in Philosophy, edited by A. J. Ayer;<sup>13</sup> English Philosophy Since 1900, by G. J. Warnock;<sup>14</sup> Language, Logic, and God, by Frederick Ferre;<sup>15</sup> and J. O. Urmson's Philosophical Analysis.<sup>16</sup> In addition to these, numerous books and articles deal directly with various aspects of contemporary analytic theory.

In order to establish a comprehensive view of Toulmin's theories on logic and ethics, the second section of this study is devoted to an examination of his writings on scientific, ethical, and ordinary reasoning. Each of his major works on these topics will be discussed and their inter-relationships established.

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<sup>13</sup>(London: Macmillan and Co., 1956).

<sup>14</sup>(London: Oxford University Press, 1958).

<sup>15</sup>(New York: Harper and Brothers, 1961).

<sup>16</sup>(Oxford: University Press, 1956).

The final section of this study is devoted to an analysis of the value of Toulmin's observations on logic and ethics to the field of rhetoric and, indirectly, to the potential value of functional analysis to the rhetorician. In evaluating Toulmin's contributions, a number of studies from both philosophy and speech have been of value.

In the February, 1960, issue of the Quarterly Journal of Speech an article entitled "Toulmin on Argument: An Interpretation and Application," by Wayne Brockriede and Douglas Ehninger first emphasized the importance of Toulmin's work to rhetorical theory.<sup>17</sup> The authors amplified and extended Toulmin's model, showed its workability, and argued persuasively that it was superior to traditional ways of viewing argument. This work and others by the same authors<sup>18</sup> are valuable to this study in connecting Toulmin's model and terminology to current argumentation theory, but they do not address themselves either to the relation of logic and ethics to rhetoric or to the basic tenets of analytic philosophy.<sup>19</sup>

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<sup>17</sup> XLVI, 44-53.

<sup>18</sup> Decision by Debate (New York: Dodd, Mead and Co., 1963), and Wayne Brockriede, "A Standard for Judging Applied Logic in Debate," A.F.A. Register, X (Spring, 1962), 10-14.

<sup>19</sup> It appears, further, that no study either in the field of rhetoric or of philosophy has been undertaken which covers the same area as this

Although Professor Toulmin's ideas have received serious attention only from Brockriede and Ehninger within the field of speech,<sup>20</sup> a number of works by professional philosophers have been devoted to his writings and are of value in judging his contributions. In particular, the criticisms of his Uses of Argument by Castenada,<sup>21</sup> Cooley,<sup>22</sup> Scott,<sup>23</sup> and Simopoulos<sup>24</sup> as well as those of his An Examination of the Place

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dissertation. Bibliographical sources such as: J. Jeffery Auer (ed.), "Doctoral Dissertations in Speech: Work in Progress," Speech Monographs (1959-62); Franklin H. Knowler (ed.), "Graduate Theses -- An Index of Graduate Work in Speech," Speech Monographs (1935-1961); Franklin H. Knowler (ed.) Table of Contents of the Q. J. S., 1915-1948 and S. M., 1934-1948 (Columbia: University of Missouri, Speech Association of America, 1949); Giles Wilkeson Gray, (ed.) Index to the Q. J. S. (Dubuque, Iowa: William C. Brown Co., 1958); Lester Thonssen and Elizabeth Fatherson (eds.), Bibliography of Speech Education (New York: H. W. Wilson Co., 1939); Lester Thonssen et al. (eds), Bibliography of Speech Education Supplement: 1939-1948 (New York: H. W. Wilson Co., 1950); Arnold H. Trotter and Marian Harman (eds.), Doctoral Dissertations Accepted by American Universities (New York: H. W. Wilson Co., 1955); and Dissertation Abstracts (Ann Arbor: University Microfilm, 1955-June 1963).

<sup>20</sup> Gulley, op. cit. and Freeley, op. cit. both presented Toulmin's "layout of argument" briefly in their texts but did not elaborate on it.

<sup>21</sup> H. N. Castaneda, "On a Proposed Revolution in Logic," Philosophy of Science, XXVII (July, 1960), 279-92.

<sup>22</sup> J. C. Cooley, "On Mr. Toulmin's Revolution in Logic," Journal of Philosophy, LVI (March 26, 1959), 297-319.

<sup>23</sup> George Edward Scott, "The Formal and Informal Logics of Modality," Unpublished Ph. D. dissertation, University of Virginia, 1961.

<sup>24</sup> J. C. Simopoulos, Review of The Uses of Argument by Stephen Toulmin, Hibbert Journal, LVII (October, 1958), 96-98.

of Reason in Ethics by John Rawls<sup>25</sup> and others are helpful in exposing weaknesses which exist in Toulmin's writings.

Despite these weaknesses and some limitations on the applicability of Toulmin's ideas to rhetoric, the conclusions of this study suggest that his observations about logic, ethics, and argument are generally consistent with the rhetorical tradition and valuable to the rhetorician of today. Further, these conclusions suggest that, because both the rhetorician and the practitioner of functional analysis are concerned with common reasoning, common language, and commonly held ethical standards, the works of other functional analysts are worthy of further study.<sup>26</sup>

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<sup>25</sup> Philosophical Review, LX (October, 1951), 572-80.

<sup>26</sup> The potential value of analytic philosophy to rhetoric is suggested indirectly in Morton White's "New Horizons in Philosophy," Central States Speech Journal, XII (Spring, 1961), 188-96.

## CHAPTER I

### THE REVOLUTION IN PHILOSOPHY: A CONTEXT FOR THE STUDY OF TOULMIN'S WORKS

A useful analogy may be drawn between recent developments in rhetoric and philosophy. Both fields boast an ancient heritage and can recall a more glorious past when many of the present academic disciplines were unknown. Yet the rise of new fields of knowledge has had a great impact on both rhetoric and philosophy. Aristotle, as a rhetorician, could advise the speaker who would face a live audience to appeal to the motives of men as he described them from a common-sense point of view. Today, the speaker often communicates with a mass audience which he cannot see and relies, not on common-sense ideas of motives, but on the conclusions of the social psychologist regarding sources of "hidden persuasion" which are a matter of empirical study.

In Aristotle's day, too, questions about how man thinks and how he should think, how man behaves and should behave, obviously, were the province of the philosopher. Today, however, the psychologist, the sociologist, the political scientist, and a host of others would claim at least a part of this territory. What, then, is the

special subject matter of philosophy?

The answer to this question is not only relevant to the problem of the interrelationship of logic, ethics, and rhetoric but has been a chief concern of the professional philosophers during the last half century as well. In fact, the "revolution" that has taken place in contemporary philosophy has been a result of a redefinition of the function and scope of philosophy in reaction to the challenge of other disciplines.

This revolution, if such is the proper term,<sup>1</sup> neither took place suddenly nor involved all schools of philosophy, and its participants neither agreed with each other nor described it in the same way. Further, since many of those who participated in the upheaval are still actively engaged in philosophical writing and reshaping their views, we are probably too close to it in point of time to see the change in its true perspective. However, a brief historical review of the recent attempts of some professional philosophers to find a new purpose and method for philosophy should at least provide a frame of reference from which to approach the problem of this study.

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<sup>1</sup> The term "revolution" is a common description for the changes which took place in philosophy after 1900. This view is well expressed by A. J. Ayer (ed.), The Revolution in Philosophy (London: Macmillan and Co., 1956). Some doubt, however, about the propriety of this term is expressed by G. I. Warnock, English Philosophy Since 1900 (London: Oxford University Press, 1958), 160-73.

Philosophy at the Turn of the Century

At the beginning of this century philosophy passed through a rapid period of development in which new and important figures emerged to challenge its prevailing view. The general movement they began has been called "analytical philosophy."<sup>2</sup> "The center of the new movement was England, and more particularly, Cambridge, and its leaders were Moore, Russell, and Wittgenstein."<sup>3</sup> Although these men were the most important to the direction of early twentieth-century philosophy, it is more convenient to consider certain movements with which they were involved than to reconstruct the views of each in turn. For, in the case of both Russell and Wittgenstein, the ideas they started early in their careers were maintained by loyal followers even after each had changed his original position. The chief movements in analytical philosophy with which the three were associated were Common Sense Philosophy, Logical Atomism, and Logical Positivism (or Logical Empiricism). Elements of these combined into the major

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<sup>2</sup> For a particularly good discussion of this point, and one praised by Toulmin, see the essay by John Holloway, "Analytical Philosophy," The New Outline of Modern Knowledge, ed. Alan Pryce-Jones (New York: Simon and Schuster, 1956), 19.

<sup>3</sup> D. F. Pears, "Logical Atomism: Russell and Wittgenstein," The Revolution in Philosophy, 41.

Philosophy developed into a separate academic subject, detached from classical scholarship, theology, economics, and finally from psychology. The teachers of philosophy of a university came to constitute a faculty, and they organized their own discussion groups. The professional quarterly journal, Mind, was established in 1876, and soon thereafter the Aristotelian Society was formed. Papers were read and discussed at the meetings of the Society and subsequently printed in its annual proceedings. Ryle contrasted this situation with an earlier time as follows:

Where Mill, Huxley, and Leslie Stephen had published their professional articles in the ordinary Reviews, Bradley, Moore, and Russell published theirs in the philosophers' professional organ or in the Proceedings of the philosophers' metropolitan forum. This new professional practice of submitting problems and arguments to the expert criticism of fellow craftsmen led to a growing concern with questions of philosophical technique and a growing passion for ratiocinative rigour. . . .

Consequently the moment could not be long delayed when philosophers would challenge one another, and be challenged by their new academic colleagues, especially the natural scientists, to state unequivocally what sort of an enquiry philosophy was and what were the canons of its special methods.<sup>6</sup>

The answer to this challenge to demonstrate a purpose for philosophy is the history of recent analytical philosophy, a brief review of which will comprise the bulk of this chapter; yet a capsule statement of the answer by Frederick Ferré may be useful in introducing the more

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<sup>6</sup> Ibid., 3-4.



detailed answer.

Philosophy's method, appropriate to its own goals, must be analysis. Synthesis, or putting together, might have been a possible method for philosophers who imagined themselves to have some sort of self-subsistent, empirical subject matter, but the new understanding of the object of philosophical concern eliminated that method. Meaningful statements are (by definition) already unities. Only the method of picking apart, or analysis, would be applicable to this subject matter. We shall find various interpretations of the proper analytical procedure when we distinguish differences within the larger "family" of linguistic philosophy; at the moment we are solely concerned with their agreements. And here, without doubt, was a firm platform of unanimity: the function of philosophy is to engage in analysis of the meaning of language.<sup>7</sup>

#### Bradley and Absolute Idealism

The term "revolution" implies an attack upon the status quo or, to use a more philosophical description, a thesis overcome by its antithesis. Against what kind of philosophy was the revolution directed? First, it was "highly and ambitiously metaphysical."<sup>8</sup> It attempted to establish striking and important conclusions about the universe as a whole, about Reality, not in some superficial or limited aspect, but in its ultimate nature. "The philosopher's concern with 'the whole'" was, as Warnock described it,

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<sup>7</sup> Language, Logic, and God (New York: Harper and Brothers, 1961), 5-6.

<sup>8</sup> Warnock, op. cit., 3.

. . . constantly and powerfully contrasted with the merely partial or fragmentary interests of other disciplines; his endeavour to arrive at really "ultimate" truths was distinguished from, say, scientific attempts to establish propositions that would serve for some non-ultimate purpose, or to satisfy some more or less arbitrary or provisional standard. It was held that what passed for truths in the world, or in the laboratory, were . . . somehow unsatisfactory -- that for the philosopher there was not only something more, but also something very different to be said.<sup>9</sup>

Ultimate reality was to be found in the philosophy of Absolute Idealism or "Hegelianism modified by Anglo-Saxon caution."<sup>10</sup> Hegel held that the universe reveals the workings, the development, the realization, and the unfolding of a World Spirit or Absolute Idea.

Morton White summarizes Hegel's conception of the Absolute as follows:

On his view the universe is not unlike an animate being that has a soul, desires, aims, intentions, and goals. The universe is spiritual; it has direction; and the explanation of ordinary facts, human actions, historical changes, and institutions may be grasped once we recognize how they are imbedded in this cosmic organism, how they are directed by the cunning of the Absolute, how they play their part in the Universe's progressive realization of the World Spirit.<sup>11</sup>

The most influential of the British idealists who added Anglo-Saxon caution to the reassertion of Hegel's doctrines was F. H.

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<sup>9</sup>Ibid.

<sup>10</sup>Ibid. Hegel's views are worth noting at this point because they served as the basis for the dominant strain in British philosophy against which Moore, Russell, and Wittgenstein reacted and because "almost every important philosophical movement of the twentieth century begins with an attack on his views." Morton White, The Age of Analysis (New York: The New American Library, 1955), 13.

<sup>11</sup>Ibid., 13-14.

Bradley. He was not only the chief spokesman for and the "most powerful mind"<sup>12</sup> among the group but was also a major influence upon the thinking of the young Moore and Russell and later the chief subject of their attack.

Bradley was opposed to the traditional British empiricism of Locke, Hume, and Mill, which he felt failed to distinguish adequately "between questions concerning the meanings of propositions and those concerning their genesis."<sup>13</sup> Here, Bradley was probably on safe ground and even Moore, Russell, and Wittgenstein agreed on this point. But the view of philosophy which Bradley would substitute for the traditional empiricism was almost the opposite of that supported by the later analytic group.

He attempted to show that the meaning of any proposition which purports to state that something exhibits a certain quality constantly breaks down into an endless series of other propositions in which the original subject of discussion ceases utterly to appear as a distinct object of thought. He rejected Hume's thesis that ideas are "copies" of distinct and original impressions, which at best are "loosely"

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<sup>12</sup> Henry D. Aiken, The Rise of Analytical Philosophy in England, Vol. II of Philosophy in the Twentieth Century, ed. William Barrett and Henry D. Aiken, 4 vols. (New York: Random House, 1962), 464.

<sup>13</sup> Ibid.

connected by natural association with another.<sup>14</sup> He also tried to show how pointless is a theory of truth which judges the truth of any proposition by its "correspondence" to a distinct object in a world independent of experience. He felt that what philosophers call "appearances" cannot validly be measured by

. . . their correspondence to an external reality to which we have no independent access, but only by their coherence with other appearances within an infinitely extendable . . . system of infinitely complex "internal" relations within which clear-cut, unambiguous ideas are impossible to find. There was, in consequence, an element of deep philosophical skepticism in Bradley's thought, and while he passionately believed in the reality of the Absolute, which is the ultimate subject matter of all thought, he was doubtful of the adequacy of any human idea of it.<sup>15</sup>

As a result, the Anglo-Saxon caution which Bradley added to Hegelian doctrine functioned as a preoccupation with problems of logic and meaning, which he felt the empirical tradition had ignored. This produced, among others, two distinct elements, "both of which were in flagrant contradiction to accepted English ideas: that is to say, the separation of logic and philosophy from psychology, and monism, the theory that Reality is an indivisible whole."<sup>16</sup> In Bradley's view there was a clear connection between the two theses in spite of the

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<sup>14</sup> Ibid.

<sup>15</sup> Ibid.

<sup>16</sup> R. A. Wollheim, "F. H. Bradley," The Revolution in Philosophy, 13.

fact that subsequent philosophers have almost universally subscribed to the former thesis and all have unanimously dissented from the latter.<sup>17</sup> To put the matter somewhat differently, Bradley both participated in the revolution and provided the thesis which it attacked.

This thesis was not so much one which developed a series of dogma as it was a general philosophical disposition. It was an attempt to relate the world to a central concept which would organize all attitudes and beliefs. This tendency to regard the proper role of philosophy as synoptic set Bradley apart from his students. He sought to explain all thought and action in relation to a central construct. His opponents felt that philosophers should attack limited, particular problems by the method of analysis. This difference in approach led Morton White to state that "the history of philosophy in the twentieth century is a history of hedgehogs and foxes, a history of philosophers who strive to know one big thing and those who are content to know many little things, or indeed one little thing."<sup>18</sup>

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<sup>17</sup> Ibid.

<sup>18</sup> White, op. cit., 18. This analogy is taken from the works of the Greek poet Archilochus and from Isaiah Berlin's study of Tolstol, entitled The Hedgehog and The Fox. It is an allusion in frequent use by Stephen Toulmin and his critics. In particular, note the debate between Toulmin, "Logical Positivism and After or Back to Aristotle," Universities Quarterly, XI (August, 1957), 335-47, and Ernest Gellner, "Logical Positivism and After or The Spurious Fox," Universities Quarterly, XI (August, 1957), 348-67.

Bradley and the other British idealists were led to claim that the actual world of science and common sense is itself only an appearance of the perfect ideal reality, "the Absolute," and that our ordinary perceptions and judgments are imperfect, partial glimpses of what is ideally "there."<sup>19</sup> In short, the idealists tended to blur the distinction between facts and value, between what is and what ought to be. Yet upon this distinction depended their own defense of the essentially spiritual aim of metaphysics. "Because of this," Aiken contends, "they were subject to the charge, which was shortly to be made with such devastating effect by Moore and Russell, that they themselves were incurably muddle-headed, that their logic (what must be) was faulty; their conception of reality (what there is), paradoxical and sentimental; and their ethics (what ought to be), confused, complacent, and strangely grubby."<sup>20</sup>

### The Revolution of Analytical Philosophy

"'Moore and Russell' -- the conjunction is inevitable."<sup>21</sup> They were leaders in the early stages of the revolt against Bradley, helped shape one another's ideas, and are often considered together in

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<sup>19</sup> Aiken, op. cit., 465.

<sup>20</sup> Ibid.

<sup>21</sup> John Passmore, A Hundred Years of Philosophy (London: Gerald Duckworth and Co., Ltd., 1957), 203.

histories of contemporary philosophy. However, for purposes of this study they will be considered separately and in association with the movements with which they are identified.

### G. E. Moore and Common Sense Philosophy

One should begin the historical sketch of the revolution by considering a man who was a movement by himself. For, as C. D. Broad observed, "Professor Moore, whom I treated as in a class by himself, has undoubtedly had a greater influence than any other man on English philosophy in general and Cambridge philosophy in particular during the last fifty years."<sup>22</sup>

Perhaps one reason why Professor Moore should be considered by himself, according to G. J. Warnock, is that Moore's character and not his specific ideas contributed to the decay of Absolute Idealism.

For it was not solely by reason of his intellectual gifts that Moore differed so greatly from his immediate predecessors, or influenced so powerfully his own contemporaries. . . . It

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"The Local Historical Background of Contemporary Cambridge Philosophy," British Philosophy in Mid-Century, ed. C. A. Mace (London: George Allen and Unwin Ltd., 1957), 50. Broad uses the phrase "in a class by himself" in the context of being the only person who belongs to one of the six classes of philosophers which he establishes; i. e., "1) Logicians, 2) Psychologist-Philosophers, 3) Pure Metaphysicians, 4) Moralist-Philosophers, 5) the class whose only member is Professor Moore, and, 6) Logico-mathematical Philosophers." Ibid., 17.

was in point of character that he was different, and importantly so. He seems to have been, in the first place, entirely without any of the motives that tend to make a metaphysician. He was neither discontented nor puzzled by the ordinary beliefs of plain men and plain scientists . . . . Secondly, he had the great force of character to resist the temptation to conform himself with his environment . . . . He did not borrow a modish metaphysical idiom to make up for, or to conceal, his own real lack of relish for any such thing. And thirdly, he seems never to have had the slightest difficulty . . . in causing his views to be taken seriously. It was always clear that his opinions, however unorthodox or naive they may have been or seemed, were not those of one who could safely be disregarded.<sup>23</sup>

The influence of Moore's character was spread, only in part, by his writings. Although the ideas and style of analysis of a number of his publications had a great impact upon his contemporaries, he was not a prolific writer and was probably fully as influential as a teacher.<sup>24</sup> He "greatly influenced generations of Cambridge students and teachers of philosophy by courses of lectures which he never published, e.g. on philosophical psychology, and by his interventions in philosophical debate."<sup>25</sup>

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<sup>23</sup> Op. cit., 12-13.

<sup>24</sup> For an interesting discussion of his teaching methods and effectiveness as a teacher see G. A. Paul, "G. E. Moore: Analysis, Common Usage, and Common Sense," Revolution in Philosophy, 69.

<sup>25</sup> Broad, op. cit., 51-52.



Sources of Moore's Common  
Sense Philosophy

Moore came to Cambridge in 1892 to study classics and had little interest in philosophy until Bertrand Russell and others drew him into philosophical discussions, and then led him, at the end of his first year, to start reading philosophy. His concern with the subject did not, as Russell's, begin with any interest in science. "I do not think," he wrote, "that the world or the sciences would ever have suggested to me any philosophical problems. What has suggested philosophical problems to me is things which other philosophers have said about the world and the sciences."<sup>26</sup>

In discussions at Cambridge, he heard ideas asserted which he could see no sufficient reason to believe. He tried to find out on what grounds the assertions were made and if, in fact, they had any meaning. It appeared to him that his companions sometimes denied what every sane man knew quite well to be true.<sup>27</sup> As a consequence, he was gradually driven to the conclusion that an enormous amount of philosophical writing was "marred by hastiness

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<sup>26</sup> Cited in The Philosophy of G. E. Moore, ed. Paul A. Schilpp (New York: Tudor Publishing Co., 1952), 14.

<sup>27</sup> Warnock, op. cit., 13-14.

and confusion " which occurred because philosophers tried to search for answers to questions of seemingly great importance without considering exactly what questions they were trying to answer.<sup>28</sup>

"They were," as Warnock explains,

. . . liable, too, to make one or two points in an argument, and forthwith to consider their whole question as closed. But often, even usually, these points could be shown to be, entirely inadequate as grounds for the conclusions supposedly based on them . . . . "Reality," for example, "may be spiritual, for all I know; and I devoutly hope it is." That opinion at least is "truly interesting and important." But one must realize how very different the opinion is from what any ordinary person believes; how many propositions must be disproved and proved, before it could possibly be said to be established; what a vast number of arguments must, therefore, be involved; and how remote we are, really, from any position in which we would see the doctrine to be true or, alternatively, false.<sup>29</sup>

Such an approach had a profound effect upon the Idealism of the 1890's. That the ordinary opinions were defective and that common ways of speaking were almost always unsatisfactory was supposedly agreed by all philosophers. For this reason, they felt that new ways of speaking and new opinions about the world should be devised. "Moore struck in fact, though perhaps unwittingly, at the very foundation of all the current philosophical structures. He asked, in effect, why they were needed."<sup>30</sup>

What Moore did was to challenge the philosophers of the day to accept the burden of proving that the opinions of the common man were

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<sup>28</sup> Ibid.

<sup>29</sup> Ibid., 15.

<sup>30</sup> Ibid., 16.

wrong. Some of the Idealists supposed that time was unreal. This, Moore regarded as a "perfectly monstrous proposition."<sup>31</sup> If time is unreal, should we not deny that we have breakfast before we have lunch? If Reality is spiritual are not "chairs and tables . . . far more like us than we think?"<sup>32</sup> Rather than assume that common beliefs were probably mistaken, he was inclined to believe that they were quite true.

Here was a combination of simplicity and directness "with the most remarkable powers of analysis and criticism. Often this has had the effect of the child in the fable, who horrified the courtiers by piping out that the emperor was in fact naked."<sup>33</sup>

Doctrines of Moore's Common Sense Philosophy

In 1925 Moore published an article called "A Defense of Common Sense."<sup>34</sup> It begins with a list of what he calls "truisms," for example, that he has a body, was born a certain number of years ago, etc. He accompanies these truisms with a flat denial that they are open to doubt

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<sup>31</sup> The Philosophy of G. E. Moore, op. cit., 14.

<sup>32</sup> Ibid. <sup>33</sup> Broad, op. cit., 51.

<sup>34</sup> In Contemporary British Philosophy (second series), ed. J. H. Muirhead (London: George Allen and Unwin Ltd., 1925).

and a blunt assertion that he knows every one of them to be true, that is, "true not just in some emended form, or in some special usage of the words employed; he meant by each of them precisely what every reader, in reading them will have understood him to mean, i. e. what they are ordinarily understood to express."<sup>35</sup>

Moore points out, however, that a great many philosophers have made assertions incompatible with these truisms. They have asserted that there are no material things at all, that there exist no other minds than their own, and in some cases they have used such words as these in such a way as to contradict some or all of his truisms. Yet these people know that such truisms are, in fact, true. "For," as Warnock states their argument, "even in their philosophical writings they have alluded to themselves, and to other philosophers, or possible readers, in such a way as to reveal their knowledge of the existence of themselves and other people, and of the ordinary world in which they and others were living."<sup>36</sup>

So far the emphasis has been on Moore's general attack on Idealism and his defense of the notion that common beliefs about certain propositions were to be regarded as true. This attack, however,

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<sup>35</sup> Paul, op. cit., 63.

<sup>36</sup> Warnock, op. cit., 18.

is a rather negative aspect of his philosophy. Certainly, no brief treatment of Moore's ideas can begin to discuss all the topics with which he dealt nor explain fully even a significant portion of them. One general topic, however, deserves some special attention. This is Moore's discussion of ethics.<sup>37</sup>

Here one must distinguish between the purely logical aspects of his ethical theory and the philosophical conclusions which he draws from his logical theses about the meaning of "good." Aiken makes this distinction as follows:

Now one of the most influential of Moore's views about the meaning of "good" was his contention that such statements as "this is good" or "this is desirable" are not logically reducible to such other statements as "this is pleasant," "this is rational," or even "this is consistent." His main argument was quite simple: Of anything which is pleasant, desired, rational, consistent, etc., we can always ask whether it really is good or desirable. And the fact that we can significantly ask such questions plainly shows that "good" and "pleasant" or "desirable" and "desired" cannot mean the same thing.<sup>38</sup>

Whether all pleasures are good is, therefore, not a logical but a moral question. Moore concluded that goodness is an indefinable notion and that those who attempt to define it are guilty of what he

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<sup>37</sup> His Principia Ethica (Cambridge: University Press, 1903) contains most of his views on this topic and is generally regarded as his most important work.

<sup>38</sup> Aiken, op. cit., 471-72.

called "the naturalistic fallacy."<sup>39</sup> There is, he asserted, an objective quality of goodness, wholly distinct from the things we call good, and independent of any feelings or opinions we may have about them. Further, he argued, since the concept cannot be defined by reference to pleasure, desire, or in any other naturalistic way, it presumably is an absolutely unique, simple, and "nonnatural" quality, whose instances cannot be apprehended through sense perception. There are, in other words, no moral "sense data" which are perceptual parts of the material objects on which ethical terms are predicated.<sup>40</sup>

This view of "good" was extended to other simple concepts. Their meaning is to be found not through logical analysis but by a form of nonsensuous intuition. In establishing certain bases of knowledge on intuition, Moore's view was not unlike that of the rhetorician George Campbell who was influenced by the earlier British exponent of common sense philosophy, Thomas Reid.<sup>41</sup>

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<sup>39</sup> This fallacy has been variously described by Moore, and among those who follow Moore's general thesis that the concept of goodness is irreducible there is no agreement concerning the exact nature of the naturalistic fallacy. Ibid., 472.

<sup>40</sup> Ibid.

<sup>41</sup> This view is supported indirectly by Douglas Ehninger, "George Campbell and the Revolution in Intentional Theory," Southern Speech Journal, XV (May, 1950), 270-76, and Clarence Edney, "George Campbell's Theory of Logical Truth," Speech Monographs, XV (March, 1953), 19-33.

After treating how we know the meaning of certain simple concepts such as the nature of "good," Moore turns to a consideration of the "truth" we know about material objects and moral law. This analysis is well summarized by Henry Aiken as follows:

Now so far as statements about material objects are concerned, Moore claims only to know with certainty the truth of such singular statements as "This is a hand" and "That is a tree." He does not appear to have believed that such general statements about material objects as "All swans are white" can be known with absolute certainty to be true. Outside ethics, the only general propositions which he appears to have regarded as absolutely certain are the truths of logic and such "analytic truths" as "All brothers are male siblings." He also claims, even within ethics, that "All moral laws . . . are merely statements that certain kinds of actions will have good effects," and hence that "Not a single question in practical Ethics can be answered except by a causal generalization." . . . Hence, although causal generalizations do not as such suffice to establish even the probability of any moral law (since the question whether certain effects of our actions are good is not itself a causal generalization but an ethical judgment), all knowledge of what is right or wrong depends upon them. In a very important respect, then, all moral laws are contingent truths, the certainty of which is merely probable.<sup>42</sup>

However, although moral laws which aim to distinguish between right and wrong conduct cannot be known for certain to be true, these laws are not the totality of general ethical truths or principles. Ethical principles, unlike moral laws, do not purport to tell us what sorts of actions will have the best effects in the long run, but, rather, what sorts of things are intrinsically good in themselves. Moore believed

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<sup>42</sup> Op. cit., 473.

that there are certain fundamental principles of ethics which are self-evident. These principles are not analytic (as are propositions like "all brothers are male siblings"), since they do not tell us anything we could infer from an analysis of the meaning of "all good things." Since goodness is a simple unanalyzable quality, any ethical principle which asserts that all good things are pleasures or objects of desire must be "'synthetic': that is to say, it asserts a relation between good things and, say pleasant things whose truth is not entailed by any conjunction of those (analytic) truths which tell us what 'good' means and what 'pleasant' means."<sup>43</sup>

Moore's approach to the scope of philosophy in general and to ethics and logic in particular is described by Professor Aiken:

In the first place, unlike Hume and (later) the logical positivists, Moore does not believe that all non-analytic general truths are uncertain; nor does he believe that all non-analytic (or synthetic) truths are empirical hypotheses about observable matters of fact. There are, for him, some general synthetic truths, principally ethical, which are self-evident. In the second place, he also believes that through philosophical analysis and reflection, we may come to know that certain synthetic truths which have been alleged to be self-evident are not so, and that certain others are so. Thirdly, it follows that for Moore philosophical analysis has a dual function: (a) to clarify concepts and propositions, and (b) to establish certain general principles of knowledge, value, and metaphysics, the validity of which cannot be ascertained either by pure logic alone or by natural or empirical science alone.<sup>44</sup>

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<sup>43</sup> Ibid., 474.

<sup>44</sup> Ibid.



Any summary of Moore's philosophical theory, insofar as it can be said that he had one, tells only a part of the story. For, as Warnock observed:

. . . in theory he did not conceive of philosophy quite differently from his metaphysical predecessors. His practice, however, consisting as it mostly did in the pursuit of analyses, naturally tended to give rise to the idea that the business of philosophy is clarification and not discovery; that its concern is with meaning, not with truth; that its subject-matter is our thought or language, rather than facts. In its influence the practice was far more important than the theory.<sup>45</sup>

Criticism of Moore's Common Sense Philosophy

Warnock's statement is both a summary of Moore's practice in philosophy and, by implication, a criticism of it. For many would contend that the philosopher should be concerned about the "truth" regarding "facts" rather than the meaning of statements in "ordinary language." Such criticism is related to two other common objections to Moore's philosophy: first, that he regarded ordinary usage as sacrosanct; and, second, that such close attention to common language made philosophy seem trivial or involved a kind of scholasticism.<sup>46</sup>

In addition to objections about the way in which Moore viewed the purpose of philosophy, others were raised about his method of analysis. These resulted from Moore's "unquestioned assumption that

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<sup>45</sup> Op. cit., 29.

<sup>46</sup> Paul, op. cit., 67.

any analysis must be of a standard pattern."<sup>47</sup> This pattern consisted in providing a verbal paraphrase of what was to be analyzed, in the form of a longer, more explicit, but strictly synonymous statement. Many words and phrases, however, are not closely related to any more explicit synonyms and "can only be made to seem so by artificial devices."<sup>48</sup> This sort of analysis, so the argument goes, "sometimes leaves out exactly what is of the most philosophical interest."<sup>49</sup>

Moore's philosophy began as a protest against the Idealism of Bradley and focused on the analysis of propositions by close attention to common language and common sense. At the same time in Cambridge his colleague, Bertrand Russell, also began to engage in the analysis of propositions and to oppose Idealism, but his Logical Atomism differed radically from the Common Sense Philosophy.

### Logical Atomism

#### Sources of Logical Atomism

The philosophical movement known as Logical Atomism was a brief and important one created by two of the three major figures in contemporary analytic philosophy. Bertrand Russell gradually evolved the leading theories of Logical Atomism in the first two decades of the

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<sup>47</sup> Warnock, op. cit., 27.

<sup>48</sup> Ibid.

<sup>49</sup> Ibid.

century, during which time he influenced and was influenced by his pupil, Ludwig Wittgenstein.<sup>50</sup> The view was first popularized by Russell through a number of essays which developed theories which he and Whitehead had earlier set forth in their famous Principia Mathematica. Later the doctrine was published by Wittgenstein (in German in 1921 and in English in 1925) in his Tractatus Logico-Philosophicus. Russell's version had its greatest effect on British philosophy in a direct manner and Wittgenstein's through the wave of Logical Positivism which it helped stimulate in Vienna and ultimately in England.

Although Russell and Wittgenstein created Logical Atomism, they both later rejected it and went their own separate ways. Wittgenstein became the father of the present branch of linguistic philosophy and Russell one of the most severe critics of Wittgenstein's later ideas.

The name "Logical Atomism," invented by Bertrand Russell, is, in the words of D. F. Pears,

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<sup>50</sup>When Russell first publicly proclaimed the fully developed principles of Logical Atomism in 1918, he gave full and candid acknowledgment that he had learned these views from his "pupil," Wittgenstein. William Barrett, "Introduction," Positivism, Vol. III, Philosophy in the Twentieth Century, 4. John Passmore also observes that "quite what he owed to, and quite what he contributed to, Russell's 'philosophy of logical atomism' is difficult to say." Op. cit., 354.

. . . an entirely appropriate name, which really tells us something about the character of the theory. It brings out the relationship with Hume, who was also a kind of philosophical atomist. For Hume tried to explain everything in terms of the impressions and ideas, which are, according to him, the sole contents of human minds. The word "atomism" is, of course, a metaphor: just as the scientist was supposed to go on dividing objects until he reached their ultimate, indivisible parts, so the philosopher's task was conceived as a kind of analysis of thought into its ultimate, simple elements. But, whereas Hume believed that philosophers ought to practise psychological analysis of ideas, Russell maintained that the analysis should deal with propositions, and so Russell qualified his kind of atomism as logical.<sup>51</sup>

Russell's Logical Atomism grew out of his rebellion against the kind of philosophy that his friend Moore had criticized. Russell claimed that Moore took the lead in the rebellion and that he followed with a sense of emancipation.<sup>52</sup> He felt that the writings of most contemporary philosophers were exceedingly loose, amateurish, and obscure. He thought that philosophy ought to be, as it never yet had been, "'scientific' -- not only not less rigorous and exact, but more so, than mathematics and the physical sciences."<sup>53</sup> For this reason, Russell felt a strong desire to bring into philosophy some technique which would enable it to compare with disciplines such as those of the scientist and mathematician.

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<sup>51</sup> "Logical Atomism: Russell and Wittgenstein," Revolution in Philosophy, op. cit., 44.

<sup>52</sup> Passmore, op. cit., 203.

<sup>53</sup> Warnock, op. cit., 30.

Atomic Analysis of Propositions

The philosopher's aim, he stated in an essay entitled "Logic as the Essence of Philosophy," should be "to give an account of the world of science and daily life."<sup>54</sup> In pursuit of this aim he should employ the most rigorous methods of logic and not be influenced by his own wishes or beliefs. The method to be followed should be that of analysis.

What is it that Russell proposed to analyze? The answer was that philosophers should analyze facts, not things. For, as he stated:

The things in the world have various properties, and stand in various relations to each other. That they have these properties and relations are facts, and the things and their qualities or relations are quite clearly in some sense or other components of the facts that they have those qualities or relations. The analysis of apparently complex things . . . can be reduced by various means, to the analysis of facts which they are apparently about those things. Therefore it is with the analysis of facts that one's consideration of the problem of complexity must begin.<sup>55</sup>

Facts, of course, are stated in propositions and propositions are complex since they are made up of words. Some words, like "red," are simple and our understanding of them is not a complex resultant of anything simpler. Understanding of the meaning of such words can only be achieved by acquaintance with what the word "red" symbolizes,

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<sup>54</sup> This essay has been reprinted in The Rise of Analytic Philosophy in England, Vol. II, Philosophy in the Twentieth Century, 630-46.

<sup>55</sup> Logic and Knowledge (London: George Allen and Unwin, Ltd., 1956), 192.

that is, a particular shade of color. The word "red" is thus not capable of analysis, and may be said to be a simple symbol.

It is, in particular, a simple predicate. Contrasted with simple symbols of this sort, there must be simple symbols of another sort, namely proper names -- the words, that is, by which we can refer to particular things to which predicates are ascribed. The simplest sort of proposition, then, will be one which consists solely of a proper name and a simple predicate. This sort of proposition Russell calls "atomic"; and the facts that such propositions state are atomic facts.<sup>56</sup>

Taking this point of view, one can construct more complex propositions out of the atomic ones, simply by joining two or more atomic propositions together with the words "and" or "or." What results is what Russell called a molecular proposition. There are, however no molecular facts. For if one asserts the molecular proposition "this is red and that is brown," he is stating not one molecular fact, but rather two atomic facts that this is red and that that is brown. Molecular propositions are therefore said to be "truth functions" of atomic propositions since their truth or falsity depends upon the truth or falsity of the atomic propositions of which they are composed.

From this basic position Russell carried the analysis further by recognizing that there are general facts as well as atomic facts. The proposition, "all debaters are intelligent," for example, is not merely

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<sup>56</sup> This statement and the general reconstruction of Logical Atomism which follows is from Warnock, op. cit., 34-42.

a conjunction of propositions, meaning "this debater is intelligent and that debater is intelligent. . .," and so on until the universe of debaters has been exhausted; for even if all debaters could be enumerated, it would still be necessary to say in the end that the debaters thus enumerated were all the debaters there were; and there the element of generality would have reappeared. The statement, if true, cannot be a conjunction of singular facts but must be an irreducibly general fact.

Further, he argued that the existence of negative facts was the only way to account for the truth or falsity of negative propositions. Finally, he came to accept facts corresponding to such propositions as "Jones believes that the world is flat," or "Smith hopes the sun will be shining tomorrow." The problem is that, although these propositions look complex, they cannot be said to be molecular. The truth of "this is red and that is brown" depends in part on the truth of "that is brown"; but the truth of "Jones believes that the world is flat" is entirely independent of the truth of "the world is flat." In other words, Jones may believe what is not a fact. As a result of these further analyses, Russell was forced to admit that atomic facts alone were insufficient to make clear in what the truth or falsity of such propositions consisted. Warnock summarized the effort to revise the atomic theory in this way:

It is not necessary now to go into the attempts that were made to dispense with these additional species of facts. Wittgenstein,

Ramsey, Wisdom, and Russell himself all made great efforts from time to time to eliminate them. But at present the important point to apprehend is that they all shared a single ambition, that is, of establishing the thesis that there were in reality only atomic facts, and in language only atomic and molecular propositions. These "atoms," linguistic or factual, were the final, or the nearest approach to the final, "residue in analysis." They laid bare the essential character of language and of the world.<sup>57</sup>

The Atomists' View  
of Language

Russell's approach to language was influenced largely by recent developments in logic for which he himself had been in a large part responsible. In the Principia Mathematica, he and Whitehead had sought to establish a notation for stating not only the whole of logic, but of mathematics as well. This notation was explicitly truth-functional. That is to say, even the most elaborate formulae storable in it were constructed out of a few very simple forms. Russell often spoke of this notation as constituting a logically perfect language. Of course, as set forth in his book it had no vocabulary; there, the pursuit of complete generality had required the use of variables only, not particular words; but it included, he thought, at least the syntax of a perfect language. The relation of this perfect language to common language in Russell's view was clearly expressed by Warnock:

Here Russell appears simply to have assumed that it was the language we commonly employ, as that would look if removable

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Ibid., 36.



imperfections were removed; that is, that his notation embodied the essence of language, and that where languages differed or common language appeared to diverge, it was merely that this essential skeleton was concealed. It was for this reason that the enormous assumption was made that all propositions whatever which do not themselves state simple facts must be truth-functions of those which do. Something like this was manifestly true of the "perfect" language, and hence it was assumed to be true, though covertly of course, of any language whatever.<sup>58</sup>

The Metaphysical  
Basis of Atomism

Clearly, Russell was not just writing about common and scientific language but was offering what he admitted was a kind of metaphysics. He was offering what "ultimately," "in the final analysis," exists in the Universe and this doctrine was obviously not an empirical one. He deduced it from a non-empirical analysis of language, to the nature of that reality which language describes.<sup>59</sup> For, as the Pythagoreans tried to give an account of the world in terms of their geometry and Locke's metaphysics can be seen as a general application of atomistic mechanics, so it is that "the shortest account of logical atomism that can be given is that the world has the structure of Russell's logic."<sup>60</sup>

The following statement from Professor Urmson both summarizes the basic tenets of logical atomism and makes clear its metaphysical nature:

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<sup>58</sup> Ibid., 38-39.

<sup>59</sup> Ibid., 39-40.

<sup>60</sup> J. O. Urmson, Philosophical Analysis (Oxford: University Press, 1956), 6.

Russell, it appears, considered that a logic from which the whole of mathematics with all its complexities can be derived must be an adequate skeleton (minus the extra-logical vocabulary which the variables replace) of a language capable of expressing all that can be accurately said at all. Holding too, that "the study of grammar is capable of throwing far more light on philosophical questions than is commonly supposed by philosophers," he came to think that the world would have the structure of this logic, whose grammar was so perfect, unlike that of the misleading natural languages. As the logic had individual variables in its vocabulary, so the world would contain a variety of particulars, the names of which would be constants to replace, as extra-logical vocabulary, these variables; as the logic required only extensional, truth-functional, connectives between its elementary propositions, so the world would consist of independent, extensionally connected facts; as the techniques of logic could define and thus make theoretically superfluous the more complex and abstruse concepts of mathematics, so, by the application of the same techniques the less concrete items of the furniture of heaven and earth . . . could be defined and theoretically eliminated. The structure of the world would thus resemble the structure of Principia Mathematica. That is the simple argument of the plot.<sup>61</sup>

#### Criticism of Logical Atomism

Logical Atomism began, like Moore's Common Sense Philosophy, with an attack on the Idealism of Bradley and concerned itself with an analysis of language. Unlike Moore's view, it favored a scientific language to that of the common man and, again unlike Moore's view, ended up subject to much the same criticism as did Bradley's. It had sometimes been said of Bradley that his own theory was suicidal. His insistence on the non-contradictory nature only of the Absolute seemed to imply "the necessary falsity of every storable truth" -- that the only

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<sup>61</sup> Ibid., 7.

really acceptable statement would be one which stated everything simultaneously, but which of course cannot possibly be made. If so, the assertions of which his own books consisted must fall under this universal condemnation; if true they themselves cannot possibly be true. It was soon pointed out, as Warnock observed:

. . . that the doctrines of Logical Atomism, if they were true, could not be stated.

This was the very singular conclusion of Wittgenstein's Tractatus Logico-Philosophicus, . . . The argument was this. According to the purest doctrines of Logical Atomism, a proposition can be stated significantly either if there is, or could be, an atomic fact to which it corresponds, or if it is a truth-function, however, complex, of propositions of that sort. But most of the propositions which Logical Atomists, including Wittgenstein himself, purported to assert were not of either of these kinds. For these propositions mostly did not state facts; they purported rather to say something about facts, in particular about the relations between facts and propositions. But according to the theory itself such propositions cannot be significant; they purport to say what cannot be said. Thus Wittgenstein was led to, and heroically drew, the conclusion that most of what he himself had said was senseless; in an odd way, to understand his own book was to see that this was so, and to realize that, although perhaps he had succeeded in showing something, he had not really said anything at all. This thesis, laid quite early like a sort of time-bomb in the basement of Logical Atomism, escaped notice, or was nervously disregarded, for a number of years; when it went off, its inventor and fortunately many others had already transferred themselves to other premises.<sup>62</sup>

There were, in Wittgenstein's Tractatus, the seeds of two kinds of revolts against Logical Atomism as well as a careful development of atomism itself. One was on the grounds that "metaphysics as a whole

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<sup>62</sup> Op. cit., 41.

he had gone to teach at Cambridge, and the group was very much influenced by his ideas . . . . It is worth noticing, however, that many of the views which came to be regarded as especially characteristic of logical positivism had already been advanced by Schlick in his book on the theory of knowledge, Allgemeine Erkenntnislehre, which was published in 1918.<sup>65</sup>

The membership of this group is indicative of its scientific orientation as is the roster of those who were associated with it and more or less remote in distance, time, or opinion. Among this group were Carl Hempel, Hans Reichenbach, Richard von Mises, Karl Popper, Charles W. Morris, and A. J. Ayer. Many of these men were not philosophers by training, but shared a common interest in the philosophy of science and a common distaste for the academic metaphysics then prevailing in Germany and Central Europe. As Ayer himself put it,

Historically, their logic was the logic of Frege and Russell, while their "positivism" owed less to Comte than to the "neo-positivism" of Mach and Poincare, Einstein's general relativity, and by way of these, to Karl Pearson, John Stuart Mill, the writers of the Enlightenment and the earlier British empiricists (most notably Hume).<sup>66</sup>

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<sup>65</sup> "The Vienna Circle," The Revolution in Philosophy, 70. Ayer's Language, Truth, and Logic (New York: Oxford University press, 1936) was the expression of the basic ideas of Logical Positivism which most influenced British philosophical thought. An excellent explication of his views may be found in a transcript of a radio debate he had with F. C. Copelston, "Logical Positivism -- A Debate," A Modern Introduction to Philosophy, ed. by Paul Edwards and Arthur Papp (Glencoe: The Free Press, 1957), 586-618.

<sup>66</sup> "Logical Positivism," The Concise Encyclopedia of Western Philosophy and Philosophers, ed. J. O. Urmson (New York: Hawthorne Books, Inc., 1960, 240. The connection, noted above, between

the manifesto, the group found other ways of disseminating their views which are described by Ayer:

In 1930 they took over a journal called Annalen der Philosophie renamed it Erkenntnis[sic], and used it as the principal vehicle for the diffusion of their ideas. Its editors were Carnap and Hans Reichenbach, the leader of a similar though less important movement in Berlin. They also in the thirties brought out a series of monographs with the collective title of Einheitswissenschaft (Unified Science) and a series of books . . . .

Throughout the period contact was maintained with philosophers of similar tendencies in other countries, notably Poland, England, Holland, and Scandinavia, and further congresses were held at Prague, Copenhagen, Paris, and Cambridge. But by 1938, the year of the Cambridge congress, the Vienna Circle had practically ceased to exist.<sup>69</sup>

The group dispersed to various parts of the world because of the pressure of hostile right-wing governments and of the Nazis who finally succeeded them.<sup>70</sup> Neurath made an attempt to keep the movement on an international scale. The title of Erkenntnis was changed to The Journal of Unified Science and its place of publication to The Hague, and an International Encyclopedia of Unified Science was begun in the United States under the direction of Neurath. Further congresses were planned, but the war intervened, and with Neurath's death in England the movement lost its central direction.

The Denial of the Metaphysical Basis of Logical Atomism

As asserted earlier, in Wittgenstein's Tractatus are found the

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<sup>69</sup> Ibid., 71-72.

<sup>70</sup> Ibid., 72-73.

seeds of two different revolts against the metaphysics upon which Logical Atomism was based. Logical Positivism was the first of these. The members of the Vienna Circle were already disposed to reject metaphysics on the old positivist grounds that it was an immature precursor of science and readily accepted the anti-metaphysical strain in Wittgenstein. In fact, they called themselves Logical Positivists "to emphasize their acceptance of the view of Wittgenstein that metaphysics was not merely outdated as old positivism had it, but a logically impossible enterprise, being excluded by the essential nature of language; it was positivism on logical grounds."<sup>71</sup> They did not object to the particular arguments in support of Logical Atomism's metaphysical base as did some of its later critics but, rather, to the possibility of a metaphysics of any kind.

Some of the statements from Wittgenstein's Tractatus which seemed to suggest the logical rejection of metaphysics are included in the following list:

- 4.003 Most propositions and questions, that have been written about philosophical matters, are not false, but nonsensical. We cannot therefore answer questions of this kind at all, but only state their senselessness. Most questions and propositions of the philosophers result from the fact that we do not understand our language . . . .
- 4.0031 All philosophy is "Critique of language."
- 4.1 A proposition exhibits the existence and non-existence of atomic facts.

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<sup>71</sup> Urmson, Philosophical Analysis, op. cit., 106-07.

Their argument was, in brief form, of this sort. If all statements are truth-functions of elementary propositions which report observations, then they will all be either empirical themselves or else tautologies or contradictions. Metaphysical statements, however, do not seem to be classifiable under these heads. This major attack on metaphysics led to the development of the basic doctrine of Logical Positivism, "the notorious verification principle," which Urmson explains this way:

The verification principle is not essentially a very novel or obscure doctrine except in its traditional formulation. This formulation is that the meaning of a statement is the method of its verification. Consequently to know the meaning of a statement, to understand it, is to know how to verify it; and an additional consequence is that if there is no way of verifying a proposition at all it has no meaning. Therefore metaphysical propositions, and quite a number of other linguistic performances which have usually been counted as meaningful, turn out to be nonsensical.<sup>74</sup>

#### The Basic Tenets of Logical Positivism

The verifiability principle is considered the central doctrine of the philosophy which emerged from the Vienna Circle. It is, however, only a part of their general position, which Albert Levi summarizes under six doctrinal theses:

1. The function of philosophy is logical analysis . . . . It should analyze all pretensions to knowledge so as to clarify the meaning of terms and the logical relationships between ideas. In the end this will mean that philosophy has become the logical analysis of scientific language.

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<sup>74</sup>  
Op. cit., 107.

2. All cognitively significant (meaningful) discourse is divisible without remainder into analytic or synthetic propositions. This thesis permits a crucial distinction between (1) the formal sentences of logic and pure mathematics, which produce propositions that are "necessary" or "certain" and cannot be refuted by experience . . . and (2) the factual sciences, where propositions may be judged probably true or probably false according to the principle of verifiability.

3. Any proposition that purports to be factual or empirical has meaning only if it is possible to describe a method for its verification. This is closely related to the "operationalism" of the Einstein revolution, to the belief that the meaningfulness of concepts is established by the operational procedures which support them . . . .

4. All metaphysical assertions, being neither analytic nor synthetic propositions, are meaningless.

5. There is a single language for all science; it is similar in form to the language of physics, and all synthetic propositions are reducible to elementary experiences expressible in this language . . . .

6. All normative assertions, whether positing moral, aesthetic, or religious values, are scientifically unverifiable, and are therefore to be classed as forms of non-cognitive discourse. Normative judgments, being neither tautologies nor factually testable, cannot be said to have validity as logical or informative modes of speech . . . .

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### Criticisms of Logical Positivism

The program of the positivists as suggested above was bold and dogmatic. However, as problems of interpretation emerged, various members of the movement offered different revisions of the doctrine, and positivism became subject to criticism both from within and outside its membership. Some criticism dealt with problems peculiar to positivism itself, like the nature of the verifiability principle. Three problems, for example, caused a great deal of debate among the positivists, and

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<sup>75</sup> Albert W. Levi, Philosophy and the Modern World (Bloomington: Indiana University Press, 1959), 343-45.



the pages of Erkenntnis in the early thirties were filled with such controversy.<sup>72</sup> The first problem was that of the verifiability of the verifiability principle itself, and the most common answer was that the principle was "a definition, recipe or criterion of meaning, not an assertion which could be either true or false."<sup>73</sup> The second was that the principle appeared to distort or deny the meaning of many propositions acceptable in science and everyday life. Historical propositions, for example, are not directly verifiable by events nor can scientific generalizations such as natural laws be verified by any finite number of observations. The third, and most difficult, problem was that of "solipsism." Put in its simplest non-technical terms, the charge was made that the positivists' conception of meaning was in any case private, incommunicable, and variable from one observer to another.<sup>74</sup>

But another criticism, and that of a much more important nature, was directed against the basic notion of analysis common to the whole "revolution" itself. Since this criticism led, as is suggested in the

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<sup>72</sup> Ayer, "The Vienna Circle," op. cit., 81.

<sup>73</sup> "Logical Positivism," Concise Encyclopedia of Western Philosophy and Philosophers, op. cit., 242.

<sup>74</sup> Ibid.

could not be seriously doubted.<sup>75</sup>

Where Moore sought only clarity and never wished to depart from common sense beliefs, Russell sought metaphysical truth and felt that common sense beliefs can be false and ordinary language inadequate as a means of discovering and expressing truth. His aim was to give a general account of the universe. Russell's picture of the world was that of one composed of "atomic facts," corresponding to each of which there would be a true "atomic statement."

The Logical Positivists, who built upon the logic and techniques which Russell, Wittgenstein, and others had developed, took still another point of view. They held that all metaphysical statements were meaningless since they could not be verified. Analysis, from the positivists' point of view, was a method for the elimination of metaphysics and for the clarification of the language of science.

#### Areas of Similarity

In spite of their differences in approach toward philosophy, the three positions have much in common. First, they all arrived by their different routes to the conclusion that the role of the philosopher consisted in the analysis of language. For Moore this was the route to clearer understanding; for the Logical Atomists it was regarded as the key to

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<sup>75</sup> "Analysis," Concise Encyclopedia of Western Philosophy and Philosophers, 17-18.

indeed without reference to fact, but in other respects in a total contextual vacuum, for the one sole purpose of stating things truly or falsely.<sup>77</sup>

There was, in the middle 1930's, a large measure of uniformity of practice, overlying, and to a great extent, concealing from view, considerable diversity in aims and doctrine. An apparent unity has tempted "commentators outside the professional ring" to identify the common preoccupation with the analysis of language and to assume that all those who follow this path are Logical Positivists.<sup>78</sup> Yet it is just this area of agreement where an attack was made which ended one period of analytic philosophy and began another.

#### Weaknesses in Analysis

A large number of technical problems gradually began to cast doubt on the whole program of analysis which sought to reduce problems to establishing the truth or falsity of factual statements.<sup>79</sup> These problems, however, were not nearly as important a cause for the abandonment of the

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<sup>77</sup> Ibid., 59.

<sup>78</sup> Ibid. This confusion will be reflected in some of the criticisms of "linguistic" and "analytic" philosophy in later sections of this study.

<sup>79</sup> A rather technical discussion of these problems, which are often alluded to but usually passed over as they are in this study, is presented in Urmson, Philosophical Analysis, op. cit., 130-62.

analytic methods of the thirties as was the fact that nobody was producing any satisfactory analyses.<sup>80</sup> P. F. Strawson stated the point as follows:

The sentences of common speech seemed somehow to resist the simplifying expansions which theory had prepared for them. Even Russell's earlier brilliant glosses on the structure of ordinary sentences, in terms of the syntax of the new formal logic, began in the end to seem a little queer. And those who went to work with fewer preconceptions about their results were apt to find that if they preserved the sense of the original, they achieved no simplification; and that if they gained a simplification, they did so at the cost of losing the sense.<sup>81</sup>

### Two New Directions

The failure to produce the desired results led most philosophers who had followed the old program of analysis to accept one of two alternative views. One was to conclude that since ordinary, natural languages are neither truth-functional nor modelled on some logical calculus they are unsuitable as objects of philosophical investigation. The other was to continue to regard ordinary language as a tool and an object for study and to alter and extend the conception of the nature and techniques of analysis. The first alternative was taken by Carnap, Quine, and their associates and is now pursued mainly in the United States. The second was taken by Wittgenstein, Ryle, and others and developed into the present-day "linguistic analysis" in England.

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<sup>80</sup> Ibid., 149.

<sup>81</sup> "Construction and Analysis," The Revolution in Philosophy, 100.

Before turning to the British variant which is the primary subject of this study, some of the characteristics of the other view must be elaborated because some critics have tended to confuse the two and because much of the criticism of the specific works examined in this study come from that frame of reference.

This group, like the Atomists, relies on the formal logic of Frege and Russell which provides them with a skeleton language in which the meaning of every element is absolutely precise, and the articulation of the elements absolutely clear.<sup>82</sup> By using this framework of logical symbols, "other systems of concepts can be constructed in which the mutual relationships of the parts will have the same clarity and precision as in formal logic itself."<sup>83</sup> These systems are, of course, not natural growths, like ordinary language, but artificial creations. This artificiality, they claim, is the very reason for the superiority of their method of system construction over the attempts to analyze common language. Such an attempt, they argue,

is defeated by the looseness, the untidiness, the shifting complexities of common speech. Instead of pursuing it, then, we are to construct clear models of language in which all the essential logical relations of our concepts can be made plain, while the irrelevant [sic] tangles of actual usage are cut away. Of course, some preliminary or incidental remark will have to be made, connecting key expressions of the system with expressions we ordinarily use. Otherwise it would not be clear what the system

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<sup>82</sup> ibid., 101.

<sup>83</sup> ibid.

was about, what concepts it was intended to clarify. But once these points of contact are made, the system stands on its own, a precise and rigid structure to which our ordinary conceptual equipment is a rough and confusing approximation.<sup>84</sup>

The orientation of this group is scientific. They are very close to the tradition of Logical Positivism, both in point of view and in membership. Rudolph Carnap, who is one of the chief spokesmen for the group, was one of the authors of the "manifesto" of the Vienna Circle. A new vocabulary including symbolic logic and general semantics has been added to some refinements in theory, but they are as close to Logical Positivism in point of view as the "linguistic analysts" are to the Common Sense philosophy of G. E. Moore.

#### Contemporary "Linguistic Analysis"

##### Sources of Linguistic Analysis

In reviewing the history of philosophy in England since 1900, G. J. Warnock observed that "there can be no serious doubt that the most powerful and pervasive influence upon the practice of philosophy in this country today has been that of Ludwig Wittgenstein."<sup>85</sup> In his Tractatus the positivists had found reason to reject the metaphysics of atomism because it suggested to them the grounds for discounting any metaphysical

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<sup>84</sup> Ibid., 102.

<sup>85</sup> Op. cit., 62.

system. In the same work, as has been previously observed, the British followers of both atomism and positivism found the seeds of the rejection of Russell's metaphysics as it led them to the discovery, one by one, "of specific defects in the metaphysics, gradually leading to the conclusion that it must be abandoned as failing to do the job it was trying to do."<sup>86</sup> Yet Wittgenstein's philosophy in later years had a positive aspect which suggested the linguistic alternative to the earlier forms of analysis.

Here, however, the exact influence of Wittgenstein is difficult to establish. For although philosophers generally agree that he "had an enormous influence upon," and was "the main originator of, the new philosophical methods" of linguistic analysis; he did not publicize his ideas.<sup>87</sup> All that is known for certain is that from the time he returned to Cambridge from Vienna in 1929 his work took on an entirely different character from that in his Tractatus.<sup>88</sup> He refused, however, to publish any of his new ideas and was strongly opposed to any publication of them by those to whom his ideas were imparted. Several years passed before even articles reflecting his views were available. Yet, as Warnock pointed out,

. . . at the same time interest in his work was so strong in many

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<sup>86</sup> Urmson, Philosophical Analysis, op. cit., 99.

<sup>87</sup> Ibid., 179.

<sup>88</sup> Warnock, op. cit., 62.

quarters that reports of it did in fact achieve a considerable though half-clandestine currency. These could not be regarded, of course, as final or authoritative; but by 1953, when his Philosophical Investigations were posthumously published, a good many philosophers had been for several years more or less familiar with his work. It is thus difficult or even impossible to say just when or how his influence, after 1929, began to operate. It was certainly widely diffused well before 1953, but the peculiar circumstances of its diffusion baffle exact historical description.<sup>89</sup>

Thus far, the claim is established that Wittgenstein was the chief source of "linguistic" philosophy and that many of his more influential ideas were advanced, in one form or another, by those who were under his influence before any of his later views were published. Two qualifications to this claim, however, must be made. First, the people who advanced Wittgenstein's thought were obviously influenced also by the whole analytic movement and, in England, particularly by G. E. Moore. Second, although the terms "linguistic analysis" and "linguistic philosophy" have been used to describe a general philosophical inclination, the use of these terms can be dangerously misleading.<sup>90</sup> The first qualification is fairly obvious but important; the second, however, is less obvious and of critical importance to this study.

The "linguistic" label<sup>91</sup> can be misleading when it is used to

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<sup>89</sup> ibid., 62-63.

<sup>90</sup> Antony Flew, "Philosophy and Language," The Philosophical Quarterly, V (January, 1955), 21.

<sup>91</sup> This designation is only one of a number of terms which fall



suggest that there is some school of philosophy or particular set of philosophical propositions which it represents. For, although a number of philosophers can be found who agree on certain points, they will surely disagree on other very important matters, and no use of the term without a careful definition will be of value. For as J. O. Urmson observed in discussing the dominant trend in contemporary English philosophy:

... these philosophers do not constitute a school or movement . . . . The contemporary philosophers we are now considering . . . do not accept any common title; such as are applied dyslogistically by their opponents . . . . The unwillingness to accept a common title reflects an absence of shared basic tenets; most of these philosophers fight shy of the sort of general philosophical pronouncements which would count as basic tenets. In any case, apart from a reluctance to subscribe in common to any general formula, there is a good deal of quite serious disagreement amongst them; while there is undoubtedly a "family resemblance" between their views and their methods it would be hard to make a description, however loose and elastic, which would apply to all or even most.<sup>92</sup>

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into this category. "Ordinary language philosophy," "British analysis," and the "Cambridge School" are other terms often used in the same respecting reference to a far rather to a vague area of agreement or to a specific set of philosophical views.

<sup>92</sup> Empirical Analysis, op.cit., 163-64. Anthony Quinton carries this point further by stating, "There is not much more common to analytic philosophers of Oxford beyond their living in Oxford and practising analytic philosophy." "Philosophy and Beliefs," The Twentieth Century, CLVII (June, 1955), 521. Norman Malcolm also says of followers of Wittgenstein's later philosophy: "This is a very heterogeneous trend which cannot be covered by one name. Even the name 'Cambridge School' is not accurate. . . . It seems to me appropriate only in so far as it reminds one of the part which some prominent teachers at Cambridge played in creating a philosophical atmosphere typical of our time." Inductive Wittgenstein: A Memoir (London: Oxford University Press, 1958), 1.

This problem of misleading generalizations about "linguistic" analysis is important not only because it can lead to an honest misunderstanding about this very general approach to philosophy, but also because it has been used by some to discredit the work of many philosophers by criticizing some of the ideas of some of the "linguistic" philosophers and drawing the conclusion that the basic precepts of "linguistic" philosophy had been destroyed.<sup>93</sup>

Philosophical ideas are not, however, most profitably discussed on such a level of generality and for this reason the specific theories of one man in the amorphous grouping of "linguistic" philosophers, Stephen Toulmin, is the subject of the present study.

However, in order to provide a broad context from which to view these specific ideas, some generalizations about "linguistic" philosophy must be made. Keeping in mind the problems inherent in such an enterprise, one may indicate some "family resemblances" among the followers of Moore and Wittgenstein.

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<sup>93</sup> This observation seems to apply to Gellner's Words and Things, op. cit. This evaluation is indicated in a number of reviews of his book in various professional journals. Of particular interest are two which support this point particularly well: Arnold Isenberg, The Journal of Philosophy, LVIII (February 16, 1961), 110-12; and Willis Doney, Philosophical Review, LXXI (April, 1962), 252-57. In fairness to Mr. Gellner, not all the reviews are hostile and the introduction to the book, written by Bertrand Russell, indicates that one famous philosopher supports Gellner's views.

### Functional Analysis

In order to do so, it may be well to borrow two terms from Frederick Ferré which help distinguish between two types of contemporary philosophy.

A root difference between functional and verificational analysis with far-reaching consequences may be found in the differing models under which each views language. This begins as a matter of emphasis: where verificational analysis tends to conceive of language largely on the model of a useful invention, functional analysis tends to picture language more as a natural growth or an organism.<sup>94</sup>

These terms are used to distinguish between the two trends which were noted earlier to have started in response to the failure of the old methods of analysis to produce results. What, then, is the general view of language and philosophy which characterizes "functional analysis"?<sup>95</sup>

Functional analysis regards language as a natural phenomenon, and no a priori grounds are given for excluding any of the uses of language. Language has a social basis in that it is through society that language may be said to have grown naturally. Since it did grow naturally it does not correspond to any simple model imposed upon it.

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<sup>94</sup> Op. cit., 38.

<sup>95</sup> The shift in the use of terms here from "linguistic philosophy" to "functional analysis" is not designed to avoid the perils of the use of the former term as cited above. Obviously, generalizing about "functional analysis" is just as dangerous, but its use avoids some of the stereotyped connotations of the former.

Linguistic utterance has only the one general characteristic that it has some social context and some practical effects. Ferré explains the characteristic of social context in this way:

Sometimes, it is true, we try to employ language where it has no social context or rules, but in each case we find that we are violently tearing language out of its ordinary and proper role in the affairs of life; when we examine the task of philosophical analysis we shall see what problems may be caused by such a gratuitous removal of language from its matrix in social existence. Language, for functional analysis, is a complex social product with many legitimate uses.<sup>96</sup>

Since language has a variety of legitimate uses and no a priori method is allowed to help determine its meaning, the functional analysts argue that the meaning of language is to be found in its use. This view is significantly different from the criterion of meaning of verificational analysis. For as J. L. Evans observed, "To say of a given sentence that it can be verified is not to say anything about the meaningfulness of the sentence but to characterize it as being a sentence of a certain type, namely, an empirical sentence."<sup>97</sup> Meaning, then, is more adequately understood in relation to the uses or functions of language than of actual experience.

This approach toward the problem of meaning is at the heart of functional analysis; the goal of analysis is to solve philosophical

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<sup>96</sup> Op. cit., 60-61.

<sup>97</sup> "On Meaning and Verification," Mind, LXII (January, 1953), 16.

problems by discovering their meaning. For as Wittgenstein stated, "Philosophical problems arise when language goes on holiday."<sup>98</sup>

### Criticism of Functional Analysis

The criticism which seems justifiably to apply to functional analysis is as limited as are the areas of agreement among the philosophers themselves. Two important criticisms, however, can be identified. One is that these philosophers "want to extrude from philosophy, and . . . their critics want to see put back into it, . . . Weltanschauung: recommendations of a moral, political and religious order."<sup>99</sup> To this charge, the functional analysts would probably claim that a Weltanschauung can and should be separated from philosophy but that this does not mean that such moral, social, or political recommendations are unimportant. For, as Anthony Quinton put it:

. . .it's quite wrong to think that analytic philosophers mean to suggest that attitudes or beliefs are unimportant when they separate them off from philosophy.

I'd better say at once that for my own part, my moral and political views are much more important to me than my philosophical

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Philosophical Investigations, trans. G. E. M. Anscombe (Oxford: Basil Blackwell, 1953), 19.

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Quinton, op. cit., 495. This statement is part of a discussion between four Oxford philosophers: Anthony Quinton, Stuart Hampshire, Iris Murdoch, and Isaiah Berlin. The whole discussion pertains to the two criticisms raised at this point and is an excellent statement of the points at issue.

ones. To change the former would involve a much greater disturbance than to change the latter!<sup>100</sup>

Functional Analysis is an activity, and a technical one. It is not to be identified with any particular religious, social, or political view. It has as its function the solution of problems which cannot be solved by empirical methods.

The second criticism is that "the study of ordinary language, gives an appearance of being in itself a trivial activity, in that it involves detailed discussion of small points of actual usage."<sup>101</sup> And, the functional analyst is quick to point out, as Isaiah Berlin put it, that

. . . what philosophers are talking about is not words qua words, but about concepts and categories: the most general and pervasive among them which particular uses of words constitutes (for thought is largely a matter of [sic] using words). Words are not distinguishable from the concepts they express or involve: but it does not follow that all there is before us is "mere words" -- trivial questions of local usage.<sup>102</sup>

The validity of the charge that functional analysis is trivial is not one which can be properly evaluated by citing opinions of philosophers for, in the end, the answer can only be a value judgment; and such judgments can be made only by examining specific attempts at such analysis. The following chapter will be devoted to such an examination of the use of functional analysis by Stephen Toulmin. For, if functional

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<sup>100</sup>Ibid., 521.

<sup>101</sup>Murdoch, Ibid., 506.

<sup>102</sup>Ibid., 509-10.

analysis can clarify concepts, Toulmin's observations on reasoning about ethical, scientific, and ordinary questions may well be of value to the rhetorician.

## CHAPTER II

### THE ANALYTIC PHILOSOPHY OF STEPHEN TOULMIN

#### Introduction

#### Toulmin an Analytic Philosopher

Stephen Toulmin places himself in the context established in the preceding chapter by stating that his brand of philosophy is not, as some critics contend, Logical Positivism but "its younger brother called Analytic or Linguistic philosophy."<sup>1</sup> He pays tribute to Mach and the Vienna Circle and then observes:

The other chief source of recent analytic philosophy has been the work of Professor G. E. Moore . . . . In this country it has been the paramount influence: indeed, I and many of my colleagues would reject the title of Logical Positivists, not only on doctrinal grounds, but also partly out of chauvinism. We may sympathise with the ideas of Ayer and the Vienna Circle, but we do not belong with them.<sup>2</sup>

Since Toulmin seems to prefer the use of the term "analytic philosophy" and because of the sometimes question-begging use of

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<sup>1</sup> "Logical Positivism and After or Back to Aristotle," Universities Quarterly, XI (August, 1957), 336.

<sup>2</sup> Ibid., 338.



the term "linguistic philosophy" by its critics, the former term and "functional analysis" will be used in this study. When the term "analytic philosophy" is employed, it will be understood henceforth to refer to the "functional" branch of analytic philosophy. For, as Toulmin has indicated, he owes a special debt to the works of Ludwig Wittgenstein.<sup>3</sup>

Toulmin is a prolific writer on a wide variety of topics. Like the analytic philosopher previously described by Quinton, he regards philosophy as a technical job involving the analysis of specific problems, espouses no Weltanschauung,<sup>4</sup> and expresses opinions on current affairs as a citizen and not as a philosopher. He has written several books in philosophy, numerous philosophical articles, reviewed philosophical works for various professional journals, and expressed his views on educational, scientific, and political matters.<sup>5</sup>

The volume of work he has produced and his stature in professional philosophy are remarkable in view of his age. His first major work,

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<sup>3</sup> The Philosophy of Science (London: Hutchinson and Co., Ltd., 1953), 7.

<sup>4</sup> Ibid., 344-47. This view is also expressed in his article "Principles of Morality," Philosophy, XXXI (April, 1956), 142-53.

<sup>5</sup> A brief look at the titles of his works included in the bibliography will bear out this observation and give one an idea of the number and variety of work he has produced.

An Examination of The Place of Reason in Ethics,<sup>6</sup> appeared in 1950 when he was twenty-eight years of age. This was hailed as "probably the most important book on ethics since Moore's Principia Ethica,"<sup>7</sup> and was "the earliest book on ethics to present the viewpoint of modern linguistic analysis."<sup>8</sup> In view of his youth, one can expect that his future contributions will extend those covered in the present study and that he will continue to re-shape and perfect his theories.

The Scope of This Study  
of Toulmin's Works

In view of the volume and diversity of Toulmin's writings only a portion of them will be reviewed in this study. None of his non-philosophical contributions will be considered and only a few of his philosophical articles will be examined. The choice of works and the degree of emphasis placed upon them will be determined by their potential utility to the field of rhetoric.

The investigation of Toulmin's works will be divided into three sections which reflect the major topics upon which he has written, i. e., science, ethics, and argument. The relevance of the last two topics

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<sup>6</sup> (Cambridge: University Press, 1950).

<sup>7</sup> The Times Literary Supplement (London), January 26, 1951, p. 57.

<sup>8</sup> "Stephen Toulmin," The Concise Encyclopedia of Western Philosophy and Philosophers, ed. J. O. Urmson (New York: Hawthorne Books, Inc., 1960), 380.

Toulmin's Philosophy of Science

The Philosophy of Science has been characterized as "the first comprehensive interpretation by a student of the later Wittgenstein . . . to understand the procedures and terminology of science."<sup>13</sup> Toulmin's purpose was to explain to the layman the type of reasoning involved in the work of the physical scientist in opposition to the view that such reasoning is to be equated with formal logic. His method is typical of current analytic philosophy. He begins by paying attention to the confusion which results because of linguistic misunderstanding. The scientist and the popularizer of scientific ideas use common words in a very specialized sense without realizing that the layman will not understand the multitude of special associations that are built into the scientific use of the words. Toulmin illustrates this problem by saying:

To a man trained in the use of sophisticated kinds of geometry the phrase "three-dimensional surface" may no longer be a self-contradiction, but for him to use it in talking to a non-mathematician is to invite incomprehension. And what applies to "three-dimensional surfaces" applies equally to "invisible light" and the like; when scientific notions are being popularized, it is necessary to explain the point of such phrases, instead of making an unexplained use of them.<sup>14</sup>

To describe this difficulty of linguistic confusion Toulmin introduces the term "language-shift." By this term he distinguishes between "an

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<sup>13</sup> Michael Scriven, Review of The Philosophy of Science, Philosophical Review, LXIV (January, 1955), 124.

<sup>14</sup> The Philosophy of Science, 13.

account of the theory in the new terminology -- in 'participant's language' -- and an account in 'onlooker's language.'"<sup>15</sup> The problem here is not just linguistic, it is logical as well. When the physical scientist states that light "travels" in a "straight line," the layman understands "travel" and "straight line" but not the logic which allows the physical scientist to view light and dark in this way. Toulmin draws an analogy between explanation of scientific ideas by the scientist to the layman and the telling of bed-time stories to children:

Some nights we tell them stories from history, other nights ancient myths; sometimes legends, sometimes fables, sometimes accounts of things we ourselves have done . . . . A clever child, no doubt soon learns to spot from internal evidence what kind of story tonight's story is; and what sort of people its characters are--fabulous, legendary, or historical. But to begin with we have to explain in asides, what the logical status of each character and story is . . . .

So also in popular science: the layman is not just ignorant of the theories of science, but also unequipped to understand the terms in which a scientist will naturally begin to explain them. To explain the sciences to him only by potted theories and vivid analogies, without a good number of logical asides, is accordingly like telling a child all the sorts of stories we do tell children and not warning him how very different they are . . . .<sup>16</sup>

One must, therefore, not only understand the literal meaning of the stories scientists tell about the facts of the physical world but also understand the various logical bases implied in their explanations. In order to reach this understanding Toulmin suggests that one follow the

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<sup>15</sup> Ibid.

<sup>16</sup> Ibid., 15.

the backing\* for it: first, our experience of everyday phenomena like those of light and shade; second, the practical skills and techniques which have been developed as a result of this experience; and third, those regularities in optical phenomena which are not stated but taken for granted and enshrined in our everyday language.<sup>20</sup>

People know, for example, that the higher the sun rises in the sky, the shorter are the shadows cast by the objects it illuminates; and that, as it moves across the sky, so do the shadows turn with it. This knowledge led to the techniques employed by the makers of sundials, who, in the course of their trade, developed a familiarity with optical phenomena which provided a second starting point for optics. There was a further range of physical regularities, with which everyone became familiar at an early age, but which were rarely stated. Toulmin gives examples of these unconscious and often unstated truisms as follows:

It is harder work running up hill than down; the shortest way to get to the opposite corner of a field is to "follow your nose"; put your hand in the fire and it will burn you -- these are things which any child, and many animals too, may be said to know, yet they seem almost too tautologous when put into words; for our recognition of

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<sup>20</sup> Ibid. 18. The words followed by a \* are ones that will appear in the sense in which they are used above in Toulmin's "layout of argument" which will be discussed later. This notation will be used in this chapter when discussing works other than his Uses of Argument (Cambridge: University Press, 1958). Its purpose is to indicate that evidence of this particular pattern of reasoning is to be found in Toulmin's works prior to his statement of it in his book on argument. Since Toulmin does not make references from one book to another nor does he explain elsewhere the evolution of his ideas nor the interrelationship of one work to another, the \* notation should obviate the necessity of citing numerous examples later in order to support conclusions about such interrelationships.

them comes before, rather than after, the development of our everyday language. The way we ordinarily use the word "straight", for instance, takes it for granted that the shortest and the straightest road are both the one you can see straight along; and our manner of using words like "up" and "down", "fire" and "burns" likewise links together things we commonly find going together.<sup>21</sup>

Toulmin then poses what is probably the most important question relating to scientific reasoning:

The question that faces us is the question, what kind of step is taken when we pass from these data<sup>2</sup> to the conclusion that "light travels in straight lines". What type of inference is this? Or is the very word "inference" a misleading name for such a step?<sup>22</sup>

In order to determine what kind of step is involved in such reasoning, Toulmin compares it with two examples of inferences which at first glance seem to resemble it. One is the kind Robinson Crusoe was supposed to have made when encountering a footprint on the beach of his island; he concluded that a man had been walking there. The other is the kind that the naturalist makes by plotting the observed tracks of a large number of flocks and concluding that they all flew along "great circles." In these cases, as in that concerning light, discoveries can be said to have been made.

There are, however, important differences. One might turn a corner and come face to face with the man who was responsible for the footprint, but telling from the study of shadows that light travels in straight lines is

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<sup>21</sup> Philosophy of Science, 18-19.

<sup>22</sup> Ibid., 19.

this way of talking about optical phenomena -- the very idea that one should talk about anything as travelling in such circumstances being the real novelty. "<sup>24</sup>

These differences point to another, and larger, difference. In the examples of Robinson Crusoe and of the naturalist, the conclusion is expressed in the familiar language of everyday life, and there is no question of giving new senses to any of the words involved. In the optical case, however, "both the key words in our conclusion -- 'light' and 'travelling' -- are given new uses in the very statement of the discovery."<sup>25</sup> Unlike the static conception that one may have had before the "discovery," coming to think about shadows and patches of light in a new way leads one to ask new questions about light. One may ask new questions like "'Where from?', 'Where to?', and 'How fast?', which are intelligible only if one thinks of the phenomena in this new way."<sup>26</sup>

The discovery of a new way of regarding observable facts leads both to new questions and to the possibility of drawing pictures and devising mathematical formulae to add new knowledge which will also fit the facts. Two qualifications to this statement, however, need to be made. First, the particular techniques need not be applicable in all circumstances; it is enough that the facts can be accounted for over a

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<sup>24</sup> Ibid., 20

<sup>25</sup> Ibid., 21.

<sup>26</sup> Ibid.

wide range of circumstances. If under certain circumstances refraction, diffraction, and some other phenomena limit the use of these techniques, or require them to be supplemented, that does not destroy their value within the wide region to which they are applicable. Second, what is or is not to count as fitting the facts has to be decided, and some standards of accuracy must be set.

These qualifications lead the physical scientists to regard their own diagrams differently than do laymen. For Toulmin points out.

The physicist's diagram is not valued for what the man-in-the-street would regard as a likeness, since the physicist's notion of light departs in important respects from the everyday one: still less is it valued on aesthetic grounds. Its point is a more prosaic one, that by the use of diagrams it has been found possible to show, or to explain, over a wide range of circumstances and to a high degree of accuracy, what optical phenomena are to be expected.<sup>27</sup>

What the physicist has to offer is a very useful model which allows one to say that phenomena can be regarded in a certain way. In fact, some scientists would say that such models allow one to say that they must be regarded in a particular way. Suppose, for example, a physicist is asked to explain a particular phenomenon, i.e., that the sun, from an angle of elevation of  $30^{\circ}$ , is shining directly on a six-foot-high wall casting a shadow ten and one half feet deep on the level ground behind a wall. Toulmin supposes the answer as follows.

"Well, that's easy enough," the physicist will say. "Light

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<sup>27</sup>  
Ibid., 32.



travels in straight lines, so the depth of the shadow cast by a wall on which the sun is directly shining depends solely on the height of the wall and the angle of the elevation of the sun. If the wall is six feet high and the angle of elevation of the sun is  $30^{\circ}$ , the shadow must be ten and a half feet deep. In the case described, it just follows from the Principle of the Rectilinear Propagation of Light that the depth of the shadow must be what it is."<sup>28</sup>

What type of reasoning is involved in the physicist's answer?

Not a bare inference from one straight-forward matter-of-fact to a different one, for, as Hume rightly insisted, there can be no "must" about any such inference -- only a "usually does". Not a deduction from a generalization, the principle is just not true: in diffraction, refraction and scattering light ceases to travel in straight lines. Further, there is nothing in the principle about all shadows being ten feet six inches deep, rather than fifty feet or two feet, so the only inference of a syllogistic kind one could look for would be "all light travels in straight lines, what we have here is light; so what we have here travels in a straight line", and this leaves the substantial step unaccounted for. In any case, if the inference were of a syllogistic kind, it would be open to the objection that logicians have always said it was, that of circularity -- since one would be justified in saying only, "Light always has travelled in straight lines; what we have here is light; so what we have here will almost certainly travel in a straight line". Somehow none of the kinds of inference we are accustomed to from the logic-books seems to fit the case.

This should not surprise us. The fact of the matter is that we are faced here with a novel method of drawing inferences -- one which the writers of books on logic have not recognized for what it is. The new way of regarding optical phenomena brings with it a fresh way of drawing inferences about optical phenomena.<sup>29</sup>

There are three ideas which Toulmin has pursued up to this point which are particularly relevant to this study. First, the discovery of new ways of viewing physical phenomena is not an inference in the ordinary sense of the word. Second, that the language chosen to describe

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<sup>28</sup> Ibid., 24.

<sup>29</sup> Ibid., 24-25.

new ways of viewing physical facts will partially determine what further questions are raised about these facts. And third, that the layman understands the literal meaning of many scientific statements but not their more important underlying "logic."

Although Foulmin pursues these and many other matters in considerable detail, the limitations of this study do not permit a full elaboration of his views. The question, however, which is central to the three observations already indicated is: what is the logical status of "discovery" in the physical sciences and what further observations can be made in accordance with such discoveries?

The "discovery" itself, in the physical sciences, is not an inference, but is a useful way of regarding phenomena. From this way of viewing reality, models are constructed which suggest further ways in which phenomena can be explained. The utility of the models is tested by observation and laboratory experiment, and "laws of nature" are identified. To every law there corresponds a set of statements of the form "This law has been found to hold, or not to hold, for such-and-such systems under such-and-such circumstances."<sup>30</sup> In order to discover how far the range of circumstances can be extended, a great deal of routine research is undertaken, "research which can in no way be said to call in question the truth, or acceptability, of the law itself."<sup>31</sup> One may adopt a proposed

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<sup>30</sup> Ibid., 78.

<sup>31</sup> Ibid.

law tentatively, hypothetically, as a guide to further experiments, to see whether the phenomena always happens so. On this level one may ask, "Is X's hypothesis true or false?", meaning, "Have any limitations been found to the application of his formula?" But, as Toulmin points out:

. . . very soon -- indeed, as soon as its fruitfulness has been established -- the formula in our hypothesis comes to be treated as a law, i.e., as something of which we may ask not "Is it true?" but "When does it hold?" When this happens, it becomes part of the framework of . . . a theory, and is treated as a standard. Departures from the law and limitations on its scope . . . come to be spoken of as anomalies and thought of as things in need of explanation . . . and at the same time the statement of the law comes to be separated from statements about the scope and application of the law.<sup>32</sup>

Toulmin feels that one can distinguish, in any science, between problems which are currently under discussion, and those earlier problems whose solutions have to be taken for granted if current problems are even to be stated. It is in this sense that he contends that "the propositions of an exact science form a hierarchy, and are built one upon another; and just as a bricklayer is only called upon at a given moment to determine the positions of the bricks in a single course -- which in their turn will become the foundation for the next course -- so the scientist is only called upon at any one time to investigate the acceptability of statements at one level."<sup>33</sup> "Established" and "hypothetical" as used in science,

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<sup>32</sup> Ibid., 79.

<sup>33</sup> Ibid., 81.

therefore need to be understood in terms of the distinction between the parts of a science that are actually being called in question, and those which must be taken for granted in order to state working problems.<sup>34</sup>

Toulmin's Foresight and Understanding

Foresight and Understanding: An Enquiry into the Aims of Science

is a rewritten and expanded version of a series of lectures Toulmin presented at Indiana University in March, 1960. It is only 115 pages in length and its brevity is one of its main criticisms.<sup>35</sup> Yet, although this criticism is valid, Toulmin attempts only limited objectives and proposes only one main thesis. His thesis and the method by which he proposed to support it were clearly summarized by the author in the introduction to his work.

Our discussion will have three phases. The first need is to exorcize the dream of stating the central aim of science in a single, all-embracing phrase. (Words like "prediction", as we shall see, conceal hidden ambiguities. Science is certainly not a matter of forecasting alone, since we have to discover also explanatory connections between the happenings we predict.) Our second and chief business is to examine some selected examples which illustrate what scientific explanations involve in practice. (We shall be forced at this stage to recognize the importance of certain "ideals of natural order" and "explanatory paradigms", . . . which have established themselves and developed in the course of men's intellectual history.) Finally, we shall come to see that there is one analogy in terms of which the development of scientific ideas can be made immediately

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<sup>34</sup> Ibid., 82.

<sup>35</sup> This point is made by Jacques Barzun in his foreword to the book, op. cit., 12, and by R. D. Bradley, Mind, LXXI (October, 1962), 568.

intelligible without gross over-simplification. In evolutionary biology, the "survival-value" of a species needs to be related both to its environment and to its ancestry. And the problem of "scientific merit" will turn out to be a similar one: it is the problem of seeing in how many ways a novel scientific idea may, in the conditions of its introduction, be "better adapted" than its predecessors or rivals.<sup>36</sup>

### Prediction and Explanation

Toulmin begins his study by comparing the problem of defining the goal of science with defining the goal of sports.<sup>37</sup> The lesson learned from this attempt is that no single goal can be attributed to either, despite the fact that some scientists insist on claiming that prediction is the single basic goal of science. "The purpose of an explanatory science," they claim, "is to explain -- that is, to lead to predictions; and the merits of a scientific theory are in proportion to the correct predictions which it implies."

After admitting that he once held this theory (it is implied in his Philosophy of Science), he seeks a further clarification of the theory by analyzing what the term "prediction" means in ordinary language:

In philosophy, as in the law-courts, words which are not defined explicitly must at the outset be interpreted in their current vernacular signification. So here: the terms 'predict', 'prediction', and 'predictive' can most nearly be understood in their familiar, non-philosophical sense . . . . On this straightforward interpretation the

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<sup>36</sup> Foresight and Understanding, op. cit., 16-17.

<sup>37</sup> This method of analysis is very similar to that used by Wittgenstein in comparing the many uses of language to the many types of games which can be played. This concept of "language games" is central to the early period of linguistic analysis.

variation sometimes appears in a population first by chance, conferring at the time no particular advantage on its possessors; yet this same variation may subsequently become of extreme value to their descendants as the result of changes in the environment."<sup>46</sup>

Scientific understanding results from novel views of nature, or the kinds of questions one asks of nature, combined with systems of prediction which lead to the temporary establishment of scientific theories. The survival value of such theories is determined by the way in which they can profitably be adapted to the ever-changing environment in which they must work.

#### Toulmin on Ethics

The very title of Toulmin's major work on ethics suggests its relevance to an examination of the interrelationship of logic, ethics, and rhetoric. An Examination of the Place of Reason in Ethics is more than just the statement of an ethical position. It is a discussion of the function and development of ethical reasoning about particular ethical questions, and of the limit of reasoning in dealing with ethical and other types of problems.

Because it was his earliest major work, one may see in it the germs of ideas which he was later to develop in greater detail. For this reason, the primary concern in this section of the study will be with Toulmin's

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<sup>46</sup>Ibid., 113.

significant. For these are essentially negative terms, indicating how things will behave of themselves, if nothing is done to them from the outside.<sup>42</sup>

### Evolution of Scientific Ideas

Toulmin's arguments conclude in his thesis that what gives scientific ideas merit is identical with "the Darwinian formula: 'What gives them survival value?'"<sup>43</sup> This survival value is a function of both their ancestry and environment. Toulmin explains the Darwinian analogy in this way:

To begin with, we know from biology how a variation which confers an advantage on one species in one environment may have no merit at all for another species, or even for the same species in a different environment. So, in science, the same theoretical move can have merit in dealing with one group of problems, and yet prove an obstacle to progress in another field or situation. We met this earlier, when we saw how arguments which had merit in the theory of illumination were out of place in gravitation theory; and theoretical patterns which were largely unfruitful in chemistry subsequently bore fruit in genetics.<sup>44</sup>

Biological species survive, so Toulmin argues, not by meeting any single evolutionary demand, but because they alone, from the available variants of earlier forms, have "successfully met the multiple demands of the environment."<sup>45</sup> What may have been at one time an unproductive scientific theory may in a different environment become highly useful. For in science, as well as in biology, "an inheritable

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<sup>42</sup> Ibid., 79.

<sup>43</sup> Ibid., 111.

<sup>44</sup> Ibid.

<sup>45</sup> Ibid.

view on ethics, and with the ways in which he discusses reasoning and rhetoric in a different manner than he does in his other works.

Toulmin divides his work into four parts. Part One examines the "traditional" method of ethics. This method of ethics is divided into three sections: "the objective approach"; "the subjective approach"; and the "imperative approach." After devoting a chapter to each, Toulmin summarizes them as follows:

Each of the three lines of approach starts with the false assumption that something which is sometimes true of our ethical judgments is essential to them:

(i) the advocates of the objective doctrine talk as though two normal, factually-informed people could not help agreeing about values (in the way in which they agree about properties);

(ii) the advocates of the subjective doctrine talk as though people could not help having different standards of value (in the way in which they have independent tests of, say, pleasantness);

(iii) the advocates of the imperative doctrine talk as though the purely hortatory nature of some ethical arguments were something which applied to all ethical arguments, and could no more be helped than the hortatory nature of exhortations.<sup>47</sup>

In Part Two Toulmin discusses ordinary and scientific reasoning in preparation for his discussion of the place of reasoning in ethics. The gist of his argument is that there are many varieties of reasoning, each with its own purpose and each with its own criteria whereby good and bad reasoning of each type is distinguished. One cannot, however,

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<sup>47</sup> Op. cit., 61.



hope to answer the question: "What is good and bad reasoning in general?"<sup>48</sup>

The first two parts of The Place of Reasoning in Ethics are but necessary preliminaries to the central theme of his work. In the third and fourth sections he makes his most important observations. Since the points which he makes are numerous and not of equal relevance to this study, only some of his observations will be discussed under topical headings which depart from his organization of the work.

#### The Function and Development of Ethics

Toulmin feels that all communities have some kinds of moral codes:

In any particular community, certain principles are current -- that is to say, attention is paid to certain types of argument, as appealing to accepted criteria of "real goodness", "real rightness", "real obligation", etc. From these, the members of the community are expected to try and regulate their lives and judgments. And such a set of principles, of "prima facie obligations", of "categorical imperatives", is what we call the "moral code" of the community.<sup>49</sup>

At the primitive stages of the development of societies, such moral codes are something fixed and unalterable. However, as a result of contacts with other cultures or changes within the community, people begin to question not only the rightness of particular actions, but also the standards laid down in the code. When, and if, members of a community have the recognized right to criticize the existing practices, and to

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<sup>48</sup> Ibid., 80.

<sup>49</sup> Ibid., 140

suggest new ones, a new phase in the development of ethics begins.

Toulmin describes this phase as follows:

In this phase, it is the motives of actions and the results of social practices, rather than "the letter of the law", which are emphasized. The "deontological" code was at first supreme; the "teleological" criterion now amplifies it, and provides a standard by which to criticise it. This does not mean that morality becomes wholly teleological, as Utilitarianism would suggest. All that happens is that the initially inflexible system of taboos is transformed into a developing moral code -- a code which, in unambiguous cases, remains mandatory, but whose interpretations in equivocal cases and future development are controlled by appeal to the function of ethics; that is, to the general requirement that preventable suffering shall be avoided.<sup>50</sup>

#### Reason in Particular Ethical Questions

Toulmin's view of the function of ethics is critical to an understanding of the role which he feels reason plays in answering ethical questions. For, as the previous quotation implies, there is more than one kind of reasoning involved in the proper solution of ethical questions.

#### Simple Moral Questions

In some moral questions a rule of action may be unambiguously appropriate. In driving a car on the proper side of the street a person follows a law of proper conduct and violates the code if he does not. If

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<sup>50</sup> Ibid., 141-142. Toulmin quotes Broad to define the terms "deontological" and "teleological" as follows:

Deontological theories hold that there are ethical propositions of the form: "Such-and-such a kind of action would always be right (or wrong) in such-and-such circumstances, no matter what its consequences might be."

Teleological theories hold that the rightness or wrongness of an action is always determined by its tendency to produce certain consequences which are intrinsically good or bad.

Reasoning about the Justice  
of Social Practices

Questions of social justice are simple to determine in a primitive society where there can be no appeal from authoritarian rules or taboos. When one turns to the second, or democratic, phase in the development of ethical standards, there is room for questions about the standards of morality themselves. If a society has a "developing moral code," changes in the economic, social, political, or psychological situation may lead people to regard the existing practices as unnecessarily restrictive or dangerously lax. "If this happens," Toulmin says, "they may come to ask, for instance, 'Is it right that women should be debarred from smoking in public?' or 'Would it not be better if there were no mixed bathing after dark?', in each case questioning the practice concerned as a whole." <sup>54</sup> Remembering the function of ethics, as Toulmin described it, the answer to these questions will be reached by estimating the probable consequences of retaining the present practices, and of adopting the suggested alternative. <sup>55</sup> Toulmin put the matter as follows:

If, as a matter of fact, there is good reason to suppose that the sole consequences of making the proposed change would be to avoid some existing distresses, then, as a matter of ethics, there is certainly a good reason for change . . . . And what stake may reasonably be risked for any particular likelihood of gain is something <sup>56</sup> to be settled with confidence -- if then -- by appeal to experience.

So far, Toulmin has discussed two kinds of moral reasoning between

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<sup>54</sup> Ibid.

<sup>55</sup> Ibid., 149-50.

<sup>56</sup> Ibid., 150.

one borrows a book, he should return it or violate the moral code by not honoring a promise. In either case a specific application of an article of "the code" is made. If, however, one asks whether the law should be followed or promises kept, no answer by reasonable appeal to the code is possible. Under some circumstances, then, one can easily reason about "the rightness of actions."<sup>51</sup>

### Conflicts of Duty

Toulmin illustrates the problem of conflicts in duty with a simple example:

. . . the fact that I promised to let Jones have his book back will seem to me reason enough for taking it to him on time -- if that is all that there is to it. But, if I have a critically ill relative in the house, who cannot be left, the issue is complicated. The solution is not sufficiently unambiguous for reasoning from the practice of promise-keeping to be conclusive: I may therefore argue, "That's all very well in the ordinary way, but not when I've got my grandmother to look after: whoever heard of risking someone else's life just to return a borrowed book?" Unless evidence is produced that the risks involved in breaking my promise to Jones are even greater than those attending my grandmother, if she is left alone, I shall conclude that it is my duty to remain with her.<sup>52</sup>

Given two conflicting claims one has to weigh the risks as well as one can and choose the lesser of two evils. The appeal to a single current principle, although it is the primary test of the rightness of an action, "cannot therefore be relied on as a universal test: where this fails, we are driven back upon our estimate of the probable consequences."<sup>53</sup>

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<sup>51</sup> Ibid., 145-46.

<sup>52</sup> Ibid., 147.

<sup>53</sup> Ibid., 149.

doing so, the nature of the inquiry is clear: someone is suggesting that in the future, when a student walks around on campus in shorts, people should not regard it as inappropriate nor condemn such a practice. The change proposed is sufficiently clear for people to discuss it as it stands and to make a decision about it on its own merits.

On the other hand, one may ask an entirely different kind of moral question which Toulmin discusses as follows:

If . . . I ask, "Is it really right to have only one wife, like the Christians, or would it be better to have anything up to four, according to the old Mohammedan practice?", my question is a good deal less intelligible. In the first place, there seems to be a suggestion that we abandon our present practice in favour of an alternative one; but the exact nature of the change proposed is not clear; so how can one begin to estimate its probable consequences? Secondly, it is questionable whether the practices compared can be regarded as "alternatives" at all. The ramifications, both in Christian and in Muslim societies, of the institution of marriage, its relations to the institutions of property, or parenthood and so on, are so complex that there is no question of simply replacing the one institution by the other.<sup>61</sup>

The two questions seem to be of the same type since the suggestion is made in each case that currently held values should be replaced by others. Both offer alternatives to the present value system, but the alternatives cannot be reasoned about in the same way. Because, as Toulmin suggests:

. . . if one is to reason about social practices, the only occasions on which one can discuss the question which of two practices is the better are those on which they are genuine alternatives: when it

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<sup>61</sup> Ibid.

which it is important to distinguish. "Each provides its own logical criteria -- criteria which are appropriate to the criticism of individual actions, or social practices, but not both."<sup>57</sup> One can justify individual conduct by reasoning back to the accepted code of a society but cannot justify it by saying that "one must not inflict avoidable suffering." This kind of reason is appropriate only when discussing whether a social practice should be retained or changed.<sup>58</sup> Toulmin illustrates this distinction by citing the example of Socrates:

It was this distinction between the "reasons" for an individual action and the "reasons" for a social practice which Socrates made as he waited for the hemlock. He was ready to die rather than repudiate it -- refusing, when given the chance, to escape from the prison and so avoid execution. As an Athenian citizen, he saw that it was his duty (regardless of the actual consequences in his particular case) to respect the verdict and sentence of the court. To have escaped would have been to ignore this duty. By doing so, he would not merely have questioned the justice of the verdict in his case; he would have renounced the Athenian constitution and moral code as a whole.<sup>59</sup>

The Limited Scope of  
Comparisons Between  
Social Practices

"The scope of ethical reasoning," Toulmin contends, "is limited as well as defined by the framework of activities in which it plays its part."<sup>60</sup> If, for example, people regard the wearing of shorts on campus as disgusting, and a student asks if he really should be prohibited from

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<sup>57</sup> Ibid., 151.

<sup>58</sup> Ibid., 150-51.

<sup>59</sup> Ibid., 151.

<sup>60</sup> Ibid., 152.

would be practical to change from one to the other within one society . . . . If this condition is not satisfied, there is, morally speaking, no reasoning about the question, and pretended arguments about the merits of rival systems -- personal preference apart -- are of value only as rhetoric.<sup>62</sup>

What can be said of the place of reason in ethics, in general, as a result of Toulmin's examination of particular situations in which people are led to reason about ethical questions? The answer is that he does not attempt to give any "theory of ethics," but to describe what constitutes proper reasoning in certain kinds of moral questions. His purpose is to show "how, in particular types of ethical question and argument, good reasoning is distinguished from bad, and valid argument from invalid -- to be specific, by applying to individual judgements the test of principle, and to principles the test of general fecundity."<sup>63</sup>

#### Beyond the Limits of Ethics

In Toulmin's view the limits to the place of reason in ethics also determines the scope of ethics as a study. Questions asked about ethics to which no valid reasons can be given are like questions asked of the scientist which are beyond the scope of scientific reasoning. A mother can ask a scientist why her child died and get a scientific account of the death. But a mother who has three children, each of whom died on his birthday, cannot ask the scientist, "Why?" and receive a scientific account. Similarly, one may ask in ethics, "Is this action consistent

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<sup>62</sup> Ibid., 153.

<sup>63</sup> Ibid., 160.

with the moral code?" or "Should this part of the moral code be revised in this manner?" But one may not validly ask in ethics, "Why ought one to do what is right?"<sup>64</sup>

Toulmin defines several subjects, which are important parts of his work on ethics, as being beyond the limits of ethical reasoning. Before discussing these, however, mention should be made of his reason for classifying them in this manner. The reason is to be found in Toulmin's notion of "limiting questions."

### Limiting Questions

Toulmin introduces the idea of "limiting questions" by summarizing one of the lessons to be learned from his analysis of reasoning:

In all the modes of reasoning analysed so far, we found that the "reasons" which could logically be given in support of any statement formed a finite chain. In every case, a point was reached beyond which it was no longer possible to give "reasons" of a kind given until then; and eventually there came a stage beyond which it seemed that no "reason" of any kind could be given.<sup>65</sup>

No reason of any kind could be given, Toulmin contends, because up until this point he had been interested "in literal answers only: so, when faced with requests for reasons of any kind beyond the point at which these ceased to be appropriate we dismissed them as illogical."<sup>66</sup>

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<sup>64</sup> For a further discussion of this point see ibid., 154-60 and 202-221.

<sup>65</sup> Ibid., 202

<sup>66</sup> Ibid.



Just because they may be "illogical" does not mean, however, that people will not continue to wish to ask them. One may wonder why he should do what everyone agrees is "right" and others may seek non-scientific explanations to account for the deaths of three children on their birthdays. Questions of this type, Toulmin says, are

. . . questions borrowed from a familiar mode of reasoning, but not doing the job which they normally do within that mode of reasoning. It is characteristic of them that only a small change is required, either in the form of the question, or in the context in which it is asked, in order to bring it unquestionably back into the scope of its apparent mode of reasoning. But it is equally characteristic of them that the way of answering suggested by the form of words employed will never completely satisfy the questioner, so that he continues to ask the question even after the resources of the apparent mode of reasoning have been exhausted. Questions of this kind I shall refer to as "limiting questions": they are of particular interest when one is examining the limits and boundaries of any mode of reasoning -- and ethical reasoning in particular.<sup>67</sup>

The important point is this: there is a limit to the questions that can reasonably be asked within any field of inquiry which are meaningful within the logical structure of that field. This may sound like the argument of the Logical Positivists and their followers who, because they feel that all utterances which cannot be taken literally are nonsense, reject metaphysical and ethical questions. Toulmin feels they are meaningless only within particular logical structures and are of value when understood for what they are. They "help us to accept the world, just as the explanations of science help us to understand it."<sup>68</sup> They may also

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<sup>67</sup> Ibid., 205.

<sup>68</sup> Ibid., 209.

be of genuine value within the fields of rhetoric and religion, as will be seen, but "limiting questions" can be found in all fields as one attempts to go beyond the logical limits of that field. A "limiting question" asked in one context may be an appropriate one in another.

### Reason and Faith

Toulmin states very concisely the way in which he views the relationship between ethics and religion. "Ethics," he says, "provides the reasons for choosing the 'right' course: religion helps us to put our hearts into it." A limiting question in ethics may be an appropriate one for religion. Toulmin gives the following example:

"Why ought one to do what is right, anyway? "

"That is a question which cannot arise, for it is to query the very definition of 'right' and 'ought'."

"But why ought one to? "

"Because it is God's will."

"And why should one do His will? "

"Because it is in the nature of a created being to do the will of its Creator", etc.<sup>69</sup>

Matters of faith in general and religion in particular are also subject to limiting questions. The specific arguments supporting this assertion are not relevant to this study and can be found in Toulmin's **chapter** on "Reason and Faith," but the fact that the limits of reason are "field dependent"<sup>70</sup> is clearly implied in what already has been

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<sup>69</sup> Ibid., 219.

<sup>70</sup> The term "field-dependent" is one which Toulmin introduces in his Uses of Argument, op. cit., and will be discussed later in this chapter. The use of the term in this particular statement is clear in its context.

Toulmin explains the kind of reasoning involved in philosophical ethics in a section entitled "Ethical Theories: Rhetoric and Reason."

As compared with straightforward ethics, with its definite criteria of truth and falsity, of validity and fallaciousness, of "good" and "bad" reasoning, philosophical ethics -- as used politically -- looks very like pure persuasion. Apart from the elementary rules of deductive and inductive inference, no fixed logical criteria can be applied to it; and even those that do apply help us only to tell arguments which appear to be valid from those which do not even appear to be. The notion of "logical validity" itself can hardly be applied; the only test by which to decide whether or not a particular argument is appropriate in a given situation lies outside the mode of "reasoning" -- if the philosophical argument lends colour to an ethical conclusion which is itself a just one, then, as a matter of ethics, it can be accepted; if not, we ought to reject it.<sup>74</sup>

Toulmin does not mean to give the impression that such arguments are concerned with the emotions alone. A political use of philosophical ethics "is less characteristic an instance of 'reasoning' than ordinary ethics; but that does not make it 'pure persuasion.'"<sup>75</sup> By "pure persuasion" Toulmin means the kind involved in a "hell-fire" sermon or a political oration. In such situations, he feels, there is such a thing as "a direct appeal to the emotions, as arguments designed to act -- and acting -- on the heart alone, arousing fear and submission, affection or sympathy, with the minimum of reasoning."<sup>76</sup> These arguments are effective in moving both the uneducated masses and the intelligent few. Philosophical arguments, Toulmin claims, differ in this way:

. . . they act more strongly on the intelligent and sophisticated

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<sup>74</sup>Ibid., 199.

<sup>75</sup>Ibid., 200.

<sup>76</sup>Ibid.

said. So, too, is the fact that not all questions of value can be answered by appeal to ethical criteria alone and be totally satisfactory to the common man.

### Ethics and Rhetoric

Toulmin's brief references to rhetoric in his Place of Reason in Ethics may be both rewarding and frustrating to the rhetorician. They may be rewarding because he discusses rhetoric as a means of persuading people about ethical types of questions. They may be frustrating because Toulmin often implies that reason and rhetoric are antithetical.

His treatment of rhetoric is within the context of his discussion of "philosophical ethics."<sup>71</sup> In examining this topic, Toulmin argues that many philosophers put forth ethical theories not as an unbiased search for truth but because such theories have "a rhetorical force useful in forwarding their particular policies."<sup>72</sup> The works of Bentham, Hobbes, Hegel, and Marx are discussed by Toulmin in this manner under the interesting heading "Ethical Theories as Rhetoric." All these men "seem to have believed in the soundness of their arguments, and of their conclusions -- but they all to some extent display, in their fallacies, Marx's own self-confessed desire not so much to understand the world as to change it."<sup>73</sup>

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<sup>71</sup> Place of Reason in Ethics, op. cit., 186-201.

<sup>72</sup> Ibid., 195.

<sup>73</sup> Ibid., 198.

than on the under-educated or stupid: they rely for their effect on familiarity with quite advanced types of reasoning, rather than on simple-hearted response; and the simple are less prone to be dazzled into accepting them as the literal truth than are the educated, for they just miss the point. There is therefore something to be said for regarding this type of argument as a form of "reasoning" -- as appealing to a kind of reason, rather than to pure emotion: but it is a type of reasoning logically less typical and more complex than those which we have considered so far.<sup>77</sup>

By the distinctions which he has drawn, Toulmin indicates the different types of reasoning that can be detected. Within ethics, reason can be used profitably up to the point of limiting questions. In philosophical ethics, reasoning, "of a type," can properly be used with a limited kind of audience. With the masses, "emotional persuasion" would appear to be the only appropriate tool. None of these is superior to the other on any scale of value; each has its own proper and important use in human affairs.

### Toulmin on Argument

#### Introduction

Toulmin's works on ethics and science stressed, among other things, the limits of formal logic and the fact that reasoning has different forms and limitations within various fields of inquiry. These ideas are developed further by Toulmin in his Uses of Argument.<sup>78</sup> Although he does not mention his earlier works in the book on argument, there is a

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<sup>77</sup> Ibid.

<sup>78</sup> Op. cit.

clear indication that the ideas expressed in the Uses of Argument are derived in part from his Philosophy of Science and Place of Reason in Ethics and are a logical extension of his earlier views. Since he has returned, almost exclusively, to writing on scientific topics since the publication of this one work on argument, one might even conclude that he simply organized, extended, and refined his earlier ideas about reasoning and took a temporary excursion into the field of argumentation.

The Uses of Argument is more directly related to the study of rhetoric than any of his other works. It has, in fact, had a good deal of influence upon recent works in the field of argumentation and discussion.<sup>79</sup> For this reason, less attention will be paid to the parts of this book which others have discussed than otherwise would be warranted.

Probably the best description of the Uses of Argument is that given by Toulmin himself:

The purpose of these studies is to raise problems, not to solve them; to draw attention to a field of inquiry, rather than to survey it fully; and to provoke discussion rather than to serve as a systematic treatise. They are in three senses "essays", being at the same time experimental incursions into the field with which they deal; assays

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The most extensive use of Toulmin's Uses of Argument is found in Douglas Ehninger and Wayne Brockriede, Decision by Debate (New York: Dodd, Mead and Co., 1963). See also Wayne Brockriede and Douglas Ehninger, "Toulmin on Argument: An Interpretation and Application," Quarterly Journal of Speech, XLVI (February, 1960), 44-53; Austin J. Freeley, Argumentation and Debate: Rational Decision Making (San Francisco: Wadsworth Publishing Co., 1961), 115-18; and Halbert E. Gulley, Discussion, Conference, and Group Process (New York: Henry Holt and Co., 1960), 160-62.

or examinations of specimen concepts drawn rather arbitrarily from a larger class; and finally ballons d'essai, trial balloons designed to draw the fire of others.<sup>80</sup>

The problems which he analyzes are "logical problems" rather than "problems in logic." He is concerned not with the kinds of problems which arise in the study of formal logic, but how logical theories apply in practice and "what connections they have with the canons and methods we use, in everyday life, when we actually assess the soundness, strength and conclusiveness of arguments."<sup>81</sup>

Toulmin begins his inquiry into the nature of argument by posing what he considers to be a central question, i.e., "how far logic can hope to be a formal science, and yet retain the possibility of being applied in the critical assessment of actual arguments." Logic is concerned, he feels, "not with the manner of our inferring, or of questions of technique: its primary business is a retrospective justificatory one -- with the arguments we can put forward afterwards to make good our claim that the conclusions arrived at are acceptable, because justifiable, conclusions."<sup>82</sup>

#### The Jurisprudential Analogy

Logic, Toulmin argues, is generalized jurisprudence. In law, and argument in general, he questions how far their forms and critical criteria

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<sup>80</sup> Uses of Argument, op. cit., 1.

<sup>81</sup> Ibid.

<sup>82</sup> Ibid., 6.

are the same for cases of all types and how far they are dependent upon the type of case under consideration. He answers as follows:

The sorts of evidence relevant in cases of different kinds will naturally be very variable. To establish negligence in a civil case, wilful intent in a case of murder, the presumption of legitimate birth: each of these will require appeal to evidence of a different kind. On the other hand there will, within limits, be certain broad similarities between the orders of proceedings adopted in the actual trial of different cases, even when these are concerned with issues of a very different kind.<sup>83</sup>

When one turns from the court of law to everyday argument, the situation is much the same. The case which one presents in defense of particular claims or solutions normally can be presented in a series of stages. "These," Toulmin warns, "it must be remembered, do not necessarily correspond to stages in the process by which we actually reached the conclusion we are now trying to justify."<sup>84</sup>

#### Argument and Modals

In characterizing "the stages into which a justificatory argument naturally falls," Toulmin finds it necessary to introduce certain modal terms into the discussion.<sup>85</sup> For the first stage of a justificatory

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<sup>83</sup> ibid., 16.

<sup>84</sup> ibid., 17.

<sup>85</sup> Although Toulmin discusses modal expressions, he does not define "modals." The Dictionary of Philosophy, ed. I. M. Baldwin (New York: The Macmillan Co., 1902), 89, defines modality as follows: "There is no agreement among logicians as to what modality consists in; but it is the logical qualification of a proposition or its copula, or the corresponding quantification of a fact or its form, in ways expressed by the modes possible, impossible, contingens, necessarium." More simply, modals may be regarded as terms like "can," "possible," "necessary," and their cognates used in the sense described above.



argument is concerned with possible solutions to particular problems under consideration. Some solutions will be more deserving of consideration than others, even at first glance. "Once we begin to consider those suggestions which have been acknowledged to deserve our attention, and ask what is the bearing on these suggestions of any information we have in our possession, a number of things may happen. In each of the resulting situations further modal terms come into the centre of the picture."<sup>86</sup> It may happen, for example, that of the set of possible solutions, one may be viewed as inescapable or necessary in the particular case. Dismissing for the time all sorts of tests that are necessary to lead to such certainty, Toulmin suggests some common examples of this state of affairs.

. . . there is one person whose current form demands his inclusion in a tennis team; the evidence leaves no doubt that the man in the dock committed the crime; a water-tight theorem is constructed, a scientific theory passes all our tests with flying colours.<sup>87</sup>

In other cases, however, there may be no obvious and certain conclusion. Yet it may be possible to dismiss some of the suggestions which earlier were considered as possibilities "as being, in the light of our other information, no longer deserving of consideration."<sup>88</sup> If one of the original suggestions turns out to be inadmissible, further modal terms such as "cannot" and "impossible" need to be applied.<sup>89</sup>

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<sup>86</sup>Toulmin, Uses of Argument, op. cit., 19.

<sup>87</sup>Ibid., 20.

<sup>88</sup>Ibid., 21.

<sup>89</sup>Ibid.

Of the remaining possible solutions, one may seem to be more probable than the rest. In this case one needs to qualify his conclusions with statements like "probably," "presumably," "almost certainly," and other such expressions.

Toulmin summarizes these stages in setting out a justificatory argument and indicates their relevance to all fields of inquiry in the following statement:

In all this, one thing should be noted: in characterizing the different situations which may arise in the setting-out of a justificatory argument, one can rely on finding examples in many different sorts of fields. The various phases -- first, of setting out the candidate-solutions unequivocally indicated by the evidence, ruling out some of the initial possibilities in the light of the evidence, and the rest -- may be encountered equally whether our argument is concerned with a question of physics or mathematics, ethics or law, or an everyday matter of fact. In extra-judicial as well as in judicial arguments, these basic similarities of procedure hold good throughout a wide range of fields; and, in so far as the form of the argument we present reflects these similarities of procedure, the form of argument in different fields will be similar also.<sup>90</sup>

### The Fields of Argument

From this introductory point, Toulmin goes on to examine the kinds of arguments advanced in real life and to determine in what ways "the formalities and structure of arguments change and do not change as we move from one sort of claim to another, or between arguments in different 'fields.'"<sup>91</sup> Here, Toulmin uses the term "field of argument" in a special

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<sup>90</sup> Ibid., 21-22.

<sup>91</sup> Ibid., 8.

sense which he describes as follows:

Two arguments will be said to belong to the same field when the data and conclusions in each of the two arguments are, respectively, of the same logical type: they will be said to come from different fields when the backing or the conclusions in each of the two arguments are not of the same logical type.<sup>92</sup>

Some aspects of the argumentative process, in Toulmin's view, are "field-dependent" and have their own specialized critical standards. Others are "field-invariant," like the stages in setting out justificatory arguments which were described earlier.

### Force and Criteria

Toulmin uses the notions of field-dependence and field-invariance in discussing modal terms used in everyday argument. By analyzing the way in which such words as "possible" and "cannot" vary and remain constant in certain aspects of their use, he makes another distinction between the "force" of such modals and the "criteria" for their use.

The meaning of a modal term, such as "cannot," has two aspects: these can be referred to as the force of the term and the criteria for its use. By the "force" of a modal term I mean the practical implications of its use: the force of the term "cannot" includes, for instance, the implied general injunction that something-or-other has to be ruled out in this-or-that way and for such-a-reason. This force can be contrasted with the criteria, standards, grounds and reasons, by reference to which we decide in any context that a particular modal term is appropriate. We are entitled to say that some possibility has to be ruled out only if we can produce grounds or reasons to justify this claim, and under the term "criteria" can be included the many sorts of things we have then to produce.<sup>93</sup>

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<sup>92</sup> Ibid., 14.

<sup>93</sup> Ibid., 30.

The word "cannot" will have the same force regardless of whether one "cannot" do something in a physical, a logical, or a moral sense of the term. One must, however, turn to a particular field in order to determine whether the use of the word "cannot" is justified. The force of the modal is, in other words, field-invariant, and the criteria, field-dependent. As a result, Toulmin generalized that "all the canons for the criticism and assessment of arguments . . . are in practice field-dependent, while all terms of assessment are field-invariant in their force."<sup>94</sup> This conclusion, he feels, differs greatly from the professional logicians' desire to produce a system of logic which is field-invariant both in the forms it employs and in the criteria it sets out for the criticism of argument.<sup>95</sup>

### Probability

Before outlining the field-invariant forms of arguments, Toulmin devotes an essay to a discussion of the term "probability."<sup>96</sup> Since everyday arguments deal with statements which are probable rather than certain and since the nature of probability is the subject of a great

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<sup>94</sup> Ibid., 38.

<sup>95</sup> Ibid., 39.

<sup>96</sup> Ibid., 44-93. Not only is the word "probable" of great importance in everyday argument, but Toulmin also makes his discussion somewhat of a test-case for the way in which he discusses all modals. He also uses this essay to attack the views expressed in two standard works on the subject of probability: Rudolph Carnap, Logical Foundation of Probability (Chicago: University of Chicago Press, 1950); and William Kneale, Probability and Induction (Oxford: Clarendon Press, 1949).

deal of philosophical controversy, the author presents his approach to the practical use of the term. One cannot ask what the word "probability" designates; this word is applicable only in the context of an assertion where it plays the role of a qualifying term of a kind which has no designation. Nor can one inquire whether there are two senses of the word, one appropriate to matters of chance, one to inductive evidence; "probable" is a word which keeps an invariant force throughout a wide variety of applications. This analysis places probability statements in argument on the same plane as other modals, i.e., maintaining the same force in all kinds of statements but having varying criteria for their establishment and allowing for their use in what Toulmin regards as their characteristic function of presenting "guarded or qualified assertions and conclusions."<sup>97</sup>

#### The Layout of Argument

After viewing argument as generalized jurisprudence, determining what aspects of arguments are field-dependent and field-invariant, and making the critical distinction between the force and criteria for the use of terms like "probable," Toulmin is prepared to present his "Layout of Argument."<sup>98</sup> Turning again to the jurisprudential analogy, the author

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<sup>97</sup> Uses of Argument, op. cit., 93.

<sup>98</sup> Although it is referred to in all of the last three essays, the total "layout" is presented in ibid., 94-107.

begins by asking, "What different sorts of propositions . . . are uttered in the course of a law-case, and in what different ways can such propositions bear on the soundness of a legal claim?"<sup>99</sup> The answer to this question serves as Toulmin's introduction to the "layout" of arguments:

Legal utterances have many distinct functions. Statements of claim, evidence of identification, testimony about events in dispute, interpretations of a statute or discussion of its validity, claims to exemption from the application of a law, pleas in extenuation, verdicts, sentences: all these different classes of propositions have their parts to play in the legal process, and the differences between them are in practice far from trifling. When we turn from the special case of the law to consider rational arguments in general, we are faced at once by the question whether these must not be analysed in terms of an equally complex set of categories. If we are to set our arguments out with complete logical candour, and understand properly the nature of "the logical process," surely we shall need to employ a pattern of argument no less sophisticated than is required in the law.<sup>100</sup>

Toulmin begins his description of the layout of argument by examining the way in which claims or conclusions are supported in a wide variety of arguments. When claims are presented they may be challenged and one has the right to ask the person making a claim, "What have you got to go on?"<sup>101</sup> Unless the claim is irresponsible, one should be able to submit data or evidence in support of it. If a man is charged with violating a traffic law, the testimony of two police officers who checked his speed would serve as supporting data or facts

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<sup>99</sup> Ibid., 96.

<sup>100</sup> Ibid.

<sup>101</sup> Ibid., 97.

bearing on the claim. "We have, therefore, one distinction to start with: between the claim or conclusion whose merits we are seeking to establish (C) and the facts we appeal to as a foundation for the claim -- what I shall refer to as our data (D)."<sup>102</sup>

The presentation of data may answer the question, "What do you have to go on?" but this is not the only challenge which can be made to a claim. One may ask, "How do you get there?"

Supposing we encounter this fresh challenge, we must bring forward not further data, for about these the same query may immediately be raised again, but propositions of a rather different kind: rules, principles, inference-licenses or what you will, instead of additional items of information. Our task is no longer to strengthen the ground on which our argument is constructed, but is rather to show that, taking these data as a starting point, the step to the original claim or conclusion is an appropriate and legitimate one.<sup>103</sup>

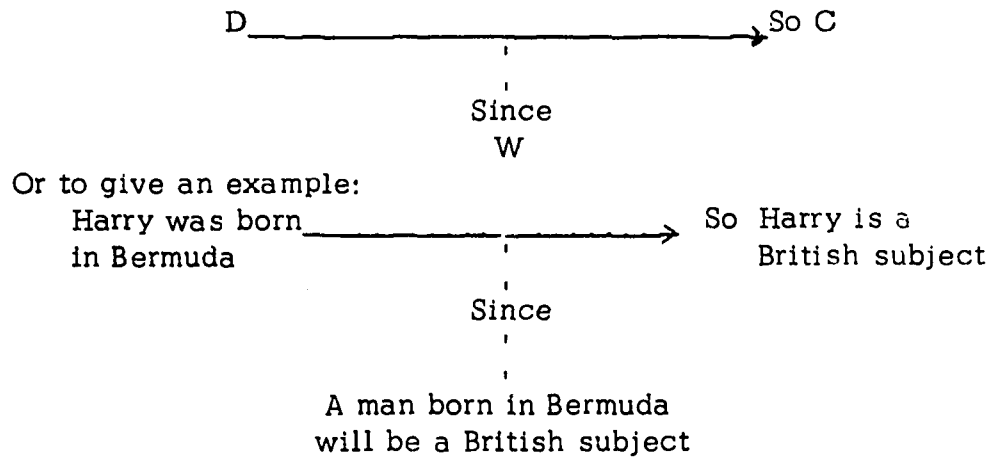
Propositions of this kind Toulmin calls warrants (W) to distinguish them from both conclusions and data. With the first three terms vital to his layout of argument presented, Toulmin places them into the first skeleton of a pattern for analyzing arguments as follows:

We may now symbolise the relation between the data and the claim in support of which they are produced by an arrow, and indicate the authority for taking the step from one to the other by writing the warrant immediately below the arrow:

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102  
Ibid.

103  
Ibid., 98.



As this pattern makes clear, the explicit appeal in this argument goes directly back from the claim to the data relied on as foundation: the warrant is, in a sense, incidental and explanatory, its task being simply to register explicitly the legitimacy of the step involved and to refer it back to the larger class of steps whose legitimacy is being presupposed.<sup>104</sup>

Warrants are of different kinds, and confer different degrees of force on the conclusions they justify. Given the appropriate data, some warrants allow one to accept a claim unequivocally and to qualify the claim with the adverb "necessarily"; others "authorize us to make the step from data to conclusion either tentatively, or else subject to conditions, exceptions, or qualifications -- in these cases other modal qualifiers, such as 'probably' and 'presumably', are in place."<sup>105</sup> For this reason, the layout of argument must include modal qualifiers (Q) and conditions of exceptions or rebuttal (R). So now the form of the argument takes on a more complicated appearance:

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<sup>104</sup> Ibid., 99-100.

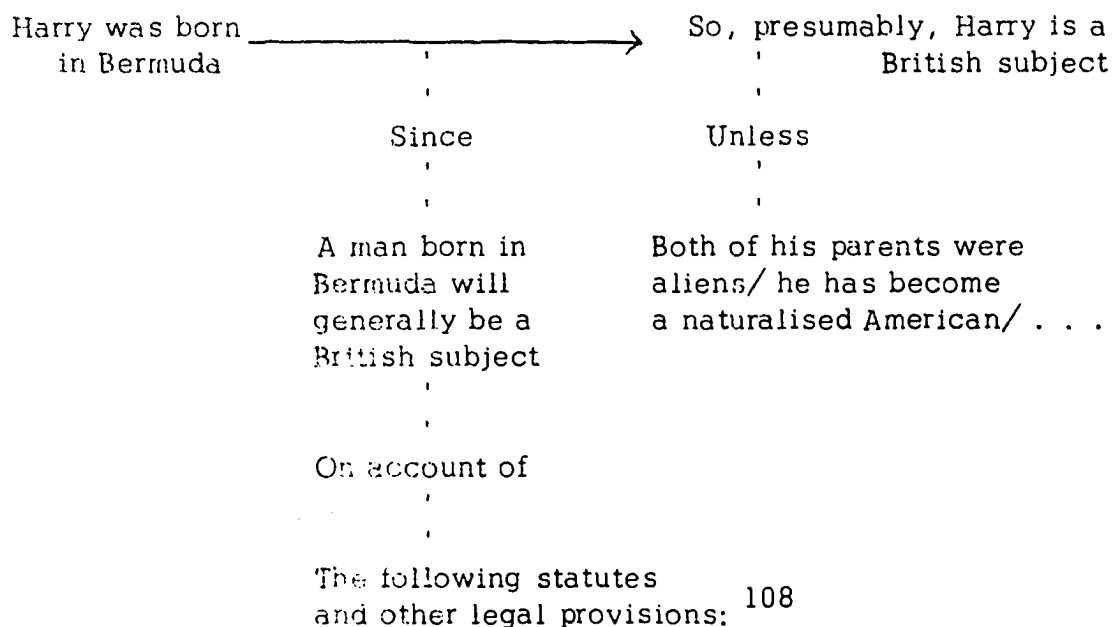
<sup>105</sup> Ibid., 100-101.





need not vary very much between fields. "A whale will be (i. e. is classifiable as) a mammal", "A Bermudan will be (in the eyes of the law) a Briton", "A Saudi Arabian will be (found to be) a Muslim" -- the words in parentheses indicate what these differences are.<sup>107</sup>

To complete the layout of argument, Toulmin places the backing below the warrant, and the earlier example would take the following shape in its final form:



Backing differs from the warrant in that it involves matters of fact rather than general political or legal morals. The warrant, in the case of Harry's citizenship, is not just a repetition of the facts in the backing; it "is a general moral of a practical character, about the ways in which we can safely argue in view of these facts."<sup>109</sup> The facts in the backing resemble those in the data, but the roles which they play in argument are

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<sup>107</sup> Ibid., 103-14.

<sup>108</sup> Ibid., 105.

<sup>109</sup> Ibid., 106.

quite different. A claim without supporting data is no argument at all, but warrants can and often must be advanced without backing in a real argumentative situation. The backing of warrants need not be made explicit, at least to begin with, and warrants may be conceded without challenge. Further, Toulmin contends:

Some warrants must be accepted provisionally without further challenge, if argument is to be open to us in the field in question: we should not even know what sort of data were of the slightest relevance to a conclusion, if we had not at least a provisional idea of the warrants acceptable in the situation confronting us. The existence of considerations such as would establish the acceptability of the most reliable warrants is something we are entitled to take for granted.<sup>110</sup>

#### Analytic and Substantial Arguments

Toulmin's discussion of the layout of argument makes clear that arguments can be set out in a valid manner by using the form "D; W; so C" and that arguments of the form "D; B; so C" cannot be so regarded. "There is, however," he feels, "one rather special class of arguments which appears at first sight to break this general rule, and these we shall in due course christen analytic arguments." An example of an analytic argument would be:

Anne is one of Jack's sisters;  
All Jack's sisters have red hair;  
So, Anne has red hair.<sup>111</sup>

If this is formulated with the major premise as a statement of

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<sup>110</sup> Ibid.

<sup>111</sup> Ibid., 123.

backing, it takes the form:

Anne is one of Jack's sisters;  
Each of Jack's sisters has (been checked individually to have)  
red hair;  
So, Anne has red hair. <sup>112</sup>

Or, writing the major premise as a warrant, it becomes:

Anne is one of Jack's sisters;  
Any sister of Jack's will (i. e. may be taken to) have red hair;  
So, Anne has red hair.

The reasoning about Jack and his sisters, although it is an unusual type and not of the sort used in everyday argument, appears to be one which allows an argument of the form "D; B; so C" to be regarded as valid. When people make assertions about legal status, declare support for scientific theories or political causes and the like, the conclusion, however, is not already stated implicitly in the data and the backing as in analytic arguments. Of these two types of arguments, Toulmin makes the following distinction:

In what follows, I shall call arguments of these two types respectively substantial and analytic. An argument from D to C will be called analytic if and only if the backing for the warrant authorising it includes, explicitly or implicitly, the information conveyed in the conclusion itself. Where this is so, the statement "D, B, and also C" will, as a rule, be tautological . . . . Where the backing for the warrant does not contain the information conveyed in the conclusion, the statement "D, B, and also C" will never be a tautology, and the argument will be a substantial one. <sup>113</sup>

The qualification in Toulmin's statement that analytic arguments

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<sup>112</sup> Ibid.

<sup>113</sup> Ibid., 125.

will, "as a rule," be tautological is important because it leads him to search for some other criterion for determining if a statement is analytic. After demonstrating the existence of non-tautological analytic arguments and discussing alternative criteria, he selects one which he calls the "verification test" and argues that by its use all analytic arguments can be detected.<sup>114</sup> In accordance with this test, he contends that an argument can be classified as analytic if, and only if, "checking the backing of the warrant involves ipso facto checking the truth or falsity of the conclusion. . . ." <sup>115</sup>

Genuine analytic arguments, Toulmin indicates, are extremely rare. Even the example about the color of Anne's hair is substantial rather than analytic. Toulmin demonstrated the substantial quality of the example by recasting it in accordance with his layout of argument in this way:

Datum -- Anne is one of Jack's sisters;

Backing -- All of Jack's sisters have previously been observed to have red hair;

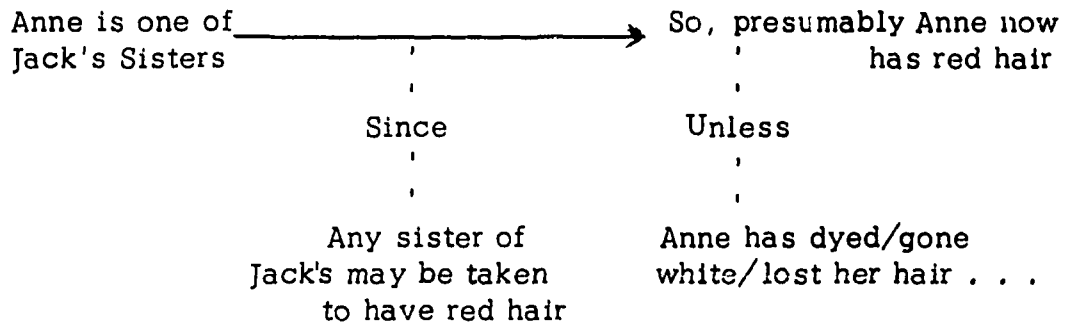
Conclusion -- So, presumably, Anne now has red hair.

The warrant relied on, for which the backing is here stated, will be of the form, "Any sister of Jack's may be taken to have red hair": (because the statement is based on past observation) this warrant can be regarded as establishing no more than a presumption:

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<sup>114</sup>  
Ibid., 125-133.

<sup>115</sup>  
Ibid., 133.



On account of the fact that all his sisters  
have previously been observed to have red hair

It seems, then, that I can defend my conclusion about Anne's hair with an unquestionably analytic argument only if at this moment I have the assurance that every one of Jack's sisters has red hair at this moment. But, in such a situation, what need is there of an argument to establish the colour of Anne's hair? And of what relevance is the other sisters' hair-colour? The thing to do now is to use one's eyes, not hunt up a chain of reasoning.<sup>116</sup>

After the development of this example, Toulmin concludes that "it begins to be a little doubtful whether any genuine, practical argument could ever be properly analytic."<sup>117</sup>

Despite the fact that there is little relation between analytic arguments and those in use, logicians use them as a standard by which to judge all forms of argument. For this reason, Toulmin states:

Many of the current problems in the logical tradition spring from adopting the analytic paradigm-argument as a standard by comparison with which all other arguments can be criticised. But analyticity is one thing, formal validity is another; and neither of these is a universal criterion of necessity, still less of the soundness of arguments.<sup>118</sup>

116  
Ibid., 126.

117  
Ibid., 127.

118  
Ibid., 145.

Working Logic and Idealized Logic

Toulmin indicated in his introduction that he was concerned with logical problems as evidenced in common examples of argument. Through-  
out his analysis of everyday arguments he found it necessary to compare and contrast arguments from various fields with each other and with the standards set forth in formal logic. In doing so, he rejected the formal, geometric paradigm of professional logicians and chose to view argument in light of the jurisprudential analogy. In his essay, "Working Logic and Idealised Logic," Toulmin attempted to explain why the analytic syllogism had become the criterion of formal logic, and why, as a result of its adoption, there is such a divergence between the "working logic" used in everyday argument and the "idealized logic" of the logician.

Toulmin's explanation for the almost exclusive emphasis on the use of the analytic syllogism is, he admits, a matter of speculation. He feels, however, that "having started like Aristotle, by studying syllogistic arguments, and particularly analytic syllogisms, logicians built up the simplest and most compact set of categories which would serve them reasonably in criticizing arguments of this first kind."<sup>119</sup> In doing so, they were led to ignore several distinctions (which Toulmin indicated in the previous essay), because these distinctions are hidden when one studies only the analytic syllogism. First, there is the distinction

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<sup>119</sup>  
Ibid., 148.

between necessary arguments and probable arguments. The analytic argument uses or implies the modal qualifier "necessarily" and allows one to argue unequivocally to the conclusion. Most kinds of arguments, however, must rely on warrants which entitle one to draw only tentative conclusions which need modal qualifiers like "probably" or to draw conditional ones or are qualified by terms like "provided that. . . ."

The second distinction is between "arguments which are formally valid and those which cannot hope to be formally valid."<sup>120</sup> An argument is formally valid if it can be set out in such a way that its conclusion can be obtained by appropriate shuffling of the terms in the data and warrant. Such a notion of formal validity defines analytic arguments as formally valid and equally denies validity to substantial arguments.

The third distinction is between arguments like the syllogism, in which a warrant is relied on "whose adequacy and applicability have previously been established, and those arguments which are themselves intended to establish the adequacy of a warrant."<sup>121</sup> In other words, the backing for the warrant is assumed to have been previously established or is unnecessary in formal logic.

A fourth distinction is between arguments expressed "in terms of 'logical connectives' or quantifiers and those not so expressed."<sup>122</sup> Formal logic allows only a few words like "all," "some," and "or" to be

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<sup>120</sup> Ibid.

<sup>121</sup> Ibid.

<sup>122</sup> Ibid., 149.



used in this way, whereas connectives and quantifiers like "most" and "few" and "but" are vital in arguments of the non-analytic type.

The final distinction, Toulmin argues, is "between analytic arguments and substantial ones, which can be glossed over only so long as we state our inference-warrants in the traditional form, 'All (or No) A's are B's.'" <sup>123</sup>

Toulmin explained the deceptive nature of such arguments this way:

As logicians discovered early on, the field of analytic arguments is particularly simple; certain complexities which inevitably afflict substantial arguments need never trouble one in the case of analytic ones; and when the warrant of an analytic argument is expressed in the form "All A's are B's", the whole argument can be laid out in the traditional pattern without harm resulting -- for once in awhile, the distinction between our data and the backing of our warrant ceases to be of serious importance. This simplicity is very attractive, and the theory of analytic arguments with universal major premises was therefore seized on and developed with enthusiasm by logicians of many generations. <sup>124</sup>

Perhaps, the most important way in which formal logic and working logic differ, using Toulmin's terminology and model as the paradigm of working logic, is that formal logic does not recognize the notions of field-dependence, field-invariance, and the difference between the force of modal terms and the criteria for their use. Formal logic treats all arguments as if they were field invariant and admits the use of only a limited number of qualifiers and connectives which always must mean

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<sup>123</sup> Ibid.

<sup>124</sup> Ibid., 143-44.

the same thing whenever they are used. In Toulmin's system, the form of the layout of argument, i.e., data, warrant, claim, are field-invariant as is the force of the qualifier. The backing for the warrant and the criteria for using the qualifier are field-dependent. This system allows for the rational use of qualified statements and for warrants that are not obviously true. Statements may be "probable" in a scientific, legal, or moral sense and the term will have a field-invariant force, whereas their criteria for use will be field-dependent. Warrants need not be universal in their scope nor in their acceptability, but they must have the kind of backing acceptable in the field of their use. The backing for warrants and criteria for the use of modals are field-dependent and important, and yet formal logic makes no provisions for such distinctions.

In everyday argument, one rarely finds a warrant which resembles the major premise of a syllogism because men seldom argue over recognized universal statements. Yet such statements are necessary in formal logic, and for that reason "idealized logic" is of little utility in assessing arguments advanced in actual controversy. When, however, warrant-establishing support is a part of the proper layout of an argument and tested by the accepted standards of a particular field, one can weigh the validity of arguments which could not be judged by the analytic paradigm. For, as Toulmin stated:

Rational discussion in any field . . . depends on the possibility of establishing inference-warrants in that field; to the extent that there

are common and understood inter-personal procedures for testing warrants in any particular field, a judicial approach to our problems will be possible. When we ask how far the authority of the Court of Reason extends, therefore, we must put on one side the question, how far in any field it is possible for arguments to be analytic: we must focus our attention instead on the rather different question, to what extent there are already well established warrants in science, in ethics or morality, in law, art criticism, character-judging, or whatever it may be; and how far the procedures for deciding what principles are sound, and what warrants are acceptable, are generally understood and agreed. Two people who accept common procedures for testing warrants in any field can begin comparing the merits of arguments in that field: only where this condition is lacking, so that they have no common ground on which to argue, will rational assessment no longer be open to them.<sup>125</sup>

Toulmin offers a "working logic" based on the jurisprudential paradigm as a substitute for the "idealized logic" based on the analytic paradigm. After examining many varieties of everyday argument, he made several critical distinctions which he felt were concealed in the apparent simplicity of the paradigm of formal logic and proposed a layout of argument which accommodated both the field-dependent and field-invariant aspects of all kinds of arguments. As a result, he argues persuasively that the "working logic" he describes will allow for the critical study of all varieties of substantial arguments in a way which "idealized logic" never can.

### Conclusion

All of Toulmin's major works which have been examined in this chapter have been concerned with the ways in which man can properly reason about a wide variety of subjects. In all cases he paid close

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<sup>125</sup> Ibid., 175-76.

attention to common sense and common language and noted where the terminology and patterns of reasoning of the scientist, the philosopher, and the logician differed from ordinary usage. Although Toulmin has made no attempt to establish any interrelationship among his various works of analysis of specific problems, a summary of the ideas most pertinent to rhetoric from each of his works reveals such an interrelationship.

Summary of Toulmin's  
View of Reasoning

Reasoning in Science

Toulmin sees the divergence between the way the ordinary individual and the scientist reason and talk about science as due to a "language-shift." The layman understands the literal meaning of scientific statements but not the underlying logic and unstated reservations implied in the technical use of the terms. Some characteristics of scientific reasoning which are often not understood can be summarized (using some of the terminology developed in the Uses of Argument) as follows:

1. Scientific discoveries are new ways of regarding familiar phenomena in such a way that new conclusions can be drawn. These discoveries, which often are regarded as scientific laws, are warrants which allow one to move from accepted data to claims which are thereby supported.
2. The new discoveries or warrants need not be applicable in all circumstances; it is enough that conditions of exception or rebuttal can be accounted for over a wide range of circumstances.
3. Standards for the applicability of the law or warrant must be established and are field-dependent.

4. Warrants are not necessary nor absolutely true and may be replaced as more useful ones are evolved. Scientific warrants survive in a Darwinian sense as long as experimentation provides proper backing for them and exceptions to their use can be explained.

5. Scientific warrants form a hierarchy and the scientist is called upon only to investigate the acceptability of warrants at one level at any one time. The terms "established" and "hypothetical" therefore need to be understood to distinguish between the parts of a science that are actually being called in question and those taken for granted in order to state working problems. Warrants may be called into question at any time, but some warrant must be accepted at least provisionally, or else reasoning or argument is impossible.

The layman regards scientific laws as certain and the methodology of science as a specific application of formal logic. The basic assumptions of science are, however, accepted warrants which may be called into question just as warrants are in everyday argument.

### Reasoning in Ethics

Any given society has a moral code of some kind, whether it is unalterable and authoritarian or subject to change from popular pressure. Reasoning about ethical problems involves comparing questions of individual conduct to the provisions of the accepted moral code. The "code" itself may be regarded as a series of warrants for ethical reasoning, and several kinds of ethical questions can be distinguished in which the warrant plays the crucial role. These kinds of questions may be summarized as follows:

1. In "simple moral questions" one need only use a part of the moral code as a warrant to reason from data to conclusion. If one does not keep a promise, one can conclude that he has violated the code, if promise keeping is an accepted warrant.

2. In "conflicts of duty" an accepted moral warrant is qualified because the existence of another moral rule would possibly lead to a contrary conclusion. For example:

Jones promised to return a book today	—————→	So, presumably, He should return it today
	Since	Unless
	Promises should be kept	It would mean leaving a critically ill person who needed help/ . . .

3. In reasoning about "the justice of social practices" the claim disputes the justice of a particular practice by the use of a general moral warrant which embodies a basic ethical assumption like "not inflicting avoidable suffering."

4. In ethics, and in other fields, there are certain "limiting questions" or warrants, which cannot be supported with additional arguments within the same "field." An argument may be advanced beyond a limiting question, but when that happens the backing appropriate to the new warrant must come from a new field.

### Reasoning in General Argument

Toulmin feels that formal logic, based on the analytic paradigm, is poorly adapted to the critical assessment of everyday arguments, and he makes a number of distinctions which he feels provide a layout of argument by which all forms of argument can be judged. The most important of Toulmin's observations may be summarized as follows:

1. The proper role of logic is a retrospective, justificatory one. It is concerned with the arguments one can put forward afterwards to make good his claim that the conclusions arrived at are acceptable, because justifiable, conclusions.

2. Argument may be viewed as generalized jurisprudence, i.e., some aspects of argument are field-dependent and others are field-invariant.

3. A justificatory argument has several stages which usually involve the use of modal terms. First, possible solutions are listed; second, inescapable or necessary solutions are sought; third, some possibilities may be excluded as impossible; and, finally, further information will allow one to classify some solutions as more or less probable.

4. Modal qualifiers have two aspects: a force which is field invariant and criteria for their proper use which are field-dependent.

5. One who advances a claim should be prepared to present data in its support and to show that the movement from data to claim is appropriate by presenting a warrant which shows that the movement is a legitimate one.

6. Unless data and some warrant are accepted, a complex argument is impossible.

7. Warrants may be subject to conditions of exception or rebuttal and need a modal qualifier to indicate the force of the warrant. The force of the qualifier will be field-invariant and the conditions of exception or rebuttal will be its field-dependent criteria.

8. A warrant, even if qualified, may be subject to challenge and, if so, backing must be presented in its support. Backing, like conditions of exception or rebuttal, is field-dependent.

#### Criticisms of Toulmin's Works

Toulmin's works on science, ethics, and argument have been subject to a great deal of criticism in the professional journals. Some reviews have been very favorable, and others rather hostile, yet only a few objections to his ideas are relevant to this study. These will be considered in the next chapter as Toulmin's conclusions are evaluated and their relevance to rhetoric assessed.

CHAPTER III  
THE RELATION OF TOULMIN'S VIEWS  
TO RHETORICAL THEORY

Introduction

This study began with the Aristotelian assumption that "rhetoric is an offshoot of dialectic and also of ethical studies"<sup>1</sup> and the further assumption that the results of a rather dramatic revolution in philosophical thought might be valuable to the rhetorician insofar as they bear on reasoning and ethics.

The revolution in philosophy which occurred in the first half of this century was, in large measure, an attempt to discover a new purpose and method for philosophy. Psychology, sociology, and other new academic disciplines had separated from the mother of the sciences and could boast of a particular subject matter and appropriate methodology, and philosophers were challenged to state the function and scope of their field and to clarify its method.

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<sup>1</sup> Aristotle's Rhetoric and Poetic, trans. W. Rhys Roberts (New York: The Modern Library, 1954), 1355<sup>D</sup>. Except where otherwise noted, references to Aristotle's Rhetoric will follow the Roberts translation.



Because of this challenge and a growing distrust of philosophical system building and metaphysical speculation many philosophers took the position that the purpose of their field was to discover the meaning of philosophical, scientific, and ordinary propositions. Their method was logical analysis of propositions rather than descriptive or prescriptive system building. Moore's Common Sense philosophy turned the tables on the metaphysical and synoptic philosophers and challenged them to prove, rather than to assume, that common sense ideas are wrong and to prove that their own speculations were right. The Logical Atomists insisted that philosophy should be as rigorous and as exact as science and sought to analyze propositions in terms of atomic "facts" in the same manner as the mathematical logic of the Principia Mathematica. The Logical Positivists felt that only analytic (formally valid) propositions or those subject to empirical verification are meaningful and that their meaning is their method of verification.

All three philosophical movements approached philosophy as a study of logical analysis of propositions, and in particular, of factual propositions. Each attempted to formulate a kind of linguistic equation with the term to be analyzed on one side and its philosophical equivalent on the other. Yet these logical analyses failed to produce the results hoped for partly because they failed to analyze language in context.

From this background two divergent philosophical approaches

emerged. Each was concerned with the logical analysis of propositions but they differ fundamentally. Verificational Analysis holds closely to the basic tenets of Logical Positivism, continues to be concerned with propositions of fact, regards ethical propositions and commonly held beliefs as meaningless, and utilizes the language of mathematics, symbolic logic, and semantics rather than the common idiom. Linguistic or Functional Analysis, particularly as expressed in Toulmin's philosophy, upholds the belief that analytic syllogisms provide a poor paradigm for argument and that scientific, ethical, and ordinary arguments are meaningful and can be judged by a standard derived from an evaluation of arguments in everyday use.

The purpose of this chapter is to suggest that Toulmin's views on logic, argument, and ethics provide a more useful foundation for rhetorical argument than do the commonly accepted syllogistic criteria. For, in spite of the work of some to emphasize the rhetorical syllogism, textbooks still insist upon dealing with the formal logical syllogism which Toulmin argues obscures many logical distinctions and is poorly adapted to matters about which men argue in practical circumstances.

Toulmin and the Nature and Purpose of Rhetoric

"Rhetoric," Aristotle contended, "may be defined as the faculty of observing in any given case the available means of persuasion."<sup>2</sup>

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<sup>2</sup> Op. cit., 1355<sup>b</sup>.

The practitioner of the art attempts, as Donald Bryant put it, to adjust "ideas to people and people to ideas"<sup>3</sup> in order to "accomplish something predetermined and directional with an audience."<sup>4</sup>

Such a capsule characterization of the classical conception of rhetoric squares somewhat with what seems to be Toulmin's understanding of the meaning of the term. He seems to recognize that persuasion, accomplished through various non-logical appeals, is necessary for non-philosophical audiences.

One difficulty in relating Toulmin's view to rhetoric, however, is that Toulmin seems neither interested in nor acquainted with rhetoric in its full classical sense. In common with many other philosophers, he feels that the techniques of rhetoric should not be used in philosophical argumentation.<sup>5</sup> "Rhetoric," to Toulmin and

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<sup>3</sup> "Rhetoric: Its Functions and Its Scope," Quarterly Journal of Speech, XXXIX (December, 1953), 413.

<sup>4</sup> Ibid., 411.

<sup>5</sup> A worthwhile discussion of this point may be found in Maurice Natanson's article, "Rhetoric and Philosophical Argumentation," Quarterly Journal of Speech, XLVII (February, 1962), 24-30. In addition to the sources cited in this article one should read Ch. Perelman's "Proof in Philosophy," in which he contends, "Rhetoric is the study of the means of argumentation which allow us to obtain and to increase the assent of people to specific theses presented to them . . . only rhetoric, in this specific sense, allows us to understand the nature of proof in philosophy." Hibbert Journal, LII (July, 1954), 354-59. For an attempted refutation of Perelman's general position see Henry W. Johnstone Jr., "A New Theory of Philosophical Argument," Philosophy and Phenomenological Research, XV (December, 1954), 244-52.

some of his colleagues, is merely the use of emotional appeals, an art which is antithetical to reasoning.

The student of rhetorical theory well understands, of course, that the classical tradition is profoundly concerned with a logic based upon probability which will aid men in the rational choice of alternatives of action. The following passage from Aristotle's Rhetoric characterizes that philosopher's interest in everyday argument, an interest altogether consistent with Toulmin's:

Most of the things about which we make decisions, and into which therefore we inquire, present us with alternative possibilities. For it is about our actions that we deliberate and inquire, and all our actions have a contingent character; hardly any of them are determined by necessity. Again, conclusions that state what is merely usual or possible must be drawn from premisses that do the same, just as "necessary" conclusions must be drawn from "necessary" premisses.<sup>6</sup>

Furthermore, Toulmin's treatment of argument assumes that Aristotle would apply the syllogism to ordinary argument, and he totally ignores Aristotle's cogent observations concerning the enthymeme, the rhetorical argument, in the Rhetoric. What is true of Toulmin's specific treatment of Aristotle's view on argument is also true of his general attack on modern formal logic. He has been criticized by his fellow logicians, and with some justification, for assuming that all formal logic is tied up with analytic syllogisms and for ignoring the treatment

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<sup>6</sup> Op. cit., 1357<sup>a</sup>.

of modal terms by some formal logicians.<sup>7</sup> Although these latter criticisms are not directly relevant to this study, one observation is extremely important. None of his critics have denied the utility of Toulmin's layout of argument nor criticized his distinctions between the "force" and "criteria" of modal terms and the "field-dependent" and "field-invariant" aspects of argument.<sup>8</sup>

The attempt to apply Toulmin's views on reasoning to the art of rhetoric, therefore, is an attempt to determine the utility of his ideas to the classical conception of rhetoric, not to Toulmin's own incomplete view. In the pages that follow the argument will be advanced that Toulmin's view of argument is a novel and useful one, in precisely the same way the "discoveries" in the physical sciences, according to Toulmin, are novel and useful ways of regarding phenomena. As a new discovery in science becomes accepted as it better accounts for a wider range of cases, so Toulmin's theory of argument also accounts

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<sup>7</sup> Some of the best evaluations of Toulmin's Uses of Argument which relate to the points mentioned here are H. N. Castaneda, "On a Proposed Revolution in Logic," Philosophy of Science, XXVII (July, 1960), 279-92; J. C. Cooley, "On Mr Toulmin's Revolution in Logic," Journal of Philosophy, LVI (March 26, 1959), 297-319; F. H. George, Review of The Uses of Argument, Universities Quarterly, XII (May, 1958), 326-330; J. Ch. Simopoulos, Review of The Uses of Argument, Hibbert Journal, LVII (October, 1958), 96-98; and, George E. Scott, "The Formal and Informal Logics of Modality," Unpublished Ph.D. dissertation, University of Virginia, 1961.

<sup>8</sup> George Scott, although critical of Toulmin's attack on formal logic, regards these distinctions as "very important and original." Op. cit., 59.

for a wider range of arguments than does the traditional view.

### The Sources of Persuasion

Whereas Toulmin identifies rhetoric with emotional appeals, the rhetorical tradition recognizes three sources of persuasion. In Aristotle's terminology, these modes of persuasion are ethos "which is achieved by the speaker's personal character when the speech is so spoken as to make him credible"; pathos which "may come through the hearers, when the speech stirs their emotions"; and logos or pistis in which "persuasion is effected through the speech itself when we have proved a truth or apparent truth by means of the persuasive arguments suitable to the case in question."<sup>9</sup>

Aristotle further indicated that logos is the most important and demonstrates its relationship to logic as follows:

It is clear, then, that rhetorical study, in its strict sense, is concerned with the modes of persuasion. Persuasion is clearly a sort of demonstration, since we are most fully persuaded when we consider a thing to have been demonstrated. The orator's demonstration is an enthymeme, and this, in general, is the most effective of the modes of persuasion. The enthymeme is a sort of syllogism, and the consideration of syllogisms of all kinds, without distinction, is the business of dialectic, either of dialectic as a whole or of one of its branches. It follows plainly, therefore, that he who is best able to see how and from what elements a syllogism is produced will also be best skilled in the enthymeme, when he has further learnt what its subject matter is and in what respects it differs from the syllogism of strict logic. The true and approximately true are apprehended by the same faculty; it may also be noted that men

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<sup>9</sup>  
Op. cit., 1356<sup>a</sup>.

have a sufficient natural instinct for what is true, and usually do arrive at the truth.<sup>10</sup>

Brockriede and Ehninger's Application of the  
Toulmin Model to the Sources of Persuasion

This statement by Aristotle makes clear that Toulmin's analysis of argument is related to the logical mode of persuasion. Wayne Brockriede and Douglas Ehninger, however, argue that in addition to applying to the logical mode of persuasion, "Toulmin's structural model and the vocabulary he has developed to describe it are suggestive of a system for classifying artistic proofs, using argument (defined as movement from data, through warrant, to claim) as a unifying construct."<sup>11</sup> Although this study does not agree with their analysis in all respects,<sup>12</sup> theirs is a very useful way of regarding the classification of proofs and of laying out all kinds of arguments after the pattern of the Toulmin model. The details of the system they propose and the arguments and examples they offer in its support are available in their journal article and in their

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<sup>10</sup> Ibid., 1355<sup>a</sup>.

<sup>11</sup> "Toulmin on Argument: An Interpretation and Application," Quarterly Journal of Speech, XLVI (February, 1960), 47.

<sup>12</sup> Later in this chapter two points of disagreement will be developed: (1) When "authoritative" or "motivational" proof is used in the form of an argument in a speech, such proofs should be regarded as logos rather than ethos or pathos as suggested by Brockriede and Ehninger; and (2) Some of their examples are warrant-establishing or inductive and not consistent with Toulmin's use of his model.

Décision by Debate,<sup>13</sup> but a brief summary will indicate how the Toulmin model can be used in the classification of arguments of all three modes of persuasion.

The authors feel that since the warrant is the crucial element in an artistic proof and its function is to carry the data to the claim, "we may recognize the possible routes which the warrant may travel in performing its function."<sup>14</sup> One kind of proof, which Brockriede and Ehninger call "substantive" and is traditionally called "logical," is one in which data is carried to claim "by means of an assumption concerning the relationship existing among phenomena in the external world."<sup>15</sup> Another, traditionally called "ethical" and dubbed "authoritative," relies on "an assumption concerning the quality of the source from which the data are derived."<sup>16</sup> The third, formerly known as "pathetic" and rechristened "motivational," carries data to claim "by means of an assumption concerning the inner drives, values, or aspirations which impel the behavior of those persons to whom it is addressed."<sup>17</sup>

Under the classification of substantive arguments, Brockriede

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<sup>13</sup> (New York: Dodd, Mead and Co , 1963).

<sup>14</sup> "Toulmin on Argument," op. cit. , 48.

<sup>15</sup> Ibid.

<sup>16</sup> Ibid.

<sup>17</sup> Ibid.



and Ehninger list the following common argumentative types: argument from cause, argument from sign, argument from generalization, argument from parallel case, argument from analogy, and argument from classification.<sup>18</sup> Unlike substantive arguments, the warrants of authoritative and motivational proofs assume no relationship among facts of the external world, and, "since the warrants of authoritative and motivational proofs state only one kind of relationship each, these two classes of proof, unlike the substantive, are not divisible into species."<sup>19</sup>

After demonstrating the structural unity of the three modes of artistic proof by showing how they "may be reduced to a single invariant pattern using argument as a unifying construct," Brockriede and Ehninger indicate how "artistic proofs, so reduced, may conveniently be correlated with the various types of disputable questions and the claims appropriate to each."<sup>20</sup> They begin by recognizing the four categories into which disputable questions are customarily classified:

(1) Whether something is? (2) What it is? (3) Of what worth it is? (4) What course of action should be pursued? The first of these queries gives rise to a question of fact, and is to be answered by what can be called a designative claim; the second, to a question of definition, to be answered by a definitive claim; the third, to a question of value, to be answered by an evaluative claim; and the fourth, to a question of policy, to be answered by an advocative claim.<sup>21</sup>

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<sup>18</sup> Ibid. In Decision by Debate, the authors add a seventh subcategory of argument by statistics. Op. cit. 148-54.

<sup>19</sup> Decision by Debate, op. cit., 158.

<sup>20</sup> "Toulmin on Argument," op. cit., 52.

<sup>21</sup> Ibid.

Each of these categories is discussed and the types of argument available to the speaker as a means of substantiating his claim statements are considered. This analysis leads Brockriede and Ehninger to summarize the types of arguments applicable to various sorts of claims in the following tabular form:

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	Desig- native	Defin- itive	Eval- ative	Advo- cative
<hr/>				
Substantive				
A. Cause	X			
B. Sign	X			
C. Generalization	X		X	
D. Parallel Case	X	X	X	X
E. Analogy	X	X	X	X
F. Classification	X		X	
Authoritative	X	X	X	X
Motivational	X		X	X

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The preceding brief review of Brockriede and Ehninger's application of the Toulmin model of argument to the traditional divisions of invention should indicate its utility in providing the speaker with lines of inquiry which he can safely pursue in a search for valid arguments. By identifying the kind of claim he wishes to make as designative, definitive, evaluative, or advocative and then recognizing the kind of warrants which are applicable in these cases, he has a good starting point for developing a reasonable

argument. From this point the speaker will be led to recognize the field-dependence of the backing he must seek for warrants and to discover what qualifications must be recognized in the statement of his claim. These qualifications will depend upon the conditions of exception or rebuttal which may be suggested to the inventor of arguments as he recognizes the kind of warrant which he employs.

If the speaker makes a designative claim, for example, and uses a causal relationship for a warrant, all of the tests of causal reasoning can suggest to him possible conditions of exception or rebuttal against which he must test his argument and which might lead him to qualify his claim. Whether the claim involves substantive, authoritative, or motivational warrants, numerous "tests" of that specific kind of argument are available to the speaker to ascertain the possible avenues of rebuttal to his claim.

These "tests" of authority, sign, generalization, etc., are discussed in the Toulmin context in Decision by Debate<sup>23</sup> and are traditionally treated in argumentation texts under a wide variety of classifications. The diversity of these classifications is confusing and does not indicate how the individual argumentative types relate to the process of argument as a whole as can be done with Toulmin's system. Argument from cause, for example, is often treated as a type of

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<sup>23</sup> Op. cit., 125-162.

deductive reasoning,<sup>24</sup> sometimes as a form of inductive reasoning,<sup>25</sup> and occasionally as something distinct from either induction or deduction.<sup>26</sup> In fact, the great advantage of Toulmin's treatment of argument would seem to be that it suggests the essential interrelationship of various types and aspects of argument which have been treated as separate and static entities in the past.

Reservations about the Brockriede  
and Ehninger Classification

The system proposed by Brockriede and Ehninger for classifying artistic proofs, suggested to them by the Toulmin model and terminology, is, as has been demonstrated, quite valuable. There are, however, two objections to it which merit discussion. First, a different interpretation of Aristotle's treatment of ethos, pathos, and logos (or pistis) would lead one to question whether "authoritative" and "motivational" arguments

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For example, see E. R. Nichols and Joseph Baccus, Argumentation and Debating (New York: W W Norton and Co., 1936); Alan Nichols, Discussion and Debate (New York: Harcourt, Brace and Co., 1941); and, James H. McBurney, James M. O'Neil, and Glen Mills, Argumentation and Debate (New York: Macmillan Co., 1951).

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Two books reflecting this view are: A. Craig Baird, Public Discussion and Debate (New York: Ginn and Co., 1937); and Luther Courtney and Glenn R. Capp, Practical Debating (New York: J. B. Lippincott and Co., 1949).

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This view is expressed by William T. Foster, Argumentation and Debating (New York: Houghton Mifflin Co., 1917); and Lionel Crocker, Argumentation and Debate (New York: American Book Co., 1944).

should not be classified under the heading of logos or pistis. If one agrees with Rhys Roberts' summary of Aristotle's treatment of the three modes of persuasion in his translation of the Rhetoric, then any kind of reasoned argument should be classified as logos or pistis. Roberts describes the three modes of persuasion as: "(1) the speaker's power of evincing a personal character (ἦθος) which will make his speech credible; (2) his power of stirring the emotions (πάθη) of his hearers; (3) his power of proving a truth, or apparent truth, by means of persuasive arguments."<sup>27</sup>

The interpretation of Aristotle cited here suggests that any argument, by virtue of being an argument, involves the use of the third mode of persuasion (logos). If one identifies ethos as what the speaker adds to the total effect of proof by the credibility engendered by his image; pathos as what the audience contributes to proof by its emotional reaction to certain stimuli; and logos as that which is contributed toward proof by the facts and reasoning about the subject matter of the speech itself; then there are three identifiable sources of persuasion which can

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Op. cit., 3. Aristotle's statement as translated by Roberts was quoted at the beginning of this major section. Another translation of Aristotle's statement reads, "The first reside in the character (ethos) of the speaker; the second consist in producing a certain (the right) attitude in the hearer; the third appertain to the argument proper, in so far as it actually or seemingly demonstrates." The Rhetoric of Aristotle, trans. Lane Cooper (New York: Appleton-Century-Crofts, Inc., 1932), 8.

blend into a single item of proof. If proof is defined as an accomplished state of mind in the audience, rather than conclusive demonstration, then each of the three sources could produce proof by itself or could be used together to establish assent to a proposition.

Of the three sources of persuasion, logos differs from the other two in an important respect. The emotional disposition of the audience and the persuasion inherent in the status of the speaker may be affected by non-verbal stimuli. That which is derived from the subject matter of the speech is not. The term logos in Greek means both "word" and "reason" or "logic." As Aristotle put it, logos deals with proof or apparent proof, "provided by the words of the speech itself,"<sup>28</sup>

If one accepts the interpretation that any statement, presented as an argument in the wording of a speech, is logos, then the Brockriede and Ehninger classification of artistic proofs according to the Toulmin model appears unorthodox. Yet the use of the "layout of argument" as a method of analyzing some "authoritative" and "motivational" appeals can be justified if one views the ethos-pathos-logos trinity from the critic's frame of reference rather than that of the speaker. In order to achieve maximum effect in a speech, the speaker often will choose not to place the persuasion inherent in his status and the audience's motivations into

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<sup>28</sup>  
Op. cit., 1356<sup>a</sup>.

the form of arguments. The critic, however, often may find it convenient to place appeals based on ethos and pathos into the context of argument for evaluation. By doing so, the critic may better account for the effect of proof and make ethical evaluations about the way in which proof was accomplished.

When the speaker uses authoritative and motivational appeals in the form of an argument, such action is an exercise of logos and he may well use the Toulmin model to evaluate his own argument. When ethos and pathos are used by the speaker outside the context of a reasoned argument, the critic<sup>29</sup> may profitably use the Brockriede-Ehninger extension of the Toulmin system to classify and evaluate such appeals.

The first objection to Brockriede and Ehninger's classification of artistic proofs by use of Toulmin's system involves only a difference in interpretation of terminology and does not lessen the utility of their analysis. A second objection, however, would suggest that their system for classifying arguments involves a major departure from Toulmin's analysis of argument. Since the difference between their interpretation of Toulmin's system and that advanced in this study involves the

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The term "critic" in this sense would apply to the members of the audience, an opposing speaker, the speaker himself, or to anyone who would attempt to evaluate the use of the three sources of persuasion in a given speech.

distinction between "warrant-using" or deductive reasoning and "warrant-establishing" or (usually) inductive reasoning, this specific criticism will be developed within the larger context of inductive and deductive argument.

### Inductive and Deductive Argument

Aristotle contended, and others generally accept the view, that

With regard to the persuasion achieved by proof or apparent proof: Just as in dialectic there is induction on the one hand and syllogism or apparent syllogism on the other, so it is in rhetoric. The example is an induction, the enthymeme is a syllogism, and the apparent enthymeme is an apparent syllogism. I call the enthymeme a rhetorical syllogism, and the example a rhetorical induction. Every one who effects persuasion through proof does in fact use either enthymemes or examples: there is no other way . . . . When we base the proof of a proposition on a number of similar cases, this is induction in dialectic, example in rhetoric; when it is shown that, certain propositions being true, a further and quite distinct proposition must also be true in consequence, whether invariably or usually, this is called syllogism in dialectic, enthymeme in rhetoric.<sup>30</sup>

Since the enthymeme is such an important aspect of rhetorical proof and clearly related to Toulmin's observations about induction and deduction, perhaps a brief examination of some contemporary thinking about the place of the enthymeme in rhetorical theory might indicate the relevance of Toulmin's works to this aspect of rhetorical theory.

### The Enthymeme

In 1936, James H. McBurney stated that "contemporary rhetorical theory is essentially Aristotelian; the enthymeme is the focal point in

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<sup>30</sup> Op. cit., 1356<sup>b</sup>.



the rhetoric of Aristotle; and the enthymeme is seriously misunderstood today."<sup>31</sup> He argued that, whereas most rhetoricians and logicians regard the enthymeme as an elided or truncated syllogism,

. . . it is not the essential difference between the syllogism and the enthymeme as originally conceived and as it should be conceived today. The real difference is in the certainty of the matter and the form. The logical syllogism is built on premises which are "materially" true . . . .<sup>32</sup> The rhetorical syllogism or enthymeme is built on "probable" premises.

More recently, Charles S. Mudd complained that most textbooks in public speaking, argumentation, and persuasion tend to ignore the enthymeme and asserted that their authors have slighted the rhetorical syllogism because of their acceptance of two propositions which they feel are not compatible:

1) The value of the enthymeme as a piece of proof is to be tested according to the principles of formal deductive logic. The method of testing to be used is to apply the rules of the syllogism. If the enthymeme, itself a logical form, meets these criteria, it is to

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"The Place of the Enthymeme in Rhetorical Theory," Speech Monographs, III (September, 1936), 50. Edward H. Madden noted a similar misunderstanding about the enthymeme among philosophers in his article "The Enthymeme: Crossroads of Logic, Rhetoric, and Metaphysics," Philosophical Review, LXI (July, 1952), 368-76. He cites seventeen different meanings of the concept "enthymeme," takes a view similar to McBurney's that it is a kind of truncated syllogism based on probabilities and signs, and takes the unusual view that scientific syllogisms are based on argument from causes and that the enthymeme cannot be so based.

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Although this view is expressed in his article, the more cogent statement quoted is from James H. McBurney, James M. O'Neill, and Glen E. Mills, op. cit., 119-20.

be considered a valid argument.

2) All-inclusive or all-exclusive (i.e., universal) statements are dangerous and should be avoided.<sup>33</sup>

Mudd believes, since modern science and theories of knowledge do not permit the belief in absolute universal statements such as are required as major premises in syllogisms, that

the solution to the difficulty seems to lie in the revision of our concept of probability. If we base our arguments on premises that are probable universals rather than particular absolutes, we avoid difficulties of formal validity without violating the requirements of material truth.<sup>34</sup>

This view of probability, which Mudd attributes to Aristotle, is quite consistent with Toulmin's and may be regarded as one of the characteristics of the enthymeme. Another characteristic was demonstrated by Lloyd Bitzer. He feels that the only essential characteristic of the enthymeme is that it is based on premises granted by the audience whether by agreement to overt statements or by having the audience supply a premise which is only implied by the speaker.<sup>35</sup>

Bitzer arrives at this conclusion by analyzing the nature of "demonstrative," "dialectical," and "rhetorical" syllogisms:

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<sup>33</sup> "The Enthymeme and Logical Validity," Quarterly Journal of Speech, XLV (December, 1959), 410-11.

<sup>34</sup> Ibid., 414.

<sup>35</sup> "Aristotle's Enthymeme Revisted," Quarterly Journal of Speech, XLV (December, 1959), 405.

(1) Demonstrative syllogisms are those in which premises are laid down in order to establish scientific conclusions; (2) Dialectical syllogisms are those in which premises are asked for in order to achieve criticism; (3) Rhetorical syllogisms, or enthymemes, are those in which premises are asked for in order to achieve persuasion.<sup>36</sup>

His view helps explain why Aristotle regarded rhetoric as the counterpart of dialectic and the enthymeme as the rhetorical counterpart of the dialectical syllogism. As contrasted with the demonstrative syllogism, in both dialectic and rhetoric "the successful building of arguments depends on cooperative interaction between the practitioner and his hearers."<sup>37</sup> Instead of using question and answer to achieve interaction as in the case of dialectic, "the speaker draws the premises for his proofs from propositions which members of his audience would supply if he were to proceed by question and answer, and the syllogisms produced in this way by speaker and audience are enthymemes."<sup>38</sup>

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Ibid.

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Ibid., 407. For a worthwhile discussion of the meaning of the term "dialectic" and one which supports Bitzer's interpretation of Aristotle, see Nicola Abbagnano, "Four Kinds of Dialectic," Revisita di Filosofia, XLIX (April, 1958), 123-33, reprinted in Philosophy Today, II (Fall, 1958, 143-49). See also Charles Perelman and L. Olbrechts-Tyteca, "The New Rhetoric," Philosophy Today, I (March, 1957), 5-6; and Ch. Perelman, "How Do We Apply Reason to Values?" Journal of Philosophy, LII, (December 22, 1955), 799-800.

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Bitzer, op. cit., 408. For a further discussion of the kinds of premises which the speaker may draw from his audience see Edward Steele, "Social Values, the Enthymeme, and Speech Criticism," Western Speech, XXVI (Spring, 1962), 70-75, and Edward Steele and W. Charles Redding, "The American Value System: Premises for Persuasion," Western Speech, XXVI (Spring, 1962), 83-91.

### Toulmin on Induction and Deduction

Toulmin's view of induction and deduction is derived from his treatment of warrant-using and warrant-establishing arguments and is pertinent, as is his discussion of probability, to a re-evaluation of the enthymeme. In order to approach an understanding of his views on induction and deduction and how they relate to the enthymeme, his distinction between warrant-using and warrant-establishing arguments must be clarified.

#### Warrant-using and Warrant-establishing Arguments

Warrants, it will be remembered, are bridge-like statements which indicate the legitimacy of the step from data to claim. Some warrants authorize claims which are "necessary" and others, conclusions which may be asserted as "probable." In any case, however, an argument cannot take place unless some warrant is accepted.<sup>39</sup>

Toulmin's is a model for "warrant-using arguments," as both his definition of that term and his examples of the model indicate. Toulmin states that warrant-using arguments

. . . will include, among others, all those in which a single datum is relied on to establish a conclusion by appeal to some warrant whose acceptability is being taken for granted -- examples are "Harry was born in Bermuda, so presumably, (people born in the colonies being entitled to British citizenship) Harry is a British

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A rather detailed discussion of the nature of warrants and the other elements of Toulmin's layout may be found in Chapter II.

citizen", "Jack told a lie, so presumably (lying being generally reprehensible) Jack behaved in a reprehensible way". . . .<sup>40</sup>

Toulmin's treatment of the term "warrant-establishing arguments" is somewhat confusing. The example he gives is clear enough:

Warrant establishing arguments will be . . . such arguments as one might find in a scientific paper, in which the acceptability of a novel warrant is made clear by applying it successively in a number of cases in which both "data" and "conclusion" have been independently verified. In this type of argument the warrant, not the conclusion is novel, and so on trial.<sup>41</sup>

Yet his use of a scientific example seems to imply that all warrants are established in the same way as scientific warrants. This view is consistent with what he has to say about induction and deduction but is not, as will be argued later, consistent with Toulmin's own use of his model of argument.

Warrant-using and Warrant-establishing Arguments and Induction and Deduction

Toulmin questions the use of the term "deduction" in contemporary logic. He feels that the common use of the term is preferable to that of the logician. The logician equates deduction with arguments "in which the data and the backing positively entail the conclusion -- in which, that is to say, to state all the data and backing and yet to deny the conclusion would land one in a positive inconsistency or contradiction."<sup>42</sup>

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<sup>40</sup> Uses of Argument (Cambridge: University Press, 1958), 120.

<sup>41</sup> Ibid.

<sup>42</sup> Ibid., 122.

Yet common usage reflects the distinction he made between warrant-using and warrant-establishing arguments. "Outside the study the family of words, 'deduce', 'deductive', and 'deduction', is applied to arguments from many fields; all that is required is that these arguments shall be warrant-using ones, applying established warrants to fresh data to derive new conclusion."<sup>43</sup> Toulmin gives several examples of the non-professional use of "deduction" and its cognates and clarifies the point as follows:

Sherlock Holmes, at any rate, never hesitated to say that he had deduced, e. g., that a man was recently in East Sussex from the colour and texture of the fragments of soil he left upon the study carpet; and in this he spoke like a character from real life. An astronomer would say, equally readily, that he had deduced when future eclipse would occur from the present and past positions of the heavenly bodies involved. As Ryle implies, the meaning of the word "deduce" is effectively the same as that of "infer"; so that, wherever there are established warrants or set procedures of computation by which to pass from data to conclusion, there we may properly speak of "deductions".<sup>44</sup>

A warrant-using argument, then, is deductive and Toulmin argues that warrant-establishing arguments, on the other hand, can be viewed as inductive. As in his explanation of warrant-establishing arguments, Toulmin defines induction by relating it to the field of science only and thereby implies that all induction is like scientific induction.

Sir Isaac Newton . . . regularly speaks of "rendering a proposition general by induction"; by this he turns out to mean "using our observations of regularities and correlations as the backing for a

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<sup>43</sup> Ibid., 121.

<sup>44</sup> Ibid.

novel warrant". We begin, he explains, by establishing that a particular relation holds in a certain number of cases, and then, "rendering it general by induction". we continue to apply it to fresh examples for so long as we can successfully do so: if we get into trouble as a result, he says, we are to find ways of rendering the general statement "liable to exceptions" i.e., to discover the special circumstances in which the presumptions established by the warrant are liable to rebuttal. A general statement in physical theory . . . must be construed . . . as an open warrant or principle of computation: both data and conclusion are independently known, then rendered general by induction, and finally applied as a rule of deduction in fresh situations to derive novel conclusions from our data.<sup>45</sup>

An Interpretation of Toulmin's  
View of Induction and Deduction

Toulmin's view on induction and deduction seems clear.

Deductive arguments are those in which a disputed claim is established by the use of an accepted warrant which connects data and claim.

Inductive arguments, on the other hand, are those in which a disputed warrant is established by testing it in sample situations where both data and conclusion are independently known.

Yet, although his treatment of deduction as warrant-using is clear and consistent with all of his uses of his model, his identification of

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<sup>45</sup> Ibid., 121-22. Toulmin's argument here is very much like his discussion of scientific reasoning described in Chapter II except for his use of the terminology he developed in his Uses of Argument. It is, perhaps, to be expected that he would illustrate his views on induction and deduction by examples taken from the field in which he has done most of his writing but such a choice, as will be noted later, is unfortunate. For a fuller discussion of inductive reasoning and scientific "discovery," see Supra 71-73.

induction and warrant-establishing arguments with the methodology of science leads to serious difficulties. The warrants used by Toulmin in his examples of the use of his model could not be established by repeated successful application to accepted data and claim: "A man born in Bermuda will be a British subject," "A Swede can be taken almost certainly not to be a Roman Catholic," "A whale will be a mammal," etc. These warrants are not derived in the way that warrants in the physical sciences are. A Swede will not be a Roman Catholic, because the data from a census makes it unlikely. A Bermudan will be a Briton because of the various acts of Parliament. A whale will be a mammal because of an agreed-upon method of taxonomical classification, etc. Warrants are field-dependent and are established by field-dependent criteria.

Warrants need not be established by the inductive methods of science, nor need they be established by any kind of induction. "A man will be presumed innocent until proved guilty" is an acceptable warrant and a fundamental rule of law in this country, but not in France. This warrant is not the result of induction but of social choice.

In addition, a warrant may be supported (or established) deductively by a warrant-using argument. "Jones," one may argue, "has not yet been convicted of a crime: so he should not be called a killer." Here, one may rely on the warrant that a man shall be presumed innocent until proved guilty and introduce backing from legal authorities who say that this is the



law. If the warrant is rejected in spite of the backing, one may claim that a man should be presumed to be innocent by appeal to data which establishes that innocent men cannot always prove their innocence by using a warrant which states the preference for a guilty man to escape rather than for an innocent man to suffer.

Perhaps the difficulty in interpreting Toulmin on warrant-establishment and induction is due in part to his use of scientific examples in such a way as to imply that the example is the rule. Yet there is another important source of misunderstanding. Toulmin uses the term "warrant-establishing" to refer both to the backing which leads an audience or opponent to accept a warrant and to the ultimate method of establishing a warrant to the satisfaction of the experts within a particular field.

The view upheld in this study is that warrant-establishment is both field-dependent and audience-dependent. It is field-dependent in that authorities in a field will establish the criteria for warrants in that field. It is audience-dependent in that the selection of backing is determined by the requirements of audience acceptability. A lay audience may accept the warrant that light may be presumed to travel in a straight line if one can cite scientists who say that this is so. An audience of scientists may accept the warrant only if the idea is demonstrated to be useful in explaining phenomena over a wide range of circumstances in a way which accounts for all exceptions. In either instance the warrant is the same.

Toulmin's model for argument is deductive or warrant-using and allows for the results of pertinent induction in the spaces reserved for backing, qualifiers, and conditions of acceptance or rebuttal. All these elements in an argument are field-dependent. For as Toulmin states: "Only once one is clear about the kind of problem involved in any case can one determine what warrants, backing, and criteria of necessity or possibility are relevant to this case."<sup>46</sup>

#### Application of Toulmin's System to Rhetorical Deduction

The enthymeme or rhetorical deduction is based on probability, depends upon the audience to supply missing premises, and otherwise is to be criticized by criteria applicable to the formal syllogism. Because Toulmin's model is a method of criticizing deductive arguments, depends upon audience acceptability, is designed for arguments based on probable universal statements, and avoids many of the objections to the use of the syllogistic paradigm his system may well be superior to the syllogistic model for evaluating enthymemes. If one views the enthymeme as a rhetorical deduction rather than a rhetorical syllogism, he can evaluate it in terms of data, warrant, claim, qualifier, rebuttal, and backing and need not imply absolute statements nor distributed middle terms. An enthymeme is a common form of argument using common language and addressed to

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<sup>46</sup> Ibid., 177.

popular audiences. It can probably better be assessed against the paradigm which Toulmin derived from an analysis of everyday argument than against the static and absolute standards of the syllogism.

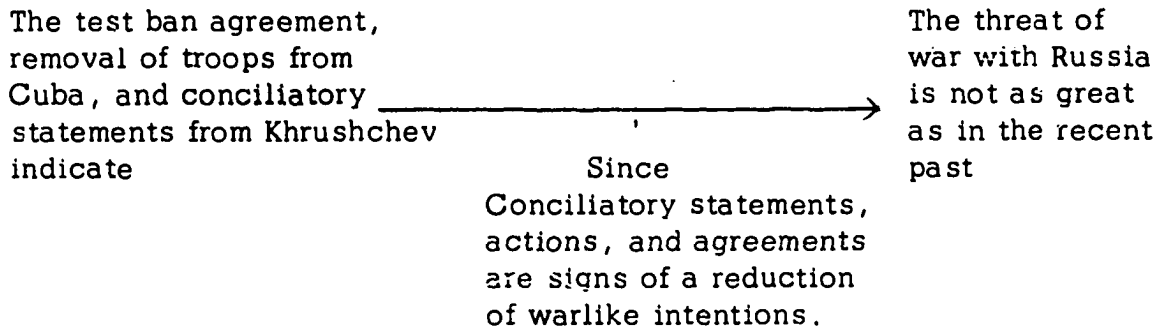
The enthymeme takes the form that it does because popular audiences cannot follow chains of syllogistic reasoning and because the audience can, in many cases, supply missing parts of an argument.<sup>47</sup> The enthymeme, as a rhetorical deduction, must be in a persuasive form when introduced in the context of a speech situation, and Toulmin's model certainly would not be a persuasive form in which to cast arguments for an audience. His model is, however, an excellent one against which to judge an enthymeme and for analysis from which to form enthymemes. For Toulmin recognizes that warrants must be accepted before argument can take place and that a warrant, if very generally accepted, need not be made explicit in an argument. The role of logic is a "retrospective, justificatory one"<sup>48</sup> and if the advocate will submit his claim, during the preparation of the speech, to the detailed layout of argument provided by Toulmin, he will not only have a good idea of the validity of his argument but also may discover what elements in the layout he must or should make explicit to his audience and what elements he can depend upon the audience to supply.

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<sup>47</sup> Aristotle, op. cit., 1356<sup>a</sup>-1356<sup>b</sup>.

<sup>48</sup> Toulmin, op. cit., 6.

If, for example, an advocate felt that he should advance the claim that the threat of war with Russia is not as great as in the recent past, he could simply connect this claim to data about the test ban agreement, removal of troops from Cuba, and conciliatory statements by Khrushchev and rely upon the audience to provide a warrant which would make the movement from data to claim acceptable. If he did so and wished to lay out the argument according to the Toulmin model to check its validity, he would begin with something like:



The very act of specifying the warrant which the audience would supply might easily suggest to the advocate the necessity of qualifying his claim and openly admitting conditions of acceptance or rebuttal. He might find advisable including a modal qualifier like "probably" or "possibly" and admitting, for example, that all of the signs of peaceful intent might be a screen for some new aggressive action. Whether the advocate chooses to use the model or after its use still wishes to advance an unqualified claim will, in part, be a matter of his own ethical choice, and the critic who would later judge his argument may be interested in this ethical

decision. For the Toulmin model is a useful way of criticizing an enthymeme whether one employs it in the criticism of his own or someone else's arguments.

Application of Toulmin's System  
To Rhetorical Induction

All of Toulmin's examples of the use of his layout of argument have been deductive or warrant-using, and the earlier discussion of his views on induction has indicated that he offers no special system for inductive argument. In fact, he recognizes that warrants which are supported inductively must be established according to the accepted inductive methods of some particular field. For this reason he does not discuss argument from example, which, along with the enthymeme, constitutes the totality of logical proofs in Aristotle's system. Although Brockriede and Ehninger's extension of the use of the Toulmin model provides a useful way of laying out inductive arguments, their use of general warrants rather than field-dependent ones is a departure from Toulmin's paradigm.<sup>49</sup> Toulmin seems to feel that since the criteria

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<sup>49</sup> This study is not concerned with the details of the adaptation by others of the Toulmin model to rhetoric except as they clarify the relationship between Toulmin's views and rhetorical theory in a direct manner. Brockriede and Ehninger's is an extension of Toulmin's system and allows for general warrants such as "What is true of the sample is probably true of the majority of members in this class," and "Since in essential respects State B is similar to State A." Decision by Debate, op. cit., 135 and 139.

for induction are field-dependent, no general layout of criteria would be helpful. If so, one must study the standards of the field in question in order to evaluate the results of induction. For, as Toulmin put it, "all the canons for the criticism and assessment of arguments, I conclude, are in practice field-dependent, while all our terms of assessment are field-invariant in their force."<sup>50</sup>

Data, warrant, backing, criteria for the use of modal qualifiers, and conditions of exception or rebuttal all are derived from some particular field with its own set of inductive procedures, and, it may well be argued, the claim is established only in the context of the field from which it was generated. One may be able, for example, to support a claim that plan X should be rejected on economic grounds but that does not mean that it should be rejected per se.<sup>51</sup> One might be

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<sup>50</sup> Uses of Argument, op. cit., 38.

<sup>51</sup> Although the field from which the parts of an argument must come is usually clear, one may not recognize that a particular claim is applicable only in a field-dependent sense. For this reason one might profitably amend the Toulmin system to indicate the field-dependence of claims by inserting a parenthetical statement concerning the field of applicability of the claim between the qualifier and the claim. For example, one might argue: (data) Program X would lead to deficit spending; so (warrant) since deficit spending is usually unwise; presumably (in an economic sense), program X would be unwise. Such an addition to Toulmin's layout would be consistent with his discussion of backing for warrants: ". . . the kind of backing we must point to if we are to establish its authority will change greatly as we move from one field of argument to another. 'A whale will be (i.e. is classifiable as) a mammal'; 'A Bermudan will be (in the eyes of the law) a Briton', 'A Saudi Arabian will be (found to be) a Muslim' -- words in parentheses indicate what these differences are." Uses of Argument, op. cit., 104.

able to support a claim from the field of ethics that would outweigh the pertinent economic considerations.

Toulmin's distinctions between the force and criteria for the use of modal terms, his notions of field-dependence and field-invariance, and his distinction between induction and deduction are important to those who would invent arguments. If a warrant and its backing must come from the field of economics, for example, statements from authorities in the fields of religion or education would not appear to be of much value in that argument. Further, if a statistical statement asserts a degree of probability, one should be aware of the criteria which allow one to make such statements. Each field has its own criteria for the use of modal terms and for what constitutes a "fact." The "fact" that there are X number of low income families in Chicago depends on a definition of the term and the use of techniques in accumulating data; the "fact" that light travels in straight lines is an accepted scientific way of viewing physical phenomena; the "fact" that a whale is a mammal is a matter of taxonomical classification. In evaluating evidence both of fact and opinion, the inventor or critic of arguments is aided by determining the field from which that evidence must come. Toulmin's system makes apparent the field-dependent nature of arguments and directs one to the conclusions and methodology of a given field for the materials from which arguments must proceed.

Ethics and Rhetoric

Aristotle regarded rhetoric as amoral. As a faculty for discovering the available means of persuasion, it will be used alike for good or evil. Of the principles of rhetoric, he said, "A man can confer the greatest of benefits by a right use of these, and inflict the greatest of injuries by using them wrongly."<sup>52</sup>

Although rhetoric, as method, is amoral, its study is an ethically justifiable one, however, "because things that are true and things that are just have a natural tendency to prevail over their opposites, so that if the decisions of judges are not what they ought to be, the defeat must be due to the speakers themselves, and they must be blamed accordingly."<sup>53</sup> Further, since rhetoric is particularly well adapted to popular audiences, truth and justice can be made to prevail by the presentation of both sides of any question by speakers using the available means of persuasion. For if both sides of a controversy are presented with equal rhetorical skill, the natural advantage of truth will assure victory for the cause of justice. Good men, therefore, should become skilled in the use of rhetoric so that they may communicate the good to popular audiences and be able to overcome the arguments of those in error. Dialectic alone will not assure victory, but mastery of all the available means of persuasion will if, as Aristotle assumes, truth

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<sup>52</sup> Op. cit., 1355<sup>b</sup>.

<sup>53</sup> Ibid., 1355<sup>a</sup>.



and justice have an inherent advantage over their opposites.

Aristotle does not specify that the use of any particular rhetorical device is unethical. He does not propose any ethical standards for rhetoric. He identifies the ethical problem in rhetoric with the moral purpose of the speaker.<sup>54</sup>

Although the attempt to establish some sort of ethical standard for rhetorical practice is a worthwhile one and many authors have proposed such standards, Toulmin's views are only very indirectly concerned with such efforts. His philosophical observations are, however, directly concerned with how one may properly argue about ethical values.

#### Ethical Standards and Rhetorical Invention

One may very well disagree with Toulmin's theory that the moral code of a society is something of its own making and still agree with him on how one may reason about ethical questions.<sup>55</sup> For whether the moral standards of a society are regarded as a matter of social convenience, as divinely ordained, or as a close approximation of some "absolute

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<sup>54</sup> A recent textbook in the field of rhetoric which relies almost exclusively on the results of experimental studies in communication takes the same position and asserts that it is commonly accepted. "It is pertinent to note that most discussions of the ethics of persuasion are essentially elaborations of Aristotle's view that 'sophistical dialectic, or sophistical speaking, is made so, not by the faculty, but by the moral purpose.'" Jon Elsenon, J. J. Auer, and John Irwin, The Psychology of Communication (New York: Appleton-Century-Crofts, 1963), 296.

<sup>55</sup> Supra, Chapter II, 80-81.

standard" which man must try to apprehend through his intellect, one may argue about individual and group behavior in accordance with the moral code of a given society.<sup>56</sup> Yet a valid criticism of Toulmin's position is that such a moral code is difficult to identify. For, as John Rawls argues,

. . . Toulmin speaks of there being moral rules to which appeal can be made to justify specific acts. He seems to think of these as a definitely known, and publicly ascertainable set of rules to which explicit reference is constantly being made. But the only rules Toulmin mentions are the rule that promises should be kept and the rule that one should drive on the left-hand (right-hand) side of the road.<sup>57</sup>

This criticism, although important, applies to all attempts to argue about moral questions. Toulmin may have left the false impression that the moral code of a community is easy to identify, but his view of reasoning about ethical questions is valuable insofar as one can identify commonly held moral values.<sup>58</sup>

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A closely related view which would apply to the ethical standards by which a speech or speaker should be evaluated is presented by Edward Rogge, "Evaluating the Ethics of a Speaker in a Democracy," Quarterly Journal of Speech, XLV (December, 1959), 419-25.

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Review of An Examination of the Place of Reason in Ethics, Philosophical Review, LX (October, 1951), 576.

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One might also regard "commonly held moral values" as psychological facts about the attitudes and opinions of an audience. If so, the following analysis of ethical reasoning would still be pertinent, but one might choose to call these arguments "motivational" rather than "ethical." The view held in this study is that such attitudes and opinions are a reflection of the moral code of a community and that the distinction between these and other motives is a useful one.

Although Toulmin gave no examples of the use of his model for dealing with ethical arguments, he often referred to ethical warrants and indicated that the model could be used for ethical as well as other kinds of arguments. One may phrase his analysis of the types of ethical questions in the terminology of his layout of argument as follows:

1. In "simple moral questions" one need only use a part of the moral code as a warrant to reason from data to claim.
2. In "conflicts of duty" an accepted moral warrant is qualified to recognize another moral rule which serves as a condition of rebuttal or counter-warrant.
3. In questions of the "justice of social practices" the basic ethical assumption of "not inflicting avoidable suffering" becomes the warrant.<sup>59</sup>

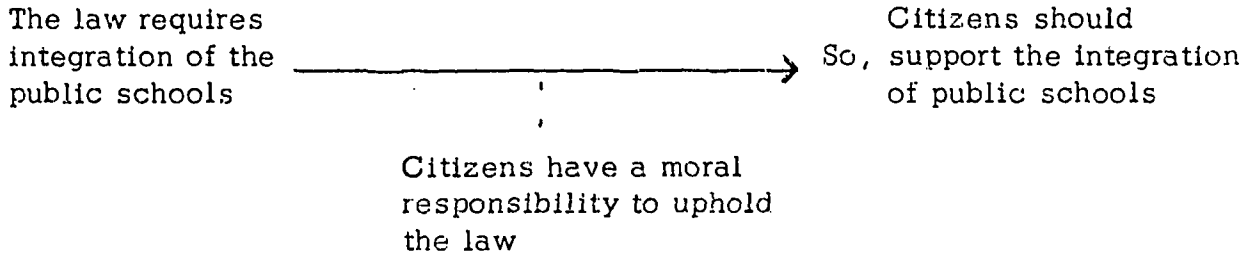
Rhetoric is characteristically concerned with the choice of alternative courses of action, and, as a consequence, with the choice of moral values. By recognizing the kinds of moral question involved and laying it out according to the Toulmin model, one should be aided in preparing and evaluating moral arguments.

Warrants, it will be remembered, are field-dependent, and whatever backing must be presented will be both field-dependent and audience-dependent. An argument which would take the form of a "simple moral

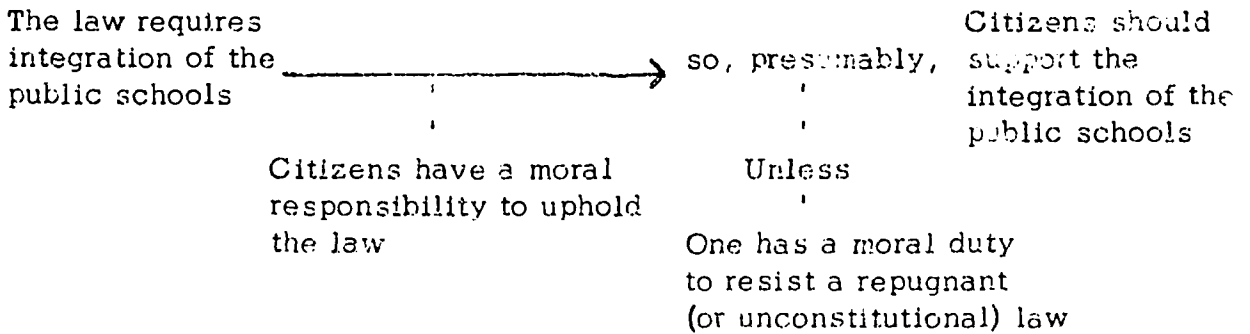
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<sup>59</sup> These ideas are developed more fully in Chapter II, Supra, 82-85.

question" for a specific audience might be regarded by a critic or another audience as involving a "conflict of duty." A "simple moral question" for an audience which would accept the warrant without reservations might take the following form:



A critic, on the other hand, might wish to recognize a qualification to the warrant which would make the argument a "conflict of duty."<sup>60</sup> One might lay out such an argument as follows:



A very important point to recognize is that a particular audience may accept as a "simple moral question" what another audience may regard

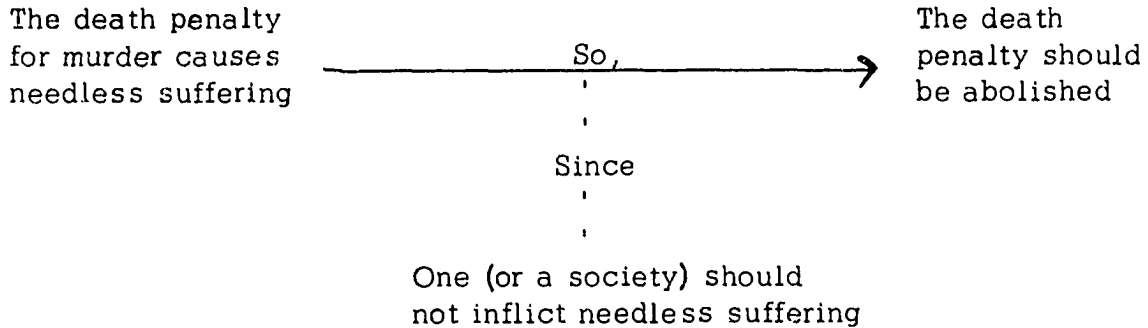
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The critical audience might also refuse to accept the data, rejecting the Supreme Court decision as "the law," and, if so, reasoned argument could not take place in Toulmin's view unless the data were to be supported by another argument in which the validity of the law was made the claim. In this, and later examples, only those aspects of the layout of argument which illustrate the matter under discussion will be presented.



In such cases, if one wishes to challenge the claim, he must do so by rejecting the warrant. For example:



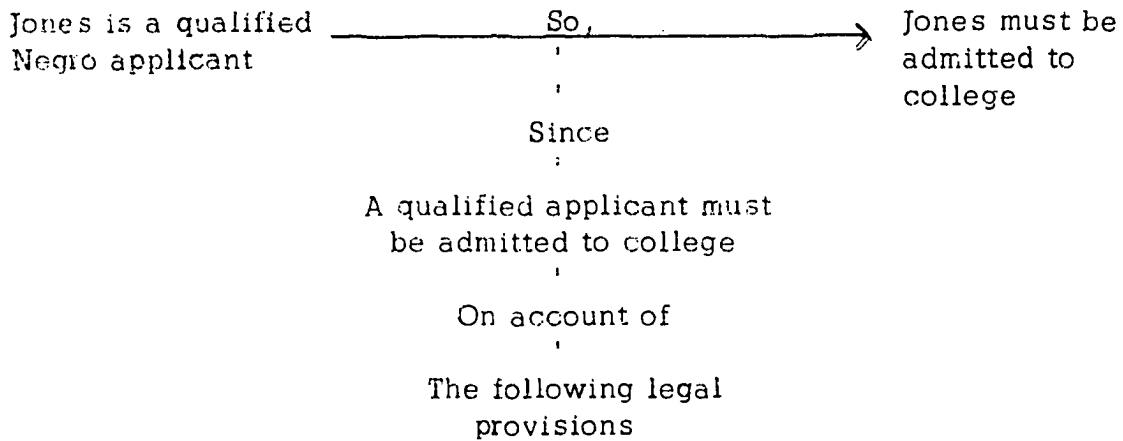
This type of attack on a previously accepted part of the moral code of a community Toulmin refers to as questions of the "justice of social practices." This type of argument differs from the "conflict of duty" argument in that the former would reject a social warrant per se, whereas the latter admits the validity of the warrant but suggests that another social warrant which conflicts with it is also valid.

In addition to pointing out the three kinds of moral questions discussed above, Toulmin's work on ethics also introduced the useful notion of "limiting questions." He holds that any particular field of inquiry rests upon certain assumptions from which logical conclusions can be drawn but which are not subject to logical support by other arguments from within that field.<sup>62</sup> When such assumptions are used as warrants and are not accepted by the audience, they may have to be maintained as claims to be supported by data and warrants from other

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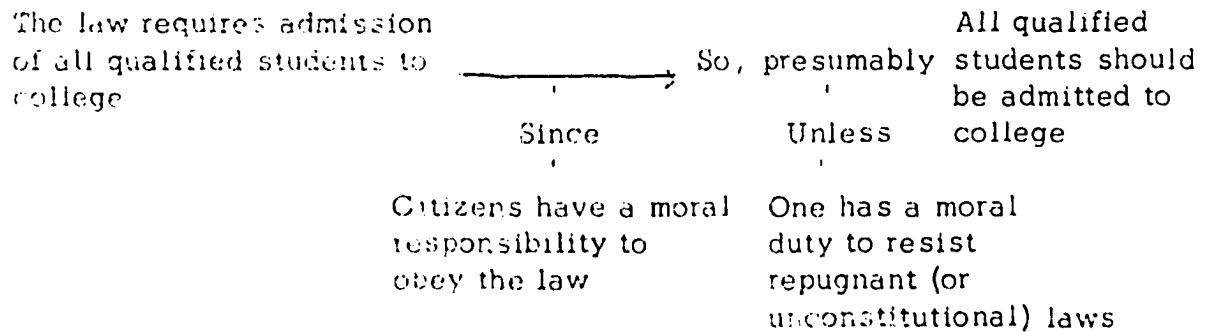
<sup>62</sup> Supra, 87-89.

fields. For example, in the following argument:



If the audience were to reject the warrant because they felt the law should not be obeyed, there could be no further appeal within the field of law.

If one rejects the fundamental legal assumption that laws must be obeyed, argument can proceed only if one tries to validate this assumption by arguments from another field. If this were done with the previous example, one might shift to the field of ethics and end with an argument which makes clear that the difference of opinion does not involve an interpretation of law but a conflict among ethical values. In fact, the example of "conflict of duty" cited earlier would serve to illustrate the form that such an ethical argument would take if one encountered a "limiting question" in law:



Toulmin's views on "simple moral questions," "conflicts of duty," "the justice of social practices," and "limiting questions" can be of value to the rhetorical critic, because rhetoric is characteristically concerned with rational choice among alternatives of belief and action. Choices will necessitate reasoning about moral values, whether one is speaking on an ethical question or led to recognize the importance of ethical standards as one encounters "limiting questions" in politics, law, or some other field.

#### Ethics and Effectiveness

Rhetoricians, at least since the time of Plato and Aristotle, have been concerned with the discovery of the available means of persuasion and with the effect of persuasion on society. All have recognized that the techniques of rhetoric can be used for good and ill and that persuasion can be affected in a manner contrary to the accepted moral code of a community. Today, as the methodology of the empirical sciences is being employed by the rhetorician to determine with precision the effectiveness of all kinds of logical and non-logical appeals, the evaluation of rhetorical effectiveness is becoming a science.<sup>63</sup> In

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<sup>63</sup> Experimental studies from the fields of social psychology, advertising, "motivational research," and speech have demonstrated statistically the superiority some speech techniques have over others. All questions of effectiveness are not a matter of "scientific fact" and the results of a number of studies seem contradictory, but research techniques are available which make scientific investigation of rhetorical effectiveness



time, the rhetorician may no longer need to speculate about what kind of appeals are most effective in a speech; he may know this for a fact.

Take several hypothetical situations which, in fact, may be true. Suppose that a statement from an unqualified but popular source can be proved to be more effective than one from a qualified authority. Suppose that a speech built upon assertions is more effective than one which includes a pertinent factual basis for argument. Suppose, in general, that no advantage, in effectiveness, could be demonstrated from learning techniques of research and the logical presentation of ideas. If these conditions did prevail, the teacher of rhetoric would probably still teach his students to employ the best methods of research available and to use the most logically defensible arguments as a matter not of effectiveness, but of ethics.

Factual accuracy, honesty, and logical reasoning in public speaking are a part of the moral code of our society. These morally approved qualities of public speaking have not been demonstrated empirically to be more effective than their opposites, and it may be that they are not. Yet, as a matter of ethics, many rhetoricians would argue that these qualities should be taught, not under the guise of effectiveness, but as the ethical responsibility of the advocate. The student of rhetoric

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possible and eventually may make persuasion more of a science than an art. Many of the kinds of studies mentioned here are discussed by Eisenson, Auer, and Irwin, op. cit., 271-327.

should be taught to discover all the available means of persuasion and how to use them if, as Aristotle believed, truth and justice are to prevail over their opposites, but he should also be taught to attend to matters of fact and logic as an ethical responsibility.

Toulmin is not concerned with the effectiveness of rhetoric nor, for that matter, with rhetoric at all as he understands the term. His system is concerned only with the rational assessment of arguments; but the rational assessment of arguments is a most important concern of rhetoric, if not as a matter of effectiveness, at least as a matter of ethics.

His system, if followed by the advocate, can be ethically advantageous for.

1. It helps identify a field of inquiry where pertinent data and warrants must be found if a claim is to be supported.
2. It helps the advocate see the relationship between the results of proper induction and the presentation of deductive arguments.
3. It encourages the recognition of the probability basis of argument and discourages attempts to find categorical and absolute premises where such may not exist.

### Conclusions

The purpose of this study has been to suggest that the recent re-evaluation of the nature and purpose of philosophy which culminated in Linguistic or Functional Analysis would be important to the rhetorician, because philosophy and rhetoric share a common interest in logic and

ethics. To accomplish this purpose, the works of a representative of this group, Stephen Toulmin, have been examined both to determine the value of his works to rhetoric and to indicate the possible relevance of Linguistic or Functional Analysis as a whole to rhetorical theory.

If the conclusions of this study are valid, Toulmin's philosophical writings are pertinent to rhetoric and are suggestive of the general value of Functional Analysis to the rhetorician. Toulmin's views have been related to the field of rhetoric in the following ways:

1. The nature and purpose of rhetoric -- Although Toulmin does not understand the nature and purpose of rhetoric in its classical sense and ignores Aristotle's analysis of common argument, his treatment of both logic and ethics is consistent with the traditional view.

2. The sources of persuasion -- Toulmin's is a useful way of regarding the logos employed by a speaker and the Brockriede and Ehninger extension of Toulmin's system provides a method by means of which the critic may classify and criticize all kinds of artistic proofs.

3. Induction and deduction -- Toulmin identifies deduction with warrant-using arguments and induction with warrant-establishing arguments (not all warrant-establishing arguments, however, are inductive.) His model of the layout of argument was designed for warrant-using (deductive) arguments and, as such, is a more useful way of criticizing enthymemes than by employing the conventional syllogistic criteria.

He offers no system for analysis of rhetorical induction but his treatment of the field-dependent nature of argument focuses attention on the critical standards of particular fields for proper inductive techniques. Also, by the use of the Brockriede and Ehninger extension of his system, many kinds of inductive arguments can be laid out for analysis after the pattern of Toulmin model.

4. Ethics and rhetoric -- Rhetoric is characteristically concerned with the rational choice of alternatives of thought and action, and such choices often involve ethical decisions. Toulmin's model and his analysis of the place of reason in ethics, especially his identification of the three kinds of ethical questions and his notion of "limiting questions," can be of value to the rhetorician as he clarifies the nature of such ethical decisions. His treatment of logic and ethics cannot be shown to lead to more effective persuasion than other similar ways of viewing both fields, nor do they indicate that any particular rhetorical devices are unethical. If, however, one believes that factual accuracy and valid reasoning are an ethical responsibility of the advocate, he may conclude that Toulmin's contributions are important as a matter of ethics, if not as a matter of effectiveness.

The branch of philosophy represented by Stephen Toulmin seems especially well adapted to rhetoric. Its emphasis on common language and common reasoning and its concern with ethical problems relate it closely to the major concerns of rhetoric and would seem to justify further rhetorical investigation.

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