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Rationality and Argument

■ *Self-criticism is based on principles of rationality. Although irrationality is to be avoided, both rationality and nonrationality have clear roles to play in the acquisition and development of knowledge. Argument assists in determining which claims for knowledge are objective or subjective. An illustration from the Bible shows how the Philippian jailer acts upon a formal argument, but a formal argument defective in informal ways.*

THERE ARE, of course, a variety of methods for acquiring and developing knowledge and methods of fixing belief in a given subject area. We employ these methods regularly, whether to determine courses of action in our everyday lives or to learn about and attempt to master academic pursuits. Unsurprisingly, these methods vary in their effectiveness. Let us try to determine, from a commonsense point of view, what sort of fixation of belief would strike us, in any given situation, as the best.

Let us suppose that the issue about which we wish to learn and, eventually, adopt a course of action is a perceived need for heart surgery. What sorts of factors would figure intelligently in making a decision about such a perceived need? Undoubtedly, such factors as the opinions of one's regular physician and of the consulted cardiologist would play a major role in coming to a decision in this matter. Now, why should these opinions weigh so heavily in making a decision about heart surgery? One would likely prefer the advice of such

experts over other forms and expressions of opinion because these persons have reached their conclusion, their advice to you, not on the basis of uninformed opinion but as a result of genuine argument. What is meant by *argument*, in this sense?

An argument, in its most basic sense, is a process by which a claim is made about something and, more importantly, is backed up or supported by relevant evidence organized in a persuasive manner. The claim in our situation is the conclusion reached by the consulted physicians that heart surgery is called for. The evidence presented, in this case, could take several forms, among which might be a medical history of steadily declining heart function, a genetic history of similar difficulties, clearly disturbing results obtained from uses of electrocardiography and angiography, and the like. In contrast, noting how much it has rained today or who is currently the president of the United States or whether the local trees have budded would not be useful evidence in this matter. Similarly, if someone used your medical history and coronary symptoms as justification for the notion that he should be crowned the King of Spain, we would, likewise, be suspicious of the employed "evidence." Of course, if parallel tracks for these medical and monarchial phenomena were claimed over a period of time with alleged cause and effect relations between events in them, we would again be confronted, as we were in chapter 1, with what Peirce called failures to predesignate. The lack of definite, testable hypotheses leads to such faulty connections of irrelevant events. But not only are we again seeing the fruits of failing to predesignate; both examples should also alert us to another, equally severe problem, namely, that the process of *reasoning*—the process that should link relevant evidence to a relevant conclusion—is also defective. The so-called "evidence," empirically derived, and the powers of human reason combine here to produce conclusions that are nonsense.

To summarize these matters, let us reconfigure our description of an argument to produce something a bit more tidy. Thus, an argument is a process in which a *conclusion* claimed as true or false is supported by relevant evidence in the form of a *premise*, and the connec-

tion between premise (or premises) and conclusion is one governed by the best possible *reasoning*.

So, we accept the opinion and advice of our medical experts because their opinion and advice is the result of adequate predesignation and argument rather than the product of, say, superstition or mere personal or subjective feeling. Please notice that this use of "argument" is very different from the sorts of shouting matches we often associate with that term. The kind of argument we are interested in with our surgery illustration produces, unlike the subjective shouting match variety, a conclusion that is *objective*—which means that, although discovered by human minds and human reason, it is independent of us, or real. Given investigators who can understand the issues involved and who do not have a private, prearranged agenda to follow, the same evidence and the same reasoning should consistently lead to the same conclusion, regardless of which investigators are involved. Such objective results are conclusions that command the respect of all competent observers, rather like the notion in classical mechanics that objects dropped near the surface of the earth will fall, if unimpeded, at a rate of acceleration of 32 ft./sec./sec. Our mere subjective opinions or feelings in the matter are completely irrelevant. In fact, the phenomenon of acceleration would function just the same without any human observers to note it at all. Such objective conclusions or knowledge-items are like a collection of materials or objects placed on a writing desk: they are "there," available for all to see. Mere subjective squabbling, while it may produce a satisfying consensus or a unanimity of opinion, will not, in and of itself, produce knowledge about issues that have an objective character.

You may recall that civilized people, for a time, formed a strong consensus as to what should be done with individuals whom they characterized as witches. The way they treated alleged witches can illustrate what are known as informal fallacies in reasoning. *Fallacy* means *error*, both in the sense of a mistake having been made and in the sense of failure in our reasoning processes. The failure to predesignate, for example, is one such fallacy. By comparison, "formal fallacies," which we

will take up in chapter 5, are violations of the logical limits of a standardized form or pattern of deductive reasoning: as in the argument all human beings are mammals; all dogs are mammals; therefore, all human beings are dogs.

Informal fallacies, however, concern basic questions about the relevance of the evidence offered in support of some conclusion. Thus, in the case of witches, a serious problem confronts the investigator trying to find relevant evidence to support the conclusion that witches exist or the opposite conclusion that they do not exist. One can well imagine an exchange like the following between two people arguing over this question. Arguer A: "Well, it's a certainty that there *are* witches, because nobody has ever proven that there *aren't* any!" Arguer B: "Nonsense! Of course there are no such things as witches, because nobody has ever proven that there *are* such things as witches!"

The difficulty in this *argument from ignorance*, as this informal fallacy is termed, is that each arguer cites in favor of his conclusion the fact that no convincing evidence for the opposite conclusion has been put forward. But none could be! The same circumstance arises with arguments over claims made by parapsychology and astrology. It is tempting to think that this fallacy should be termed "argument from *enforced* or *unavoidable* ignorance," because the existence of witches and many of the claims of parapsychologists and astrologists are matters outside the bounds of objective testing procedures. As such, they are not matters, as yet at least, that can guide us to an objective point of view: they are not objective matters dealing with objective evidence. Recalling the irrelevant correlation of sunspots and pregnancies (a failure to predesignate) that we noted in chapter 1, we can detect the relationship between failure to predesignate and an argument from ignorance. In short, it appears that all arguments from ignorance are by default instances of failures to predesignate. But, using the example connecting sunspots and pregnancies as an illustration, not all failures to predesignate are arguments from ignorance. We are not, in the correlation between sunspots and pregnancies, drawing a conclusion based on hopeless, unavoidable ignorance. Sunspots and pregnancies

and alleged relations between them are things about which we *can* have objective knowledge.

Objective matters, then, are matters about which all informed and reasonable persons should, eventually, agree. The histories of various inquiries, such as the history of medical pathology, disclose this tendency, especially when errors and misconceptions arise and must be eliminated or corrected.

All this can be phrased in a different and more compelling manner. When we reach such objective conclusions, we have conducted ourselves according to the dictates of being creatures who are *rational*. That is, we try, whenever possible in such matters, to use relevant types and sufficient amounts of evidence, to draw conclusions consistent with the evidence and to draw such conclusions in just that way because we have used good reasoning.

For example, if I have a well-fixed belief that I can hop into my red sports car and drive from this location to a nearby city, this is surely a rational belief on my part. When I say that I know that I can do this (or, to get a bit technical about it, when I say, "The statement 'Stewart can drive to a nearby city' is true"), I have fixed my belief in a rational manner. Thus, the relevant statement, "Stewart can drive to a nearby city," is my conclusion; the premises consist in the existence of the proper equipment, pavement, abilities, and a past history along these lines; and the good reasoning consists in the fact that, combining all the pieces of evidence and putting them into play, it is perfectly reasonable to presume that the conclusion will result. Whether or not such a conclusion is a matter of absolute certainty or relative probability is an important question that will, shortly, command our attention.

If, on the other hand, I have a well-fixed belief that, by flapping my arms furiously and launching myself from the roof of the local bank, I can *fly* to a nearby city, then I am most assuredly operating in an *irrational* manner. How long I can continue to operate with this belief is a question that could be answered by purely empirical means, by my attempt to fly after leaping from the bank roof. Similar means might

have been employed, pragmatically rather than dogmatically, by those who believed in witchery. These cases are worth study because they illustrate the danger of irrationality and of blindly following important-sounding advice, thereby convincing ourselves that some mechanistic, dogmatic approach to knowledge will provide us with a guarantee that our knowledge or beliefs are assured and insured. In his "Our Senses as Reasoning Machines" of 1900, Peirce gave a summation of this problem:

> What, then, is the use of designating some formations of opinion as rational, while others (perhaps leading to the same results) are stigmatized as blind following of the rule of thumb or of authority, or as mere guesses? When we reason, we set out from an assumed representation of a state of things. This we call our *premise*: and working upon this, we produce another representation that professes to refer to the same state of things: and this we call our *conclusion*. But so we do when we go irreflectively by a rule of thumb, as when we apply a rule of arithmetic the reason of which we have never been taught. The irrationality here consists in our following a fixed method, of the correctness of which the other method affords no assurance; so that if it does not happen to be right in its application to the case at hand, we go hopelessly astray. In genuine reasoning, we are not wedded to our method. We deliberately approve it, but we stand ever ready and disposed to reexamine it and to improve upon it, and to criticize our criticism of it, without cessation (Peirce 1900, MS 831: 9–11).

We can conclude then that irrationality—whether from an immediate and abrupt conflict with good reasoning and the facts of the world or brought on more gradually by operating from an ignorantly followed or dogmatically held method—cannot produce objective knowledge or reliable fixations of belief. In the arm-flapping flight illustration, above, the principal fault seems to derive from my defective reasoning having led me to embrace an inaccurate, if not outright false, picture of the world around me and how it ordinarily operates.

If choosing appropriate subsidiary methods is part of our pragmatic business too, then we see that irrationality characterizes such mischoosings as thinking the Black Death of fourteenth century Europe and Asia due to divine retribution. So, rational behavior involves good reasoning while irrational behavior involves bad reasoning. Both the actual, immediately experienced consequences and the imaginable practical consequences of using acceptable or defective reasoning can help us improve reasoning that is a bit weak, or else lead us to discard reasoning that is plainly wrong.

There is yet another realm in which human knowledge and belief are conspicuous, a realm that seems set apart from both the rational and irrational. This is the realm of the *nonrational*. If rationality implies good reasoning while irrationality implies bad reasoning, then nonrationality seems to leave reasoning out of the acquisition and development of human knowledge altogether. How could knowledge or the fixation of belief occur in the complete absence of reasoning? That is, how could we be confident in making claims that are not supported at all by reasoning, whether that reasoning be good or bad? What sorts of topics or subjects could be approached by a nonrational means? The answer to this last question may lead us to an understanding of how nonrational insight and subsequent critical knowledge can come about.

Rationality depends on good reasoning and produces knowledge, in most matters. Irrationality stems from poor reasoning and can yield lunacy, if not criticized. Nonrationality offers no reasoning at all and produces results that, for the long run, cannot be relied upon without criticism.

An example of nonrationality is instinct. Obviously, our previous examination of inherited instinct clearly shows any instance of such truly instinctual knowledge to be nonrational in nature: we do not reason about it and probably are not even clearly aware of it. But bear in mind that with such truly inborn knowledge, no learning or acquisition seems to have taken place. One does not, *in utero*, methodically

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calculate whether or not the drive to survive is a good thing to cultivate or a rationally derived thing to believe. This example of inborn instinct is not of much interest to us at the present. What is of interest to us are any possible candidates for nonrational belief that do actually involve and produce acquired knowledge.

In the remainder of this chapter I will put forward three subjects that seem clearly to involve nonrational insight or fixation of belief in such an acquisitive manner. They involve genuine religious experience, private emotional states like falling in (or out of) love, and profound moments when an "aha!" or flash experience of artistic comprehension occurs. We are not concerned, for the moment, about the sorts of theological or pseudo-theological debates that can precede or follow upon authentic religious experiences, or about the rationalizations that often accompany our truly transitional emotional states, or about critical and reflective assessments that sometimes lead up to and follow after moments of real, legitimate artistic enlightenment. What is of interest here are those "moments of truth" inherent in each of these three cases, those particular, singular instances of religious, emotional, and artistic immediacy that overwhelm us, that so thoroughly saturate our cognitive processes that during those moments the possibility of rational consideration is totally obscured.

One such instance, dealing with the religious variety of acquired, nonrational insight, is recorded in chapter 16 of the New Testament's Acts of the Apostles: verses 25–34 generally and verses 30–31 in particular. This is the account of the conversion of the Philippian jailer, a striking instance of such a singular moment.

> And at midnight Paul and Silas prayed, and sang praises unto God: and the prisoners heard them. [26] And suddenly there was a great earthquake, so that the foundations of the prison were shaken: and immediately all the doors were opened, and every one's bands were loosed. [27] And the keeper of the prison awaking out of his sleep, and seeing the prison-doors open, he drew out his sword, and would have killed himself, supposing that the prisoners

had been fled. [28] But Paul cried with a loud voice, saying, Do thyself no harm: for we are all here. [29] Then he called for a light, and sprang in, and came trembling, and fell down before Paul and Silas: [30] And brought them out, and said, Sirs, what must I do to be saved? [31] And they said, Believe on the Lord Jesus Christ, and thou shalt be saved, and thy house. [32] And they spake unto him the word of the Lord, and to all that were in his house. [33] And he took them the same hour of the night, and washed their stripes; and was baptized, he and all his, straightway. [34] And when he had brought them into his house, he set meat before them, and rejoiced, believing in God with all his house.

Notice the relationship between our "belief—doubt—belief" model and what actually, observably happens to the Philippian jailer. He begins, first, with a well-fixed belief. He thoroughly believes that Paul and Silas belong in his jail. It is, to him, a piece of certain knowledge. If we review verses 16–24, we see why he thinks this is so.

[16] And it came to pass as we went to prayer, a certain damsel possessed with a spirit of divination, met us, which brought her masters much gain by soothsaying: [17] The same followed Paul and us, and cried, saying, These men are the servants of the most high God, which shew unto us the way of salvation. [18] And this did she many days. But Paul being grieved, turned and said to the spirit, I command thee in the name of Jesus Christ to come out of her. And he came out the same hour. [19] And when her masters saw that the hope of their gains was gone, they caught Paul and Silas, and drew them into the market-place unto the rulers, [20] And brought them to the magistrates, saying, These men, being Jews, do exceedingly trouble our city, [21] And teach customs which are not lawful for us to receive, neither to observe, being Romans. [22] And the multitude rose up together against them: and the magistrates rent off their clothes, and commanded to beat them. [23] And when they had laid many stripes upon them, they cast them into prison, charging the jailer to keep them safely: [24] Who having received such a charge, thrust them into the inner prison, and made their feet fast in the stocks.

The jailer is certain that Paul and Silas belong in his jail because the magistrates ordered their arrests; the magistrates appear here as his superiors and as competent authorities in Roman law. They ordered these arrests because the "masters" of the fortune teller or soothsayer, seeing a destruction of their profits at hand, cited what they took to be a proscription in Roman law against practicing objectionable or disruptive customs as an argument for the imprisonment of Paul and Silas. But were these masters themselves competent authorities in Roman law, or just emotionally attached to their profits? Were the magistrates reasonable in making judgments based on such claims? And are not the members of the aroused mob also being ruled by their emotions, rather than by their potential to be clear-headed eyewitnesses? Emotions play a role, perhaps quite a large role, in our acquisition and development of knowledge; but surely we do not want questions such as these decided mainly by our emotions!

This specific chain of events contains at least two informal fallacies best avoided in argumentation generally, namely, accepting an illegitimate authority and accepting uninformed consensus as legitimate sources and kinds of evidence. In this case the "masters" and the crowd are the generative factors. These fallacies are known, respectively, as *argument from authority* and *appeal to the mob*.

But the jailer, having received his orders from the magistrates, did not postpone his actions because of such logical difficulties. He had received orders from his superiors, and as far as he was concerned the prisoners delivered into his hands had been duly convicted and were his responsibility to keep locked up. The jailer's duty and belief system were perfectly in tune, and after securing his prisoners he no doubt retired for an evening of untroubled sleep.

At this point, the jailer has surely accepted an argument from authority by the magistrates, who had been swayed by the masters' claim and by the appeal of the mob. He probably has also accepted two additional informal fallacies, namely, the masters' *ad hominem* attack on Paul and Silas as disruptive aliens and an *appeal to emotion* by the mob. An ad hominem argument appeals to prejudice by attacking a

person's character rather than by mounting any objective evidence against that person's contentions. And an appeal to emotion is just that: an appeal to subjective emotion rather than an exhibition of actual evidence.

Now, let us take a closer look at the arrangement of the jailer's "reasons," and let us do so by way of being as explicit and clear as we can about the *formal* argument he has accepted. For he has indeed accepted, is following, and is prepared to act upon a formal argument of which he seems to be completely unaware.

The jailer has been confronted with a formal argument of the kind we can describe as a *hypothetical* argument. You can think of a hypothetical argument as one in which at least one piece of evidence, one premise, is a *conditional* statement, namely, a statement that follows the "If . . .then . . ." pattern. Thus, one could easily construct the following argument of this sort: "It is my hypothesis, my guess, my prediction for the future, that *if* I fulfill the condition of seriously studying what I want to learn, *then* I will learn it well. I have seriously studied what I want to learn. Consequently, I have learned it well." In a nutshell, what this initial sort of hypothetical argument tries to do is to make explicit a linkage or relation between two sets of conditions or requirements, such that if the first or antecedent set appears, the second or consequent group should follow. Whether this relation is one producing absolute certainty or a kind of probability is not something we need to concern ourselves with at the moment. Nor do we need to concern ourselves at present with what relations there may be between a conditional statement's consequent and antecedent when considered *in that order*. It is this initial conditional relation of "If the antecedent conditions are present, then the consequent results will appear" that does interest our attention for now, especially when fleshed out in the illustration of the Philippian jailer.

Now, put yourself in the jailer's situation at just the moment when the order to imprison Paul and Silas had been uttered. The following hypothetical argument might pose itself.