

# A Rhetorical Conception of Rationality

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Most philosophers today assume that rational beliefs are those based on the rules of logic applied to the best available empirical evidence, and that rational action is action based on such beliefs.<sup>1</sup> Their epistemological disputes are typically not over this, but over just how such rules and evidence should be formulated. Introductory logic textbooks, purporting to be philosophically neutral, contain sections on formal and informal fallacies, implying that all behavior based on such pseudo-reasoning is irrational, and suggesting that it is rampant in our society.

A favorite source of horrible examples is advertising: "Ads appeal chiefly to emotions, not to reason. They typically make false, misleading, or irrelevant claims, or contain fallacious arguments."<sup>2</sup> Much the same could be said, and often is, about the level of political argument in this country: "Today as always most public rhetoric deceives by means of fallacious argument."<sup>3</sup> The message is clear: most of "them" out there are hopelessly irrational, but you can be one of the rational few by learning to apply the canons of logic and scientific method. One wonders how someone who thinks this way could justify democracy!

Defining rationality in terms of logic and scientific method may seem to be philosophically neutral in the same way that science itself is. But it involves siding with Plato against Aristotle, with Descartes against Vico, with Mill against Nietzsche. There is another tradition in the West in which rationality is associated not with probability of correctness, but with plausibility in the circumstances. This is the rhetorical tradition, stretching from Gorgias and Isocrates in ancient Greece down to Wayne Booth and

Chaim Perelman in our own day.<sup>4</sup> It is a tradition in which participation in democratic dialogue is the vocation of the educated man and citizen. Rationality is an "essentially contested concept," in W.B. Gallie's felicitous phrase.<sup>5</sup> Examination of the concept of rationality associated with rhetoric raises questions about the assumptions of some philosophers.

If rational means scientific, there can be little doubt that most people are irrational. A recent Gallup poll<sup>6</sup> says that 95% of Americans believe in God, and 70% in personal survival after death. It also found that 60% believe that our planet has already been visited by aliens from outer space; 54% believe in angels, and 40% in devils; 51% in ESP; and 26% in astrology. On a perfectly representative jury of twelve good men and true, then, seven of the twelve would believe in flying saucers, six or seven in angels and ESP, five in devils, and three in astrology. How rational is the jury system? Presumably several would believe that women have lower IQ's than men, that Blacks are genetically inferior to whites, that homosexuals are "sick," etc. Clearly large numbers of Americans accept propositions for which there is little positive scientific evidence, and in some cases plenty of negative evidence.

Or so I am told, anyway. I am told by scientists like Carl Sagan that we have probably not been visited (yet) by aliens, and I believe him. I am told by George Gallup that 60% of Americans believe that we have been, and I believe him too, although with reservations. (Actually I am told by the publishers of *Newsweek* that Gallup said this; I believe them too!) We tend to forget how much we depend on

trust, even in the reporting of scientific “facts.” Now trust in scientists is far from universal. Many Americans not only believe in God but do not trust people who don’t. Further, for many of these people “belief in God” means understanding everything in the world in terms of His purposes. The attempt to understand the world without referring to God, even as a hypothesis, as scientists admit to doing, would be “godless” and dangerous to faith and social order. This issue was better understood in the time of Bruno, Galileo and Descartes. Many people who believe in flying saucers, astrology, or the innate inferiority of women and Blacks know perfectly well that scientists reject these ideas, but they regard scientists as The Enemy: why should they believe what **they** say? For this audience, a claim not derived from the Bible, at least implicitly, carries little weight. Could such an extreme rejection of the authority of science be rational? And could it be rational to believe in the Bible, flying saucers, astrology, etc.? It depends on when it is rational to accept authority; and this is a rhetorical problem.

“Appeal to authority” (**argumentum ad verecundiam**) is one of the chief “informal fallacies” in the logic textbooks. In Kahane’s **Logic and Contemporary Rhetoric** it is at the head of the list. Alongside improper appeals to experts, “appeal to popularity,” “traditional wisdom,” “provincialism,” and “loyalty” are treated as variations of the same fallacy. All of them involve accepting the opinion of some person or group, including the majority, when we should be critically examining the evidence for ourselves. Kahane starts by granting that “No one knows everything. So we often must consult experts before making decisions.” But, he adds immediately, “An authority in one field is not necessarily worth listening to in another.” Further, “It is generally fallacious to accept the opinion of an authority ... on topics about which experts disagree. The same is true of opinions in fields about which relatively little is known.

Finally, “If you have to rely on expert opinion, at least choose experts with a good track record.”<sup>7</sup> Thus proper appeals to authority are restricted to situations in which the experts all agree, and their opinions can in principle be checked against “the facts;” in other words, to scientists speaking about their own specialty, provided it is non-controversial! Appeals to religious, moral or political authorities seem clearly to be ruled out, as well as to psychotherapists, educationists, economists—just about every field, in fact, in which people **do** accept authorities just because they **don’t** feel competent to judge “the facts” themselves. (It follows that they cannot determine the “track record” of their authorities either; more on this later.) Kahane’s book is typical of logic texts in so restricting “valid” appeals to authority that they seldom occur.<sup>8</sup>

Something must be wrong here. Calling traditional wisdom and loyalty “fallacies,” when they have guided the lives of most humans throughout history, surely cannot mean that we should not base our behavior on them. It cannot mean that they never give us good reasons to believe (in) something, and to act on the basis of that belief. If it means anything, it must mean that these reasons nevertheless do not guarantee the **truth** of that belief. But this is quite a different issue. The distinction between **reasons for belief** and **evidence of truth** lies at the heart of the problem about rationality. Granted that measurable probability of truth is one good reason for believing—granted even that it is the best reason when available—it does not follow that it is the **only** good reason. Believing what “people like me” generally believe, **especially** on controversial issues—that is, accepting the authority of whatever reference group I generally identify with—is perfectly rational when it would be impossible or too much trouble to investigate further. The more important the decision, and the easier it is to get more information, the less rational it would be to act on this basis alone. Such **prima facie** rationality is often the best we can do with our limited time and resources. I call this “rhetorical rationality,” following Aristotle’s characterization of rhetorical arguments as directed toward particular judgments rather than the establishment of general laws or truths.<sup>9</sup> We all tend to believe what we have been brought up to believe, what the people around us believe. This is probably as true of Americans as of people in traditional societies, and almost as true of scientists and philosophers as of ordinary mortals. I will try to formulate the implicit logic of such ordinary beliefs as carefully as possible, in order to see whether they are irrational in the circumstances of everyday life. I will also try to show that while plausible arguments can sometimes be construed as weak or incomplete inductions, often they cannot: the scientific model is simply irrelevant.<sup>10</sup>

It is a striking fact that many of the “informal fallacies” in the logic textbooks—**ad verecundiam**, **ad populum**, **ad hominem**, **ad ignorantiam**, “straw man”—appear also in **rhetoric** textbooks ever since Aristotle’s among the “good” arguments, which **should** persuade the average audience. In Aristotle’s case, at least, this is not because he thought that people in general are gullible, or that rhetoric should be an art of tricking audiences. On the contrary, he often expresses respect for the intelligence of the average man;<sup>11</sup> and he insists that attempts to manipulate the emotions of the audience bring only short-lived success. An effective rhetorician must use arguments that are genuinely (and not just apparently) plausible.<sup>12</sup> A genuinely plausible argument gives a good reason for its conclusion, which may nevertheless be false. To make this distinction clearer, he devotes two chapters of his book to examples of each. Book II, chapter 23 is a

list of twenty-eight kinds of "genuine" enthymemes; that is, lines of argument that a rhetorician should use (when appropriate), because one of them may well be the strongest argument available in the circumstances. For example: analogy to a similar case (#10); the prior decision of an authority (#11); good or bad consequences of the proposed action (#13); if two results are the same their antecedents must have been the same (#17); the motives people might have for doing the action in question (#20); if the cause is present, the effect must be present (#24). These are plausible as common-sense assumptions we all make in everyday life. I will quote #11 more fully, as it is particularly relevant to my theme:

11. Another line of argument is founded upon some decision already pronounced.... Such a proof is most effective if everyone has always decided thus; but if not everyone, then at any rate most people; or at least the wise or good men, or most of them; or the actual judges of the present question; or those whose authority they accept; or someone they cannot question because he has control over them; or someone it would be unseemly to question, such as the gods, or one's father, or one's teachers.<sup>13</sup>

In the following chapter he gives nine kinds of "spurious" enthymemes, which should not be used because they are not really plausible, although they may seem so. Again a few examples: asserting of the whole what is true of the parts of something, or vice-versa (#2); the use of indignant language (#3); representing what is accidental as if it were essential (#5); if B happened after A, it must have been because of A (#7). The difference between the two lists is illustrated nicely in #9 of the second, pseudo-probability. A weakling may plausibly defend himself against a charge of assaulting a larger man, for example, by pointing to its intrinsic improbability. If a larger man is charged with assault, however, he must not try to argue that he was unlikely to do it just because people would think he was likely to do it! Even if this was in fact his reason for not doing it, the argument is not plausible.<sup>14</sup>

In the second group there is no logical connection between premises and conclusion, and no common-sense assumption that would establish such a connection. Some of them are verbal or syntactical tricks; some are appeals to emotion rather than reason. While one of them might **work** with a given audience, such an attempt would be an insult to the intelligence of the audience, and unworthy of the rhetorician's art. Aristotle was keenly aware that Greek democratic institutions, which he generally supported (see **Politics** iv), presupposed the rationality of the average man. His **Rhetoric**, along with his **Politics**, should be read as a justification of this assumption against both Plato's elitism and the cynicism of most prior teachers of rhetoric, who apparently taught it (as some advertising manuals

do today) as an art of manipulating the emotions of the audience.<sup>15</sup>

Besides mentioning overt appeal to authority in his list of plausible arguments, Aristotle gives the speaker's personal character (ethos) as one of the three basic sources of persuasion available in every rhetorical situation along with the speech itself and the emotions of the audience.

Persuasion is achieved by the speaker's personal character when the speech is so spoken as to make us think him credible. We believe good men more fully and more readily than others: this is true generally whatever the question is, but especially true where exact certainty is impossible and opinions are divided. ... [The speaker's] character may almost be called the most effective means of persuasion he possesses.<sup>16</sup>

That he regards persuasion by this means as rational, like that produced by a genuine enthymeme and unlike appeals to emotion, is clear from his discussion of the ways to establish a good character in the eyes of an audience. These are the same as the ways of establishing the good character of someone else, he says, and follow closely his analysis of moral virtue in his **Nicomachean Ethics**.<sup>17</sup>

Let us see whether modern rhetoric is rational by Aristotle's criteria. Kahane devotes a whole chapter of his text to advertising, which he himself summarizes in the sentences quoted above: "Ads appeal chiefly to emotions, not to reason. They typically make false, misleading, or irrelevant claims, or contain fallacious arguments." Most of the chapter is written as if all ads were TV commercials, ignoring newspapers, the Yellow Pages, signs in front of stores, etc., all of which tend to be more informational than emotional. But even with TV commercials, much depends on how the implicit argument is construed. Kahane consistently takes them to be giving (bad) reasons why the product being advertised is a better product than any of its competitors, and points out that there is often very little difference between them, and that the images on the screen often have little to do with product quality in any case.<sup>18</sup> But this competitive, object-centered interpretation is not the only possible one. The claim may be simply that you will be satisfied with the product, not that it is better than all the others. This would seem to fit our advanced stage of capitalism, in which corporations agree to "reasonable market shares" rather than trying to eliminate each other. More to the point, the means of persuasion in TV ads is usually the speaker rather than the speech: what Aristotle calls **ethos** rather than **logos**. Typically someone is using the product, or describing it to us, and recommending that we use it on his or her authority. The implicit argument in such ads is, "If you trust (or identify with) this type of person, you should use the product too." Whether the appeal is plausible depends not so much on the

facts cited, but on how good the actors are at convincing the "target audience" that the type of person represented **does** use the product. We are given no evidence of this, and doubtless it is often not true at all. But it can be made plausible: a good actor can convince us of it, just as he can convince us that a character he portrays in a drama would really talk and act that way.

Would it be rational to buy the product on this basis alone? Of course not. Every six-year-old in our society knows that ads are biased in favour of the product. But it would not be irrational because ads appeal to emotion rather than reason: emotion is too short-lived for TV anyway; it might get you as far as the refrigerator, but not to the store. Nor would it be irrational because ads are fallacious, because when properly construed they often aren't. It would be irrational because there is normally plenty of time and opportunity to obtain more and better evidence before acting. The more substantial the decision, the less rational it would be to make it on the basis of a TV ad alone. The converse is also true: trying Alka-Seltzer because you like their ads is perfectly rational, or at least not irrational. If it doesn't give satisfaction, you're only out a buck or so. What **would** be irrational is spending time and money testing various upset-stomach remedies, or consulting with doctors to see if they agree which one is best! The rationality of actions is always relative to the circumstances; the rationality of discourse intended to influence action must therefore be relative likewise.

How about rhetorical arguments in a courtroom? In our "adversary system" of law, like that of ancient Greece, the judge or jury must decide not the truth of the matter, but which side has made the most plausible case. Each lawyer is expected to make his case as plausible as he can, within the constraints of limited time and resources.<sup>19</sup>

Aristotle gives the following as an example of a plausible argument to be used in court:

The accused had a motive to commit the crime.  
He also had an opportunity to commit the crime.  
The crime was committed.  
Therefore, the accused probably committed the crime.<sup>20</sup>

Note that this prosecutor's case rests squarely on the common-sense assumption that if one wants to do something, and can do it, he sooner or later will do it. We have been given no evidence that this accused person actually committed the crime, or that no one else also had a motive and opportunity. Nevertheless, Aristotle implies that Athenian juries would convict a defendant on this basis if he could not present a more effective counter-argument. But the man may be innocent! we cry. They should have witnesses, fingerprints, etc. Interestingly enough

Aristotle mentions these kinds of evidence, calling them "non-artistic arguments." He warns his students that they are **not** as persuasive as a good enthymeme like the one above, because a clever opponent can easily invent **a priori** grounds for scepticism about them: witnesses can be bribed, documents can be forged.<sup>21</sup>

Is our legal system more rational than theirs? The relative plausibility of these two kinds of argument seems to have become reversed, so that we attach greater probative force to "facts" such as fingerprints, presumably because of the successes of modern empirical science. (A history of the idea of "facts" would be fascinating.) And if I were accused of a crime I didn't commit, I would be grateful for the change. But is a jury that attaches greater weight to general arguments than to particular facts therefore irrational? Modern evidence can still be faked, after all; and "innocent until proven guilty" means until a judge or jury decides that you have been proven guilty. Granted that Athenian lawcourts may have been somewhat more likely to convict an innocent person than ours are, due to lack of confidence in empirical methods of proof: these methods were still rudimentary, and did not yet deserve much confidence. Their understanding of human nature, however, may well have been as reliable as ours, and they relied on it.

But how can any legal system be rational, one might ask, in which both sides are admittedly biased? The witnesses, including "expert witnesses" like doctors, ballistics scientists, etc., are each brought in by either the prosecution or the defense. How can the jury trust any of them? By the standards of logic textbooks, none of these people is a legitimate authority, because the situation is too polarized; attempts to establish their credibility can only be a distraction. A rational jury should suspend judgment in every case, since neither side can possibly offer an unbiased argument for its contentions.

But in fact this would be irrational. It would be demanding more precision than the situation permits. As Aristotle says in a related context:

It is the mark of an educated man to look for precision in each class of things just so far as the nature of the subject admits; it is clearly equally irrational to accept plausible reasoning from a mathematician and to demand scientific proofs from a rhetorician.<sup>22</sup>

Again, rationality in practical decisions is relative to the circumstances.

As a final example consider religious belief, which calls for "decision" only in a very special sense—the sense in which one's whole life is a single decision—and which is notoriously difficult to justify on empirical grounds. Does it follow that religion is irrational?

I am talking about the religion of the ordinary person, not about how good a case can be made for any particular version of it by theologians or philosophers. I assume that the religion of the ordinary person rests heavily on authority: of parents, teachers, priests, prophets. The same is true of the unbelief of most atheists and agnostics. The authorities accepted by each person tend to agree with each other on this issue, because we tend to reject the ones who don't. If the Gallup poll is correct, most Americans are surrounded by other people who are confident that there is a God, and that He has revealed His wishes and plans to us in the Bible. There are subcultures in America, however, such as many college campuses, in which most members tend to doubt this, especially the part about the Bible. Are they more rational than the others? I doubt it: they have simply come to accept different authorities.

Consider a child who is raised in a religious home and community, and believes. He then goes to a college where most of the professors, and the students who get the best grades, are sceptical; so he becomes a sceptic too. Is he more rational now? Before going to college he was believer. His family and friends can't all be wrong about something so important: it just isn't **likely**. But once in college, he decides that the professors and students can't all be wrong: after all, they know more than his family does about most other things. And their arguments sound good, although he doesn't always understand them. By the criteria of rationality implied in logic textbooks like Kahane's, his position is irrational both before and after his "conversion:" both groups of authorities fail every test for "proper appeal to experts," and he certainly had no scientific basis for switching from one group to the other.<sup>23</sup> By the rhetorical criterion of rationality that I have been developing, however, both his belief and his unbelief are perfectly rational in the circumstances. This is true whether he was raised a Unitarian or a Fundamentalist. Someone who refused to accept what everyone around him accepts **without having a better reason to reject it** would be strange rather than philosophical. I fully support the pursuit of such better reasons—I am not siding with the sophists against Socrates—but it does not follow that this pursuit must never be abandoned for a second, or that all other pursuits are irrational, or that every decision must be postponed until the pursuit has been successful. The criterion of plausibility is what a rational person would accept **in the circumstances**: from this speaker, with these kinds of available evidence, this amount of time in which to decide, this degree of importance, etc. It is a normative concept, but quite a different normative concept from scientific probability.

It might be supposed that what I am calling a rhetorical argument is simply a weak induction, so that my thesis amounts to the truism that some

inductions require more evidence than other for practical purposes. This analysis would explain why arguments based on authority and tradition are often valid: our past experience with the speaker as trustworthy is evidence that he is telling the truth now, even on a different subject. C.L. Hamblin informs us that **verecundiam** actually means shame or modesty, and the "fallacy"—first named by John Locke—originally emphasized the impudence of questioning the opinions of long-respected authors.<sup>24</sup> Now this is an impudent thing to do. It involves putting one's own judgment above, or at least equal to, that of generations of others. We moderns have been brought up on the heroism of a Galileo, a Darwin, or an Einstein who dared to question what everyone else accepted and who turned out to be right. These men **were** heroes; but this does not mean they were the only rational ones. After all, most of the vast corpus of beliefs passed on to us by our parents and teachers must be more or less correct, or the society would not have survived.

But this explanation is too simple. We all accept many arguments in everyday life that are not inductions at all, and thus not weak inductions. At least some of the common-sense assumptions of every society are not generalizations from past experience, but principles for the interpretation of experience. This is most obvious in the case of ethical judgments, such as "all men are created equal," which would be bewildering to a traditional Chinese sage. But it applies also to basic assumptions about the nature of reality. The widespread belief that nature is full of spirits, for example, is presumably not based on having observed many of them. Nor is it based on noting that people who believed this fared better than people who didn't; everybody did, and always had. Is animism rational? It is generally rejected in our society; but Claude Levi-Strauss has shown that it is the very principle of rationality in many traditional societies.<sup>25</sup> Have we abandoned animism because experience failed to bear it out? Hardly. An assumption this basic is consistent with whatever happens, because all experience is interpreted in terms of it. Apparent exceptions are easily accounted for. E. Evans-Pritchard gave a classic account of such "secondary elaboration," as he called it, among the Azande of the Sudan, when their magical rituals fail to obtain the desired result (which happens frequently): the ceremony was not performed properly, someone present had evil thoughts, etc.

There is no incentive to agnosticism. All their beliefs hang together, and were a Zande to give up faith in witch-doctorhood, he would have to surrender equally his faith in witchcraft and oracles. ... In this web of belief, every strand depends upon every other strand, and a Zande cannot get out of its meshes because it is the only world he knows. The web is not an external structure in which he is enclosed. It is the texture of his thought and he cannot think that his thought is wrong.<sup>26</sup>

Some anthropologists, in the tradition of Tylor and Frazer, attempt to contrast such "closed" thinking with the thinking of "scientifically oriented cultures" like our own, implying that our "open" awareness of alternatives has led us to a more objective understanding of the world.<sup>27</sup> But we moderns arrive at our metaphysical beliefs in much the same way earlier people did. Evans-Pritchard's criticism of Levi-Bruhl applies equally to these neo-Frazerians:

The fact that we attribute rain to meteorological causes alone while savages believe that Gods or ghosts or magic can influence the rainfall is no evidence that our brains function differently from their brains. It does not show that we "think more logically" than savages.... It is no sign of superior intelligence on my part that I attribute rain to physical causes. I did not come to this conclusion myself by observation and inference and have, in fact, little knowledge of the meteorological processes that lead to rain; I merely accept what everybody else in my society accepts...

It would be absurd to say that the savage is thinking mystically and that we are thinking scientifically about rainfall. In either case like mental processes are involved and, moreover, the content of thought is similarly derived.<sup>28</sup>

This is not to deny that science itself is more reliable and objective than traditional belief systems. But the intrinsic rationality of scientific methods does not imply that scientists themselves, let alone the rest of modern society, use anything resembling these methods to arrive at the beliefs on which they base their everyday behavior.<sup>29</sup> The **content** of "common sense" gradually changes to reflect the findings of science—often with a "lag" of a century or more—but the **process** of thinking remains the same. If we identify rationality with scientific method, this would mean that people are still as irrational as ever. But it is much less misleading to conclude that most people have been rational all along in the more relevant sense: namely, they reason from assumptions believed to be true in their community, and which they have no reason to doubt. The arguments of politics, mass communications, and the rest of everyday life necessarily appeal to "what everyone knows." These assumptions may be unverifiable or even false, but their acceptance in the relevant community is itself an excellent reason for the audience to accept them. These arguments persuade us not because we mistakenly think their form is compelling,<sup>30</sup> or because we are feeling instead of thinking, but because they derive from what we already take to be true. A rational person should not withhold his assent from them unless he happens to have a stronger reason for believing otherwise.<sup>31</sup>

I have been assuming that science is rational in some non-rhetorical sense, because its assumptions are themselves justifiable rather than simply accepted for practical purposes. In maintaining that rhetorical plausibility cannot be interpreted as a weak

induction, I have been arguing that there are two distinct concepts of rationality here, not a looser and a tighter version of the same (scientific) concept. I must now deal with the possibility that science itself is a type of rhetoric, so that again we would have two forms of the same (rhetorical) concept. The issues involved are too complex for a full-scale treatment here, but I must at least indicate how I would respond to two recent arguments.

Since the appearance of Michael Polanyi's **Personal Knowledge** (1958) and Thomas Kuhn's **The Structure of Scientific Revolutions** (1962), writers on science have generally conceded that the consensus of the community of scientists is crucial in the practice of science.<sup>32</sup> This means that science has a rhetorical dimension: not only in the trivial sense in that scientists too are trying to "persuade" their colleagues, but in the deeper sense in that the choice between "paradigms" (to use Kuhn's term) is never dictated by logic or experiment, but is freely adopted by a community of practitioners for its own widely varying reasons:

Like the choice between competing political institutions, that between competing paradigms [in science] proves to be a choice between incompatible modes of community life. ... When paradigms enter, as they must, into a debate about paradigm choice, their role is necessarily circular. ... The status of the circular argument is only that of persuasion. It cannot be made logically or even probabilistically compelling for those who refuse to step into the circle. ... As in political revolutions, so in paradigm choice—there is no standard higher than the assent of the relevant community.<sup>33</sup>

Articles have begun to appear with titles like "Science as a Rhetorical Transaction,"<sup>34</sup> "The Scientific Community as Audience: Toward a Rhetorical Analysis of Science,"<sup>35</sup> "The **Personae** of Scientific Discourse,"<sup>36</sup> "The Literary Rhetoric of Science."<sup>37</sup>

Already these books and articles have demonstrated that science may fruitfully be considered from a rhetorical point of view. But it does not follow that science is best characterized as a form of rhetoric; more argument is required about the alternatives.<sup>38</sup> And it certainly does not follow that truth is relative, or that truth is agreement, as at least one author has claimed.<sup>39</sup> Surely truth cannot be what any particular group of people happen to agree to; it **may** be what people in general **should** agree to. The normative aspect of the concept of truth, first emphasized by C.S. Peirce, is crucial here. Consensus of the community of scientists may be a necessary condition of truth, but it cannot be a sufficient condition of truth, but it cannot be a sufficient condition. Otherwise it would be **meaningless** to say, for example, that the current scientific theory about the surface of Jupiter may turn out to be incorrect. I realize that this issue is murkier when the theory in question is not directly confirmable by experience;

but simply equating truth with agreement of scientists cannot be right. Consideration of the rhetorical dimension of science points rather, I think, to Peirce's definition of truth as "the opinion which is fated to be agreed to by all who investigate."<sup>40</sup> A similarly normative and non-relative concept of truth underlies Perelman's distinction between "persuading" (some particular audience) and "convincing" (the "universal audience;" that is, everyone with the necessary training and information.)<sup>41</sup>

Another recent line of argument is that science, like all language, makes extensive use of models, analogies, or metaphors;<sup>42</sup> and since these are free creations of the human mind, they are closer to the traditional rhetorical concept of ingenuity (*inventio*) than to Aristotle's strict proof (*episteme*).<sup>43</sup> If science too is an activity of the imagination, the argument continues, then there can be no sharp distinction between knowledge and opinion, objective and subjective, science and rhetoric; at most the difference will be one of emphasis. This position has been set forth most fully by Ernesto Grassi, who has traced it historically in Cicero, Quintilian, and the Renaissance Humanists culminating in Giambattista Vico:

It is clear that the first *archai* (principles) of any proof and hence of knowledge cannot be proved themselves... Only symbolic speech provides a framework within which a proof can come into existence. ... Such speech is an immediate showing, and for this reason "figurative" or "imaginative" ... it is metaphorical... Every original, primary, "archaic" speech cannot have a rational but only a rhetorical character.<sup>44</sup>

Again, there can be no doubt that we have much to learn from the history of rhetorical theory about the cognitive aspect of rhetoric; and that this aspect has been obscured from our view by the dominance of anti-rhetorical philosophies of science in our tradition: first aristotelianism, then cartesianism, then positivism. Indeed, my own argument for the rationality of rhetorical appeals to shared assumptions has been drawn from this neglected aspect of our heritage. But most of Grassi's critique seems directed at just one type of rationalism: the assumption that knowledge is deduction from indubitable "starting-points" (*archai*) which mirror the fundamental units or structures of reality. Granted, this assumption has been common: Aristotle's universals, Descartes' clear and distinct ideas, Russell's atomic propositions, etc. The deductive model of science does seem to be seriously compromised by the realization that it must make use of images and metaphors. But if the concepts made use of by scientists are not distinctive, the *way* they use them still may be. The *dialectical* tradition, starting with Plato and including Hegel, Marx, the pragmatists, the Frankfurt School of sociology, and a number of contemporary philosophers, locates the unique objectivity of science at the *end* of the process of

inquiry rather than at the beginning, and asks how we can maximize the probability of getting there. In Plato's dialogues it is the *attitude* of Socrates that is stressed rather than the conclusiveness of his arguments:

Some things we have said, Meno, of which I am not altogether confident. But that we shall be better and braver and less helpless if we think that we ought to inquire than we should have been if we indulged in the idle fancy that there is a knowledge, and no use in seeking to know what we do not know—that, Meno is no theme upon which I am ready to do battle, in word and deed, to the utmost of my power.<sup>45</sup>

The willingness of Socrates to "follow the argument wherever it may lead," and his insistence on raising and dealing with every difficulty he can think of, make him the personification of the selfless pursuit of truth. He knows that the materials (concepts) with which he is working are always more or less "contaminated" with images drawn from particular experiences; but his method and attitude are designed to maximize in the long run whatever true knowledge is possible for man. An excellent historical example of this process is the development of ancient Greek thought, in which concepts originally laden with concrete associations were gradually "purified" by successive generations of philosophers.<sup>46</sup> Despite the many variations on this theme in the dialectical tradition, there is a recognizable core of rationalism which seems immune to Grassi's critique, and which can provide a rationale for science (as the institutionalization of the Socratic attitude) which distinguishes it from any form of rhetoric aiming at persuasion or adaptation in particular situations.<sup>47</sup>

If I were writing a logic textbook, I would explain that just as the concept of validity abstracts from whether the premises of an argument are true or false, the concept of soundness is an idealization, an abstraction from the practical conditions in which arguments are generally used. As such it can be extremely useful, for example in science. But to reject an argument simply because its premises are not known to be true is like rejecting a society simply because it is not utopia. It would be a mark of irrationality rather than rationality. The student must be given ways of evaluating the plausibility of arguments in context. This means devoting at least a chapter to rhetoric: not to stylistic devices or applied psychology, but to the common "topics" or forms of plausible arguments. These must be reformulated in each society and in each generation: this is a valuable lesson in itself for the student. Appeal to tradition has lost some of its persuasiveness for us, for example, and novelty has become a positive value; there are solid historical reasons for this, which must be discussed. Individual freedom and self-actualization are unquestioned Good Things in our society; impracticality is a Bad Thing.



Someone who questioned any of these assumptions would be considered irrational unless he could produce an explanation very quickly. Rhetoric itself has been so discredited in our society that a successful argument must seem to be non-rhetorical, must seem to be "nothing but the facts." Examples of plausible argument forms for our time are not hard to find, but must be formulated carefully. Again, I am not talking about what **in fact** would persuade most people today—this is a question for empirical social science, properly excluded from logic—but what **ought** to persuade them, given a certain historical and intellectual context. Instead of saying that an appeal to authority or majority opinion is fallacious unless certain other conditions are present, the textbooks should say that these are plausible arguments, and therefore should persuade a rational person, unless a stronger argument to the contrary is available with a reasonable expenditure of time and effort. They should then point out that such arguments are irrelevant for the special purpose of science, to discover truth without regard for cost and time limitations.

The implications of this concept of rhetorical rationality for social and political philosophy are considerable. It is this concept, I think, that courts use when they ask what "the man in the Clapham omnibus" would have done; and when they admonish a jury that they must find the defendant guilty "beyond a reasonable doubt."<sup>48</sup> If it is irrational to accept any argument whose premises are not known to be true, then most of us are irrational most of the time. This immediately suggests either a platonic elitism or a rejection of reason in favor of faith, intuition, or arbitrary commitment. But if most of us can and do demand rational (plausible) arguments most of the time, even from politicians and advertisers, then there may be hope for reason and democracy yet.

### Notes

<sup>1</sup>This statement seems non-controversial to me; I encounter this assumption everywhere. To give just one example, the Collier-Macmillan **Encyclopedia of Philosophy** says in an article on "Decision Theory" (by Patrick Suppes) that because of the mathematical paradoxes involved in this theory, "We do not yet understand what we mean by rationality." (Vol. ii, p. 310)

<sup>2</sup>Howard Kahane, **Logic and Contemporary Rhetoric** (Wadsworth, 2nd ed., 1976), p. 140. I will take this as a representative textbook of informal logic, because it is widely respected and unusually explicit about its assumptions.

<sup>3</sup>*Ibid.*, p. iii.

<sup>4</sup>For a useful survey of the rhetorical tradition that does not evade philosophical issues, see S. Ijsseling, **Rhetoric and Philosophy in Conflict** (The Hague: Nijhoff, 1976.)

<sup>5</sup>**Proceedings of the Aristotelian Society**, 1957, pp. 167-98. See also J. Kekes, "Essentially Contested Concepts: A Reconsideration," **Philosophy and Rhetoric**, vol. 10, no. 2 (Spring 1977), pp. 71-89, for a refinement of Gallie's ideas which uses rationality as an example.

<sup>6</sup>Reported in **Newsweek**, June 26, 1978.

<sup>7</sup>*Op. cit.*, pp. 7-8.

<sup>8</sup>See also J. Woods and D. Walton, "Argumentum ad Verecundiam," **Philosophy and Rhetoric**, vol. 7, no. 3 (Summer 1974), pp. 135-53. Like Kahane, Woods and Walton assume that appeals to authority have a logical structure implying "P is true" (pp. 140-46). Their final paragraph (p. 152), however, points rather to an analysis like that offered here, in which the conclusion would be rendered by "Therefore you should believe P."

<sup>9</sup>**Rhetoric** i, 1. See E. Garver, "Rhetoric and Essentially Contested Arguments," **Philosophy and Rhetoric**, vol. 11, no. 3 (Summer 1978), p. 157.

<sup>10</sup>I will not be talking about rationality in the sense of capacity for intelligent behavior; this is the sole topic of J. Bennett's **Rationality** (London: Routledge and Kegan Paul, 1964). I will also avoid issues in "philosophy of action" such as how it is possible to do something for a reason, how beliefs are related to actions, etc.—see J. Raz, ed., **Practical Reasoning** (Oxford, 1978.)

<sup>11</sup>For example, **Metaphysics** ii, 1.

<sup>12</sup>**Rhetoric** i, 1. 1355b 10-15.

<sup>13</sup>*Ibid.*, ii, 23. 1398b 19-24. Compare this list of "valid authorities" to Kahane's!

<sup>14</sup>*Ibid.*, ii, 24. 1402a 18-24.

<sup>15</sup>*Ibid.*, i, 1. 1354a 16-30; and i, 2. 1356a 16-17. One of these may have been Gorgias, who said in his "Encomium on Helen" that "Persuasion by speech is equivalent to abduction by force.... The power of speech over the constitution of the soul can be compared with the effect of drugs on the bodily state." **Ancilla to the Presocratic Philosophers**, trans. K. Freeman (Harvard University Press, 1957), pp. 132-33.

<sup>16</sup>*Ibid.*, i, 2. 1356a 4-14. Again contrast this to Kahane's position.

<sup>17</sup>*Ibid.*, i, 9. Compare also: "Apart from arguments, there are three things that gain our belief: intelligence, character, and good will. Speakers are untrustworthy in what they say or advise from lack of one or more of these.... Therefore a speaker who is thought to have these three qualities necessary is trusted by his audience." *Ibid.*, ii, 1. 1378a 6-18.

<sup>18</sup>*Op. cit.*, pp. 140-53.

<sup>19</sup>A recent law textbook which discusses this assumption and its implications thoroughly is **The Lawyering Process** by G. Bellow and B. Moulton



- (Foundation Press, 1978), pp. 35-121.
- <sup>20</sup>*Rhetoric* ii, 19. 1392b 20.
- <sup>21</sup>*Ibid.*, i, 15.
- <sup>22</sup>*Nicomachean Ethics* i, 3. 1094b 24-28.
- <sup>23</sup>Many theologians would accept this, of course, from Tertullian to Kierkegaard and Barth.
- <sup>24</sup>*Fallacies* (Methuen, 1970), p. 160.
- <sup>25</sup>*The Savage Mind* (University of Chicago Press, 1966). See also R. Horton, "African Traditional Thought and Western Science," in B. Wilson, ed., *Rationality* (Oxford: Blackwell's, 1970), pp. 132-53.
- <sup>26</sup>*Witchcraft, Oracles, and Magic among the Azande* (Oxford University Press, 1937), p. 194.
- <sup>27</sup>For example R. Horton, *op. cit.*, pp. 153-71.
- <sup>28</sup>"Levi-Bruhl's Theory of Primitive Mentality" (1934), quoted by P. Winch in *Rationality*, pp. 79-80.
- <sup>29</sup>See E. Gellner, "The Savage and the Modern Mind," in R. Horton and R. Finnegan, eds., *Modes of Thought* (London: Faber and Faber, 1973), pp. 162-81.
- <sup>30</sup>As is suggested by D. Walton in "Why is the *ad populum* a Fallacy?," *Philosophy and Rhetoric*, vol. 13, no. 4 (Fall 1980), pp. 264-78.
- <sup>31</sup>The best discussion of this point known to me is Wayne C. Booth's in *Modern Dogma and the Rhetoric of Assent* (Notre Dame, 1974), chap. 3.
- <sup>32</sup>Both published by the University of Chicago Press. See also J. Bronowski, *Science and Human Values* (New York: Harper & Row, 1956), chap. 3; and J. Ziman, *Public Knowledge: The Social Dimension of Science* (Cambridge, 1968).
- <sup>33</sup>T. Kuhn, *op. cit.*, p. 93. See also pp. 147-49.
- <sup>34</sup>W.B. Weimer, *Philosophy and Rhetoric*, vol. 10, no. 1 (Winter 1977), pp. 1-29.
- <sup>35</sup>M.A. Overington, *Philosophy and Rhetoric*, vol. 10, no. 3 (Summer 1977), pp. 143-63.
- <sup>36</sup>P.N. Campbell, *Quarterly Journal of Speech*, vol. 61 (1975), pp. 391-405.
- <sup>37</sup>J. Gusfield, *American Sociological Review*, vol. 61 (1976), pp. 16-33.
- <sup>38</sup>I find Walter Weimer's argument for this (footnote 34) the most interesting, but I am not prepared to give up "justificationism"—the view that science yields objective probabilities—for Weimer's characterization of science as a set of "injunctions" to colleagues.
- <sup>39</sup>B. Brummett, "Some Implications of 'Process' or 'Intersubjectivity': Post-modern Rhetoric," *Philosophy and Rhetoric*, vol. 9, no. 1 (Winter 1976), p. 21-51, especially 32-36.
- <sup>40</sup>*Collected Papers*, Vol. V (Harvard University Press, 1934,) p. 407.
- <sup>41</sup>C. Perelman and L. Olbrechts-Tyteca, *The New Rhetoric: A Treatise on Argumentation* (Notre Dame, 1969), pp. 26-35.
- <sup>42</sup>M.B. Hesse, *Models and Analogies in Science* (Sheed & Ward, 1963; enlarged edition, Notre Dame, 1966); C. Turbayne, *The Myth of Metaphor* (University of South Carolina Press, 1962.)
- <sup>43</sup>P.N. Campbell, "Poetic-Rhetorical, Philosophical, and Scientific Discourse," *Philosophy and Rhetoric*, vol. 6, no. 1 (Winter 1973), pp. 1-29.
- <sup>44</sup>E. Grassi, *Rhetoric as Philosophy: the Humanist Tradition* (Penn State University Press, 1980), pp. 19-20. See also Grassi's "Critical Philosophy or Topical Philosophy?" in *Giambattista Vico: An International Symposium*, eds. G. Tagliacozzo and H. White (Johns Hopkins, 1968), pp. 39-50; and "The Priority of Common Sense and Imagination: Vico's Philosophical Relevance Today," in *Vico and Contemporary Thought*, eds. G. Tagliacozzo, M. Mooney, and D.P. Verene (Humanities Press, 1979,) vol. 1, pp. 163-85. Vico, however, did not draw the corollary that science is rhetorical: see E. McMullin, "Vico's Theory of Science," *Ibid.*, pp. 60-90.
- <sup>45</sup>*Meno*, 86B.
- <sup>46</sup>The most careful account of this fascinating story is that of G.E.R. Lloyd, in *Polarity and Analogy* (Cambridge, 1966) and *Magic, Reason and Experience* (Cambridge, 1979).
- <sup>47</sup>See J. Habermas, *Communication and the Evolution of Society* (Beacon Press, 1979), especially chap. 3: "Historical Materialism and the Development of Normative Structures." H. Johnstone, Jr. has distinguished between rhetoric and philosophy along similar lines, in *Philosophy and Argument* (Penn State University Press, 1959), chap. 4. For more on the relationships between rhetoric, science and philosophy, see my "Rhetoric, Dialectic, and Force," *Philosophy and Rhetoric*, vol. 7, no. 3 (Summer 1974), pp. 159-64.
- <sup>48</sup>See L. Tribe, "Trial by Mathematics: Precision and Ritual in the Legal Process," *Harvard Law Review*, vol. 84, no. 6 (April 1971), pp. 1329-93. □

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