

# The Rationality of Belief And Some Other Propositional Attitudes

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Thomas Kelly  
Harvard Society of Fellows  
University of Notre Dame

**ABSTRACT.** In this paper, I explore the question of whether the expected consequences of holding a belief can affect the rationality of doing so. Special attention is given to various ways in which one might attempt to exert some measure of control over what one believes and the normative status of the beliefs that result from the successful execution of such projects. I argue that the lessons which emerge from thinking about the case of belief have important implications for the way we should think about the rationality of a number of other propositional attitudes, such as *regret*, *desire*, and *fear*. Finally, I suggest that a lack of clarity with respect to the relevant issues has given rise to a number of rather serious philosophical mistakes.

## 1. Introduction

It is a philosophical commonplace that beliefs can be evaluated according to different standards. The evaluative concepts applicable to beliefs that have dominated the attention of philosophers--those of **being certain** or **uncertain**, **warranted** or **unwarranted**, and the like--are typically employed in the making of *epistemic* evaluations. But we can--and not infrequently do--evaluate beliefs *practically* as well as epistemically: that is, we can evaluate a given belief with respect to the consequences, or the expected consequences, of its being held, or with respect to how its being held would affect the achievement of some desired aim.

Consider contemporary debates over relativism.<sup>1</sup> One set of issues concerns the probative force of considerations that are adduced for and against various relativist theses. Is relativism

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<sup>1</sup>The literature on relativism is voluminous. For a sampling, see the essays in Hollis and Lukes (eds.), Rationality and Relativism, as well as the essays in Krausz (ed.), Relativism: Interpretation and Confrontation.

self-refuting? Is there evidence for relativism, evidence afforded (as is sometimes claimed) by disciplines such as cultural anthropology? We might construe these debates as debates about whether someone who was acquainted with the relevant considerations would be *epistemically rational* in believing the contested theses.

A second set of issues--not always distinguished from the first set with sufficient care--concerns the *consequences* of belief in relativism. Thus, critics of relativism often condemn belief in relativist doctrines because of the bad consequences (e.g., the erosion of moral standards) which, they allege, would inevitably ensue if such belief became widespread. On the other hand, defenders of relativism often extol belief in relativist doctrines because of the good consequences (e.g., the fostering of greater tolerance among diverse groups) which, they allege, would result from belief in such doctrines. Here, both parties to the dispute are engaged in the practical evaluation of belief in relativism--they simply disagree over the question of whether the consequences of such belief would be good or bad on the whole.<sup>2</sup>

The conviction that consequences of a certain sort would result from a given belief's being held by others might lead one to attempt to propagate that belief in society, or, alternatively, to hinder its propagation. No doubt, various interesting ethical issues arise with respect to such possibilities. My concern though, is with the fact that one can evaluate one's own beliefs

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<sup>2</sup>I suspect that one reason why the two sets of issues are not always distinguished with sufficient care is that those who find the case for relativism intellectually compelling also tend to think that widespread belief in relativism would do more good than harm, while those who think that relativism is not well-supported intellectually tend to be among those who think that widespread belief in relativism would do more harm than good. A similar situation seems to obtain with respect to religious belief: in my experience, those who think that religious belief is intellectually bankrupt tend to think that such belief has pernicious consequences on the whole, while those who find the case for religious belief intellectually compelling tend to think that such belief has beneficial consequences. I suspect that there is a general psychological tendency at work here. If there is such a tendency, then this might lead us to consistently *underestimate* how often epistemic rationality is in fact practically disadvantageous, and how often epistemic irrationality is in fact practically advantageous. (It would also be interesting to investigate the *direction* of such psychological influence: Do people tend to alter their views about the epistemic credentials of a belief to fit their views about the practical consequences of its being held? Or rather, do they alter their views about practical consequences to fit their views about epistemic credentials?)

practically as well as epistemically, and in particular, with the question of whether such evaluations can make a difference to what it is rational for one to believe. It is uncontroversial, I take it, that one can evaluate one's own beliefs practically as well as epistemically: an athlete, for example, might realize that holding optimistic beliefs about her abilities would result in better performances than holding pessimistic beliefs about her abilities. More controversial is the suggestion that a realization of this sort might make a difference to what it is rational for the athlete to believe about her abilities. Can the expected consequences of holding a belief make a difference to whether it is rational to hold that belief? The core of the present paper consists of an exploration of this issue. In the remainder of the paper, I attempt to apply the lessons which emerge from that exploration. First, I argue that the lessons which emerge from thinking about the case of belief have important implications for the way we should think about the rationality of a number of other propositional attitudes, attitudes such as *regret*, *desire*, and *fear*. I then suggest that a lack of clarity with respect to the relevant issues has given rise to a number of rather serious philosophical mistakes.

## 2. The Rationality of Belief

Beliefs resemble actions in at least two theoretically interesting respects. First, token beliefs, like token actions, can be evaluated with respect to their rationality. Secondly, as we have already emphasized, token beliefs, no less than token actions, can be evaluated with respect to their expected consequences. It is curious then, that while the expected consequences of performing an action are ordinarily taken to be highly relevant to the rationality of that action, the expected consequences of holding a belief are ordinarily taken to be irrelevant to the rationality of that belief. That the expected consequences of performing an action are highly relevant to the rationality of that action--this will be conceded even by those who contend that the rationality of an action is not *entirely* determined by its expected consequences (other factors are also relevant), as well as by those who contend that, even if the rationality of an action is entirely determined by

its expected consequences, one need not have performed the action with the *best* expected consequences in order to have acted rationally.<sup>3</sup> Indeed, perhaps the paradigm of an irrational course of action is a course of action which frustrates the agent's aims in foreseeable and predictable ways. In contrast, the rationality of a belief seems to depend not on its expected consequences but rather on its *epistemic status*. Our paradigm of an irrational belief is not that of a belief which predictably leads to the frustration of the believer's goals, but rather that of a belief which is held in the face of strong disconfirming evidence. An athlete who has an overwhelming amount of evidence that she is unlikely to do well, and bases her belief that she is unlikely to do well on that evidence, would seem to qualify as a rational believer--even if her rational belief frustrates, in foreseeable and predictable ways, her goal of doing well. (Indeed, in such circumstances her rationality would seem to be part of her problem.) What accounts for this asymmetry?

Of course, some philosophers have maintained (or at least, have been interpreted as maintaining) that the expected consequences of holding a belief *are* relevant to the question of whether it is rational to hold that belief. Perhaps the best known application of the idea is Pascal's Wager. In a passage which Ian Hacking has described as "the first contribution to what we now call decision theory",<sup>4</sup> Pascal recommended belief in God on the grounds that the expected utility of being a religious believer is higher than the expected utility of being a non-believer. Compare the justification that Kant offers for belief in the "postulates of practical reason". According to Kant, the proposition that *human beings have free will* (for example) is a proposition for which we lack, and indeed must inevitably lack, the kind of epistemic grounds that metaphysicians have often sought to provide. Nevertheless, belief in this proposition is rational inasmuch as its being

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<sup>3</sup>Here I have in mind "satisficing" accounts of practical rationality, of the kind first explored by the economist Herbert Simon. See his "A Behavioral Model of Rational Choice" and "Theories of Decision Making in Economics and Behavioral Science". The general approach is further developed by Michael Slote in his Tanner Lectures, "Moderation, Rationality, and Virtue", as well as in his Beyond Optimizing.

<sup>4</sup>The Emergence of Probability, page 62. For Pascal's presentation of the Wager argument, see his Pensees, pages 149-153.

believed is a necessary condition for full obedience to the moral law.<sup>5</sup> More recently, contemporary philosophers such as Robert Nozick and Richard Foley have held that the expected consequences of holding a belief are relevant to its rationality.<sup>6</sup> Such philosophers face the task of delineating the respective roles that epistemic and practical considerations play in determining the status of a given belief as rational or irrational. On the other hand, those who reject the idea that practical considerations can make a difference to what it is rational to believe face the task of explaining *why* this should be so. Given that both actions and beliefs can be evaluated practically, why should practical considerations matter in the one case but not in the other?

One attempt to account for the putative asymmetry appeals to the apparent psychological inefficacy of practical considerations with respect to beliefs. The mere realization that my believing some proposition would issue in good consequences does not result in my believing that proposition. On the other hand, the realization that I have strong evidence that some proposition is true typically does result in my believing that proposition. With respect to beliefs, practical considerations seem to be psychologically impotent in a way that epistemic considerations are not. And it is tempting to conclude from this that practical considerations are irrelevant to a belief's rationality.

Compare the situation with respect to *height*. One can, of course, make judgements about the expected consequences of being a certain height. For example, I am confident that I am considerably better off, on the whole, being as tall as I actually am as opposed to being two feet shorter. Still, no one would think that it is more rational for me to be some heights rather than

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<sup>5</sup>See Kant's Critique of Practical Reason, page 132. In reading Kant in this way, I follow the interpretation of Christine Korsgaard: "A postulate of practical reason is an object of rational belief, but the reasons for the belief are practical and moral. The person needs the belief as a condition for obedience to the moral law, and it is this, combined with the categorical nature of that law, that justifies the belief." "Morality as Freedom", page 172.

<sup>6</sup>Nozick, The Nature of Rationality, chapter 3; Foley, The Theory of Epistemic Rationality, chapter 5. A list of others who express at least some sympathy for this thesis would include Richard Gale ("William James and the Ethics of Belief"), Jack Meiland ("What Ought We to Believe? or the Ethics of Belief Revisited"), Roderick Firth ("Chisholm and Ethics of Belief"), and Nicholas Rescher (Pascal's Wager).

others. Moreover, it's plausible to suppose that the reason why the expected consequences of my being a certain height make no difference to whether it is rational for me to be that height derives from my utter lack of control over my height. (Perhaps if I *could* control my height, then it *would* be more rational for me to be some heights rather than others.) Perhaps then holding a given belief is like being a certain height: although one can evaluate the expected consequences of holding that belief, such evaluations make no difference to whether it is rational to hold that belief.

There is a standard response to concerns about the psychological impotence of practical considerations, a response which dates back to Pascal. Immediately after presenting his Wager Argument, Pascal has his interlocutor respond as follows:

Yes, but my hands are tied...I am not free...I am so made that I cannot believe. What do you want me to do then?<sup>7</sup>

After acknowledging the force of this concern, Pascal offers his interlocutor some advice.

Roughly put, the advice is this: one should *act* in ways that are conducive to the acquisition of religious belief. Pascal's idea is that what one believes is, to a considerable extent, determined by what one does. And inasmuch as one can control what one does, one can exert a certain amount of indirect control over what one believes. Since having been first articulated by Pascal, this **Standard Response** to concerns about our lack of control over our beliefs has been embraced by many.<sup>8</sup>

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<sup>7</sup>Pensees, page 152.

<sup>8</sup>See, for example, John Heil ("Believing What One Ought", page 753, and "Believing Reasonably", page 51), and Foley (The Theory of Epistemic Rationality, page 216). On the general possibility of exercising indirect control over what one believes, see also Brand Blanshard, (Reason and Belief, pages 402-403), Bernard Williams ("Deciding to Believe") and William Alston ("The Deontological Conception of Epistemic Justification"). Compare, in a very different context, Jerry Fodor:

Epistemologists often remark that there is no such thing as deciding to believe that P...Well, maybe. But here's something that you can decide to do about what you believe: You can decide to put yourself in a situation where, depending on how things turn out, you may be

The possibility of influencing one's beliefs indirectly is often noted but seldom explored at any length. For this reason, I want to examine some of the more interesting ways in which one might engage in such a project. The cases in which I am interested have the following form: (i) An individual knows that her believing some proposition (which she does not now believe) would have good consequences, so she deliberately undertakes a course of action which results in her acquiring the desired belief, or (ii) An individual knows that her believing some proposition would have bad consequences, so she deliberately undertakes a course of action which results in her not holding the undesirable belief. Not only are projects of this sort possible, they are, I think, not infrequently pursued in the course of everyday life. Moreover, contrary to what is sometimes claimed, successfully completing such a project need not require any self-deception.

In some cases, one can acquire the belief that *p* is the case by changing the world so that *p* is the case. This point is noted by Richard Feldman<sup>9</sup> who provides the following example: if I'm offered a large sum of money if I acquire the belief that *the lights are on in my office*, then I can win the money simply by turning my office lights on. Given the highly contrived nature of Feldman's example, it's natural to think that the possibility of manipulating one's beliefs in *this way* is uncommon, or to think that it is philosophically uninteresting. (Feldman himself notes the point only in passing, and quickly sets it aside as irrelevant to the main issue with which he is concerned.) Neither of these natural thoughts is correct.

Manipulating one's beliefs in this way is not uncommon--in fact, a fair bit of human behavior is best explained by attributing projects of the relevant sort to the agents in question. Consider, for example, the countless number of people who exercise regularly and carefully monitor their diets in order to avoid being overweight. No doubt, there are many reasons why people act in this way, but one fairly common motivation seems to be this: if one is overweight, then that makes it considerably more difficult to avoid *believing* that one is overweight. And for many, the psychological costs of believing that one is overweight are (or would be) considerable. Given

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caused to believe that *P* (The Elm and the Expert, page 94).

<sup>9</sup>"The Ethics of Belief" page 671.

this, one might--and, I suspect, many do--avoid being overweight at least in part in order to avoid having the belief that one is overweight.

Consider, more generally, *self-respect*--according to John Rawls, the most important of the primary goods.<sup>10</sup> Plausibly, self-respect requires that one hold certain beliefs about oneself--or at least, it requires that one *not* hold certain beliefs about oneself. Someone who believes that his or her activities are utterly worthless does not possess self-respect. One might then act in worthwhile ways in order to maintain (or acquire) the belief that one's activities are worthwhile, and (thereby) achieve self-respect.

The possibility of deliberately acquiring desired beliefs about oneself by acting in ways designed to result in the holding of those beliefs raises interesting issues for moral psychology. Consider, for example, the proper role of *conscience* in moral motivation. In explaining why he refrains from performing an immoral action, an individual might say: "I couldn't live with myself if I did that". One might avoid performing immoral actions in part because of the psychological costs of believing that one has performed such actions (or perhaps: the psychological costs of believing that one is the *sort* of person who performs actions of the relevant kind). To what extent do such "impure" motivations detract from the moral praiseworthiness of an agent? Kant held that only conduct performed out of respect for the moral law possesses moral worth; to the extent that a person refrains from immoral behavior in order to avoid the sanctions of a guilty conscience, his conduct lacks moral worth. There is, however, this much to be said on behalf of such an individual: he is at least the sort of person who would be bothered by the belief that he has acted immorally. (Contrast a person who would be undisturbed by this belief, or worse, one who would perversely derive pleasure from it.)

Many other examples in which the desirability of believing that *p* is the case provides a powerful motive for acting so that *p* is the case could be provided; I confine my personal favorite to an extended footnote.<sup>11</sup>

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<sup>10</sup>Rawls' notion of a primary good is that of a good which is desirable and will bring benefit no matter what else one desires (*A Theory of Justice*, pages 90-95).

Insofar as I am epistemically rational, the acquisition of strong evidence that  $p$  is true will result in my acquiring the belief that  $p$  is true. In some cases then, I can acquire a desired belief by exploiting my epistemic rationality: I deliberately manipulate my epistemic position, acquiring evidence for the relevant proposition, knowing that belief will follow. Cases in which my means of acquiring evidence that  $p$  is true consists in my acting so that  $p$  is true are simply special cases of this more general possibility. For even if one cannot affect whether  $p$  is true, one can often deliberately acquire the belief that  $p$  by acquiring evidence for  $p$ , evidence that one would not have acquired if one was not motivated to believe that  $p$ . Again, the possibility of engaging in such behavior is one that is routinely exploited in the course of everyday life, and again, our doing so need not involve any self-deception. A nervous parent, unable to sleep because he or she does not believe that his or her child has arrived safely, will often acquire the desired belief by means of a simple phone call.

Consider the neo-Pascalian project of maximizing the expected utility of one's beliefs. One

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<sup>11</sup>For many years, one of the largest American insurance companies maintained a highly-successful advertising campaign which peddled life insurance under the slogan "Peace of Mind". (Their slogan was *not* "Take Care of Your Family".) The intended appeal of the advertisements seemed to be the following. An individual without life insurance might believe that his or her family would face extreme financial hardship in the event of his or her death and thus lack peace of mind. By purchasing life insurance, one would be acquiring good reasons to believe that one's family would escape this fate. This in turn would enable one to believe that one's family would remain financially solvent and (hence) enable one to achieve peace of mind.

It is somewhat puzzling why this particular advertising campaign would have been (thought to be) effective. For who is the target audience supposed to be? Those indifferent to the posthumous fates of their families would, presumably, have no need to purchase "Peace of Mind". On the other hand, those *not* indifferent to the fates of their families would presumably be motivated directly by their desire to spare their family financial hardship ("Take Care of Your Family") and not by their desire to achieve psychological tranquility.

The "Peace of Mind" advertising campaign makes most sense, I think, if there are a non-negligible number of individuals who, while willing to pay the costs of life insurance in order to provide for their families *and* procure peace of mind, might *not* be willing to pay the cost of life insurance if the only perceived benefit is that of providing for their families. (They need to be explicitly reminded of the extra expected utility that they stand to gain, without which they might not be motivated to act.) I find it interesting, and somewhat disturbing, that there are (thought to be) individuals whose preferences are structured in this way.

might have thought, offhand, that this is not the sort of project that could be fruitfully pursued by an individual who is perfectly epistemically rational, i.e., an individual who, at any given time, believes all and only those propositions which it is epistemically rational for her to believe at that time. But it should now be clear that this natural thought is mistaken. In particular, an individual who is perfectly epistemically rational might take into account the expected utilities of holding certain beliefs in deciding which questions to investigate further. Such an individual could adopt a policy of investigating topics with respect to which the present state of the evidence is unfavorable (in the hope that further investigation will alter the state of the evidence in desirable ways), while choosing not to actively investigate topics with respect to which the present state of the evidence is favorable. We would expect that such a policy, if consistently followed, would skew the individual's doxastic corpus in the direction of beliefs with greater utility--while preserving the impeccable epistemic rationality of that corpus at every given moment. Perhaps surprisingly, allowing considerations of expected utility to play a role in determining one's beliefs is consistent with the highest degree of epistemic purity.<sup>12 13</sup>

Because human beings are largely (although imperfectly) epistemically rational, the strategy of acquiring a desired belief by means of acquiring evidence for that belief will often be the most effective strategy available. Of course, one can only acquire evidence for a desired belief if in fact evidence for that belief is forthcoming. This is just to say that project of acquiring a desired belief

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<sup>12</sup>In the Introduction to his Philosophical Explanations, Robert Nozick seems to explicitly embrace something like this suggestion with respect to philosophical questions. Powerful arguments which purport to show that we lack free will or knowledge are to be undermined precisely because of the value of being able to conclude that we possess free will or knowledge. Equally formidable arguments, the conclusions of which concern matters of relative indifference, would be left unmolested.

<sup>13</sup> Of course, if an individual allows her desire to believe that p to *bias* the way she carries out her investigation (her desire leads her to give greater weight to evidence that supports p than to evidence that supports not-p, etc.), then the belief at which she ultimately arrives might not be epistemically rational. However, we should distinguish between the *motive* for undertaking an investigation and the *character* of that investigation. One might conduct an "honest" investigation, remaining genuinely open to evidence both for and against p, even if one is motivated to undertake the investigation because one desires to believe that p.

by means of acquiring evidence for it will--like any other project--be frustrated if the world proves sufficiently recalcitrant. In cases in which evidence for the desired belief is *not* forthcoming, one might, of course, resort to alternative strategies. Thus, Pascal advised his interlocutor to thoroughly immerse himself in a life of religious ritual and to imitate, in every way, the behavior of those who do believe. By doing so, the non-believer might hope to become more "docile",<sup>14</sup> and hence, more susceptible to religious belief. In a similar vein, Alston writes of "selective exposure to evidence, selective attention to supporting considerations, seeking the company of believers and avoiding non-believers, self-suggestion, and more bizarre methods like hypnotism".<sup>15</sup> It is an empirical question how much control we might exercise over our beliefs by utilizing strategies such as these--and one whose answer might very well change, if more effective strategies are developed, or currently available strategies are refined.

Can the expected consequences of holding a given belief make a difference to the rationality of holding it? In answering this question, we should distinguish carefully, as Eugene Mills has urged<sup>16</sup>, between the assessment of a token belief and the assessment of the actions which are intended to result in the acquisition of that belief. Just as it might be rational to cause oneself to act irrationally<sup>17</sup>, it might be rational to cause oneself to hold an irrational belief. That is, the mere fact that a token belief is the intended result of a course of action which it was rational to undertake does not guarantee that the belief is rational. But can the expected consequences of holding a belief make a difference to the rationality of the *belief itself*? Taken in one straightforward sense, this question should be answered in the affirmative: the expected consequences of holding a belief can make a difference to whether it is rational to hold that belief.

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<sup>14</sup>The French is abetira. In his translation, A.J. Krailsheimer offers the following comment on the passage: "That is, the unbeliever will act unthinkingly and mechanically, and in this become more like the beasts, from whom man was differentiated, according to contemporary philosophy, by his faculty of reason" (Pensees, page 152).

<sup>15</sup>"The Deontological Conception of Justification", page 134.

<sup>16</sup>See his "The Unity of Justification."

<sup>17</sup>As argued by Derek Parfit (Reasons and Persons, pages 12-13.)

Indeed, we have already seen that this is so. Upon realizing that my believing some proposition (which I presently neither believe nor have any evidence for) would be practically advantageous, I might set out to acquire evidence for that proposition. Suppose that my efforts are successful: I subsequently acquire a significant amount of evidence that the relevant proposition is true. Even those who contend that believing a proposition is rational if and only if the believer possesses a significant amount of evidence that the proposition is true will agree that, in these circumstances, my holding this practically advantageous belief would be rational. Moreover, they will also presumably concede that there is a clear sense in which the expected consequences of holding this belief has made a difference to whether it is rational for me to hold it: I would not now possess evidence for the belief if I had not realized that my holding it would be practically advantageous. That is, even if the rationality of a given belief is wholly determined by its epistemic status, the expected consequences of holding the belief might make a difference to whether it is rational to hold it, simply because its epistemic status might be historically dependent on the expected consequences of its being held. In this sense then, the expected consequences of holding a belief can make a difference to the rationality of holding it.

However, those philosophers who have defended the idea that the expected consequences of a belief can make a difference to its rationality have meant something considerably stronger than this. Such philosophers have held that practical considerations can make a difference to whether it is rational to hold a given belief even when practical considerations do not make a difference to the epistemic situation of the believer. For example, Foley claims that

All things being considered, it can be rational for an individual to believe what it is not epistemically rational for him to believe.<sup>18</sup>

And this is because it might be clear, in a given case, that holding an epistemically irrational belief would best promote one's goals.

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<sup>18</sup>The Theory of Epistemic Rationality, page 214.

Here, the suggestion seems to be that practical considerations can *rationalize* beliefs, in much the way that practical considerations can rationalize actions.<sup>19</sup> Suppose then that we interpret the question of "Can the expected consequences of holding a belief make a difference to whether it is rational to hold that belief?" so that it is equivalent to the question: "Can practical considerations ever rationalize the holding of a belief?" So interpreted, the question should, I think, be answered in the negative: practical considerations do not rationalize beliefs. With respect to beliefs, rationality just is epistemic rationality.

As a first step towards seeing why this is so, consider a distinction familiar from both epistemology and action theory: the distinction between

- (1) some individual's  $\Phi$ -ing while having a reason R to  $\Phi$ , and
- (2) some individual's  $\Phi$ -ing for reason R

That the first state of affairs (1) obtains does not guarantee that the second state of affairs (2) obtains. For example, I might have strong epistemic reasons to believe that *today will be a bad day*, believe that today will be a bad day, but not hold the belief for those strong epistemic reasons. (Suppose that I hold the belief simply because of an unduly pessimistic temperament.)

When an individual not only has a reason to  $\Phi$ , but in fact  $\Phi$ -s for that reason, we say that her  $\Phi$ -ing is *based on* that reason. The basing relation is the relation which obtains between a reason R

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<sup>19</sup>Here and below, I use the term "rationalize" in Davidson's somewhat idiosyncratic sense of "tending to make rational". That is, as I use the word, it is not in any way pejorative. In ordinary speech, the word "rationalize" *is* sometimes used in a pejorative sense: someone who is rationalizing his actions or beliefs is engaged in the project of attempting to provide reasons for those actions or beliefs which are not the *real reasons* for those actions or beliefs (where typically, the real reasons are too disreputable to be explicitly cited). I want to explicitly disassociate my use of the term "rationalize" from any negative connotations which the word might carry. Indeed, as will become clear, as I use the term "rationalize", a reason can only rationalize a belief or an action if it is among the "real reasons" for which the belief is held, or the action is performed.

and a token belief (or a token action) when the belief is held for that reason (or the action is performed for that reason).

It is because of the gap between (1) and (2) that one can be epistemically irrational in holding beliefs that are overwhelmingly supported by one's evidence, and practically irrational in performing actions that one has overriding practical reasons to perform. Inasmuch as I believe that today will be a bad day solely because of an irrationally pessimistic attitude towards life, my belief is epistemically irrational. Even though I in fact possess compelling epistemic reasons for this belief, my belief is not rationalized by these reasons because it is not based on them.

How the basing relation should be analyzed is extremely controversial.<sup>20</sup> Some philosophers advocate causal analyses of the basing relation. According to such analyses, an individual's  $\Phi$ -ing is based on a reason R just in case the individual's recognition that R plays the appropriate causal role in his or her  $\Phi$ -ing. Other philosophers reject causal accounts of the basing relation and attempt to develop alternatives. Fortunately, we need not enter into this dispute, for the point which is essential for our purposes is conceded by both sides. The point in question is the following. Even if

one's recognition that R plays an essential role in the causal history of one's  $\Phi$ -ing

this is not sufficient for

one's  $\Phi$ -ing to be based on R.

Even those philosophers who seek to analyze the basing relation in causal terms admit that not just any causal relation is sufficient; the causal relation must be of "the right sort".<sup>21</sup> Suppose, for

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<sup>20</sup>For a survey of much of the recent literature in epistemology, see Korcz, "Recent Work on the Basing Relation".

example, that my recognition that I have strong evidence that *today will be a bad day* leads me to consult my horoscope--in the hope, perhaps, of being told otherwise. Suppose further that upon consulting my horoscope, I immediately forget about my original evidence, but believe that today will be a bad day simply because this is what my horoscope portends. In this case, my belief is not based on my original evidence--although my possession of that evidence plays an indispensable role in my coming to hold the relevant belief.

Notice that in cases in which one succeeds in acquiring a desired belief indirectly, the acquired belief is not based on one's recognition that the belief would be practically advantageous to hold. If my desire to hold a belief results in its acquisition via the acquisition of evidence which supports that belief, my belief is not based on practical considerations: rather, it is based on the newly-acquired evidence. Of course, my recognition that the belief in question would be practically advantageous might very well have played an indispensable role in the causal history of my coming to hold it. But from this it does not follow that the belief is based on that recognition. (In contrast, the *actions* which lead to the acquisition of the relevant evidence *are* based on my recognition that the belief would be practically advantageous.) Similarly, if, having been convinced by Pascal, an agnostic undertakes a program of religious self-indoctrination, then her undertaking this program is based on the belief that the expected utility of being a religious believer is greater than the expected utility of not being a religious believer. But if the program ultimately succeeds, the newly-arrived at belief that God exists will not be based on this belief about the expected utility of religious belief.

Here, I think, is why practical considerations do not rationalize beliefs. Although practical considerations can make a difference to what one believes, they do not do so by constituting grounds on which beliefs are based. (Contrast the way in which practical considerations do constitute grounds on which actions are based, and epistemic considerations constitute grounds

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<sup>21</sup>The point is much emphasized by Davidson, the philosopher most responsible for the (re)popularization of causal theories of action. See his "Freedom to Act".

on which beliefs are based.) And rational beliefs, like rational actions, are rationalized by those considerations on which they are based.<sup>22</sup>

It is tempting to think that the reason why practical considerations do not rationalize beliefs is the following: insofar as practical considerations can influence one's beliefs, their influence is indirect--that is, their influence is mediated through intervening actions. Epistemic considerations, on the other hand, can influence beliefs directly. But the distinction between "direct" and "indirect" is not, I think, crucial here. In general, S's  $\Phi$ -ing might be based on a reason R (and hence rationalized by R) even if S cannot  $\Phi$  directly, but can only  $\Phi$  by performing some intervening action which leads to her  $\Phi$ -ing. Consider the relationship between basic and nonbasic actions. It is often the case that my  $\Phi$ -ing is rationalized by my recognition that R, even though I cannot respond directly to my recognition that R by  $\Phi$ -ing, but can only respond by performing some series of actions A1...An which culminate in my  $\Phi$ -ing. For example, my recognition that my young child would be better off if she attends a good university might rationalize my *ensuring that she attends a good university*, although I can only do this by setting aside money each month, working with her on her academics, and performing various other actions over a period of years. Thus, the fact that practical considerations influence beliefs only indirectly (i.e., through intervening actions) does not suffice to show that they do not rationalize

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<sup>22</sup>At least, this holds for those rational beliefs which are rationalized 'by' something else. Not all rational beliefs fall into this category: for example, my belief that  $2+2=4$  is (I assume) a rational belief, but it is not rationalized in virtue of standing in a certain relation to supporting considerations, in the way that my rational belief that *communist economies tend to be inefficient* is. In what follows, I ignore this complication (Although see also footnote 23 below).

Of course, a consideration can be the grounds on which a given belief is based, *without* rationalizing that belief. In order to appreciate this, consider a character familiar from the literature on the traditional problem of induction: the counterinductivist. The counterinductivist (whose inductive practice runs "counter" to our own) believes that *the next emerald to be observed will not be green*, on the grounds that *all previously-observed emeralds have been green*. Although the counterinductivist's belief that the next emerald to be observed will not be green is based on his belief that all previously observed emeralds have been green, the former is not rationalized by the latter. (Indeed, nothing rationalizes his belief that the next emerald to be observed will be not-green, since this is not a rational belief.) In general: it is a necessary, though not sufficient, condition for S's  $\Phi$ -ing to be rationalized by R that S's  $\Phi$ -ing be based on R.

those beliefs. The important contrast is not between "direct" and "indirect"; rather, the important contrast is the contrast between the kinds of considerations on which a given response can be based and the kinds of considerations on which it cannot.

Given the centrality of the basing relation to the preceding claims, it would be useful to have an account of it which renders theoretically perspicacious the intuitive difference between (1) R's being a reason on which S's belief that p is based and (2) R's playing a role in the history of S's believing that p. Otherwise, how can we be sure that, e.g., the belief that God exists is *not* based on practical considerations, in those cases in which it is in fact arrived at in Pascalian fashion? Ideally, we would like an analysis of the basing relation, in the form of necessary and sufficient conditions for S's belief that p to be based on R. Unfortunately, I have no analysis of the basing relation to offer.<sup>23</sup> We do not require an analysis, however, in order to note a crucial mark of the distinction between (1) and (2). Whether R is a reason on which S's  $\Phi$ -ing is based, or whether R merely plays a role in the history of S's  $\Phi$ -ing will be reflected in the conditions under which S would (or would not) continue to  $\Phi$ . If my belief that *Smith is rich* is based on my belief that Smith has won the lottery, and I subsequently discover that Smith has not won the lottery, then I will (all else being equal) abandon the belief that Smith is rich. Contrast this to a case in which my belief that Smith has just won the lottery plays an indispensable role in my coming to believe that Smith is rich, but is not the grounds on which my belief is based:

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<sup>23</sup>I will, however, offer a desideratum for any proposed analysis. (And I do so in full awareness that the practice of offering desiderata for proposed analyses, without actually proposing analyses, is not the most admirable practice in which a philosopher might engage.) As we have noted, actions as well as beliefs can be based on reasons. In the next section, I will be concerned with the fact that many propositional attitudes other than beliefs (e.g., fears, regrets, desires, and suppositions) can be based on reasons. An analysis of what it is for a belief to be based on a reason should, I think, reflect the fact that the basing relation can obtain between reasons and many other things besides belief. It is perhaps not necessary that there be only one relation: perhaps there is a basing relation for beliefs, a basing relation for regrets, and so on. But at the very least, we would expect that the analyses of these different relations would exhibit significant structural similarities which show that they are all *basing* relations; i.e. that they are different species of the same genus.

Having been told (falsely) that Smith has just won the lottery, I immediately drive to his home in order to congratulate him and to ask for money. Upon my arrival, I see that Smith lives in a great mansion and realize that he has been extremely wealthy all along. When Smith informs me that the lottery story is false, I do not abandon my belief that he is rich.<sup>24</sup>

Imagine an agnostic who, having become convinced that the expected utility of being a religious believer is higher than the expected utility of not being a religious believer, undertakes a project designed to induce religious belief. The agnostic thoroughly immerses herself in a life of religious ritual, seeks out the company of religious believers while scrupulously avoiding that of non-believers and (following Pascal's advice) imitates in every way the behavior of those who do believe.<sup>25</sup> In time, she genuinely becomes convinced that God exists. Suppose further that a tragic irony subsequently ensues: the expected utility of belief in God suddenly and dramatically changes. (A despot bent on persecuting religious believers unexpectedly seizes power.) Even if she recognizes that the expected utility of being a believer is now lower than the expected utility of being a non-believer, this recognition will typically not prompt the abandonment of the newly-acquired belief. (Although it might, of course, prompt an anti-Pascalian project of *deconversion*.) Here, the fact that the belief is not abandoned in response to the change in expected utility indicates that the belief is not based on considerations of utility.

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<sup>24</sup>In his *Change in View*, Gilbert Harman emphasizes that we often do not keep track of the grounds on which our beliefs are (originally) based. This leads him to propose an account of belief revision according to which it is normatively appropriate to continue believing a proposition which one presently believes, as long as one lacks positive epistemic reasons for doubting it. Although practical considerations play an important role in Harman's thinking about belief revision, he does not claim that practical considerations rationalize beliefs. For to insist (as Harman does) that a belief is rational in the absence of special reasons for doubting it is not to say that practical considerations rationalize beliefs; rather, it is to expand the class of rational beliefs whose status as rational does not depend on their standing in certain relations to supporting considerations (cf. footnote 22 above). This possibility, I assume, is of no use to the defender of the view that practical considerations can rationalize beliefs. For that view amounts to the claim that beliefs can be rationalized in virtue of standing in certain relations to practical considerations.

<sup>25</sup>Compare the discussion of the possibility of exercising "long range voluntary control" over one's beliefs in Alston's "The Deontological Conception of Epistemic Justification", pp. 133-136.

Now let us alter the example slightly. In the altered version, the despot seizes power at a somewhat earlier time--the agnostic has begun the project of acquiring belief in God, but the project has not yet reached fruition. Upon recognizing that the expected utility of being a religious believer is now lower than that of being a non-believer, she simply discontinues the project. Here, the fact that she discontinues the project in response to the change in expected utility indicates that her participation in the project is itself based on considerations of utility. The considerations on which a given belief (or course of action) is based are revealed by the circumstances which would prompt one to abandon that belief (or course of action).

But isn't the claim that beliefs cannot be based on practical considerations undercut by familiar psychological phenomena such as wishful thinking? However, the acknowledged possibility of wishful thinking should be carefully distinguished from the (alleged) possibility of basing one's beliefs on practical considerations. To a first approximation: wishful thinking involves holding a belief because one thinks that things would be better *if that belief were true*. This, of course, is quite different from holding a belief because one thinks that things would be better *if one held that belief*. (Indeed, perhaps the most objectionable thing about engaging in wishful thinking is that doing so so often leads to bad consequences, in foreseeable and predictable ways.)

Even if one accepts the claim that practical considerations cannot rationalize beliefs because beliefs cannot be based on practical considerations, one might well wonder: Why *can't* beliefs be based on practical considerations? This is a fair question, and one for which I do not have a confident answer. Nevertheless, I offer the following hypothesis. The reason why actions but not beliefs can be based on practical considerations is simply this. Actions are not beliefs. One of the central features which distinguishes a given response *as* an action rather than a belief is that it is the kind of response which can be based on practical considerations. Conversely, one of the central features that makes a given state a belief--as opposed to an action, or some other kind of propositional attitude--is that it is the kind of response which can be based on epistemic considerations but not on practical considerations. That is, it is part of the nature of belief that beliefs are states which can be based on epistemic considerations but not on practical

considerations. (Compare the way in which we would answer someone who wondered why actions could not be based on epistemic considerations.<sup>26</sup>)

In this section, I have argued that practical considerations do not rationalize beliefs. I do not want, however, to exaggerate the probative force of the argument on offer. I take the dialectical situation to stand as follows. The apparent psychological inefficacy of practical considerations with respect to beliefs constitutes a prima facie case that practical considerations do not rationalize beliefs. The Standard Response seeks to undermine this prima facie case, by showing that (in at least some instances) practical considerations are psychologically efficacious with respect to beliefs. I have attempted to undermine the Standard Response by showing that the kind of psychological efficacy which it attributes to practical considerations, though real and not uncommon, is essentially *irrelevant* to the question of whether such considerations can rationalize beliefs. Although this kind of argument is obviously insufficient to *prove* that practical considerations do not rationalize beliefs, it does, I believe, effectively shift the burden of the argument back to the side of those who would defend the opposite claim. In the remainder of the paper, I want to consider some of the consequences that would follow in the event that this burden proves too heavy to discharge.<sup>27</sup>

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<sup>26</sup>Given the (notoriously difficult to explicate) connection between epistemic considerations and truth, it would be interesting to explore the theoretical possibility that there is an intimate relationship between the following two philosophical theses: (i) It is part of the nature of belief that beliefs can be based on epistemic considerations and (ii) It is part of the nature of belief that beliefs "aim at truth". For the thesis that "belief aims at truth" see Williams, "Deciding to Believe". The thesis is, however, controversial; for a recent criticism, see Dretske "Norms, History, and the Constitution of the Mental".

<sup>27</sup> The view that a belief's rationality is wholly determined by its epistemic status is perhaps the mainstream doctrine among philosophers (even if it is *not* the mainstream doctrine among philosophers who have explicitly addressed the issue in print). For those who do accept the mainstream doctrine, the primary interest of the present argument might derive, not from the fact that the argument supplies additional reasons to believe a conclusion that they already believe, but rather from the fact that it affords an *explanation* of why this conclusion holds true. That is, even if one is firmly committed to the view that epistemic status is all that matters with respect to a belief's rationality, one might still puzzle over the fact that beliefs and actions differ in this fundamental respect (Cf. pages 3-4 above).

### 3. Belief and Other Propositional Attitudes

Should one believe a proposition for which one lacks evidence if doing so promises to have beneficial consequences for oneself or for others? Should one abstain from believing a proposition for which one has a considerable amount of evidence if believing that proposition would have pernicious consequences? Questions of this sort have been pursued under the rubric "the ethics of belief".<sup>28</sup> Although philosophers have vigorously debated the ethics of belief, they have not similarly debated "the ethics of regret" or "the ethics of fear". We should note though, that conflicts closely analogous to those which fuel the ethics of belief debate can arise with respect to other propositional attitudes as well. I want to illustrate this fact, by means of examples, with respect to the propositional attitudes of *regret*, *fear*, and *desire*.

I am presented with a rare opportunity to achieve a lifelong dream, but I foolishly squander that opportunity. In these circumstances, I have strong reasons to *regret that I squandered the opportunity*; regret is, in this respect, the normatively appropriate response to the situation in which I find myself. That I regret having squandered the opportunity, however, might very well have bad effects on the whole: hopelessly distracted by my regret, I am severely hindered in the pursuit of my present projects.

I find myself confronted by a wild beast that has been known to viciously attack and kill human beings. In these circumstances, I have strong reasons to *fear that the beast will attack*; fear is, in this respect, the normatively appropriate response. However, I know that this particular species tends to "smell fear" and is more likely to attack if it senses that it is feared. It would thus be greatly advantageous if I was not afraid.

A final example is due to Derek Parfit<sup>29</sup>:

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<sup>28</sup>For a sampling of the literature, see Heil ("Believing What One Ought", "Believing Reasonably"), Meiland ("What Ought We to Believe, or The Ethics of Belief Revisited"), Mills ("The Unity of Justification"), Nozick (The Nature of Rationality, ch. 3) and Foley (The Theory of Epistemic Rationality, ch. 5). Recently, the term "ethics of belief" has come to be used in a somewhat wider sense. See the sundry topics addressed by Richard Feldman under the rubric in his "The Ethics of Belief".

<sup>29</sup>In conversation.

I have an important interview the next day, and I know that I will only perform my best if I get a full night's sleep this evening. Lying awake in bed the night before the interview, I strongly *desire that I fall asleep as quickly as possible*. However, the fact that I desire to fall asleep as quickly as possible might interfere with my ability to fall asleep as quickly as possible. If I lacked this desire, I would be better off.

In the preceding section, I suggested that the expected consequences of holding a belief cannot rationalize that belief because beliefs, unlike actions, cannot be based on practical considerations. Although the basing relation is typically discussed as a relation which holds between reasons and token beliefs or token actions, we can, I assume, also make sense of it as a relation which holds between reasons and propositional attitudes other than that of belief. Thus, we can ask whether my desire to consume a certain food is based on my belief that doing so will contribute to good health, or rather on my belief that the food in question is delicious. Similarly, we can ask whether my regret over having squandered the opportunity to meet some famous person is based on my belief that

- (1) if I had met this person, I would have been able to ask her some personal question (whose answer only she can provide and which I desperately want to know)

or (alternatively) on my belief that

- (2) if I had met this person, I would be more entertaining at cocktail parties

or on some third possibility.

Either (1) or (2), I think, might be the reason on which my regret is based. Suppose however, that

I *often* foolishly squander opportunities. Moreover, that I continue to squander opportunities is due in large part to my failure to feel regret over past squandered opportunities. If I regret my failure to meet this famous person, this would make me

less likely to squander similar opportunities in the future.

Given these facts, I might be, on the whole, better off if I feel regret. That I would be better off is something that others might recognize about me, or which I might recognize about myself. That is, I might believe that

(3) If I regret not having met this person, I will be better off.

Nevertheless, (3), unlike (1) or (2), cannot constitute the basis for regretting that I did not meet this person. (Although it might very well constitute the basis for *regretting that I do not regret not having met this person*.) Aware of my self-destructive tendency to squander opportunities, my girlfriend might attempt to make me regret this most recent squandering, in the hope that this will lead to greater opportunism in the future. In attempting to induce regret she will attempt to make me understand how much I have lost by not availing myself of this opportunity; she will not attempt to convince me of how much better off I would be in the future if I felt more regret about the past. This is because she recognizes that, if and when I do come to regret having squandered this most recent opportunity, my regret will be based on a more vivid appreciation of what has been squandered, and not on a belief about the expected consequences of holding the relevant attitude itself.

Regrets, like beliefs, cannot be based on beliefs about the expected consequences of their being held. And it is because of this that the expected consequences of regretting that such-and-such is the case cannot rationalize regretting that such-and-such is the case. For parallel reasons, practical considerations do not rationalize desires or fears.

Are there *any* propositional attitudes which can be rationalized by practical considerations? The answer to this question, I think, is "Yes". Here is my candidate for a propositional attitude of this kind: the propositional attitude of *supposing*. Imagine that it is relatively unlikely that some particular possibility will obtain, but that, if this possibility does obtain we will be saved from utter

disaster only if we have previously undertaken extensive measures to counter its effects. In such circumstances, we might decide to suppose that this possibility will obtain, in our deliberations about how to prepare for the future. Whether it is rational for us to make this supposition depends, I think, on the expected consequences of making the supposition.<sup>30</sup>

Of course, even though practical considerations do not rationalize desires (or regrets, or fears), practical considerations might make it rational to act so as to acquire a given desire. Moreover, the relevant course of action might be intended to result in the acquisition of the desire by means of acquiring genuine reasons for the desire, reasons which *do* rationalize the desire. In this way, the expected consequences of holding a given desire might make an indirect difference to whether it is rational to hold that desire. We noted above that, often, the most effective strategy for deliberately acquiring a desired belief is to act so as to acquire (epistemic) reasons for that belief. An analogous point holds with respect to desires and other propositional attitudes: often, the most effective strategy for acquiring a desired desire will be to act so as to acquire reasons for holding that desire. Consider, for example, the desire to lose weight. One might have good reasons for desiring to lose weight: if one lost weight, one would be in better health, have a better self-image, and so on. In addition to considering such reasons, one might also evaluate the expected consequences of desiring to lose weight. For example, having this desire might cause one to feel a certain amount of anxiety (a negative consequence); on the other hand, having this desire might make it much more likely that one *does* lose weight (a positive consequence). Suppose that, on the whole, the expected consequences of having the desire are better than the expected consequences of not having the desire, and therefore (one concludes) it would be better to maintain the desire. One knows, however, that one's desire to lose weight tends to wane over time. In these circumstances, one might attempt to manipulate one's desires by deliberately acquiring additional reasons for the relevant desire. One might, for example, arrange to

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<sup>30</sup>Compare L.J. Cohen and Michael Bratman on the propositional attitude of "acceptance" (as distinguished from belief). Cohen, *An Essay on Belief and Acceptance*; Bratman "Practical Reasoning and Acceptance in A Context".

automatically forfeit a significant sum of money to one's most disliked political group or organization if one fails to lose weight. By making such an arrangement, one deliberately acquires an additional reason to want to lose weight (in addition to being in better health and feeling better about oneself, one can avoid subsidizing political causes that one regards as odious or pernicious) and thereby makes it more likely that one will continue to desire to lose weight. In fact, many weight reduction programs employ exactly this strategy.<sup>31</sup> Tactics such as these are simply analogues of the tactic of acquiring epistemic reasons in order to maintain or acquire desired beliefs.

#### 4. The Consequentialist Mistake

Because the expected consequences of performing an action bear on the rationality of that action, there is a persistent tendency to mistakenly assume that the expected consequences of holding certain propositional attitudes bear on the question of the rationality of those attitudes. We might call this **The Consequentialist Mistake**. The Consequentialist Mistake has, I think, been committed by philosophers both early and late. Thus, some Stoics and Epicureans held that it is irrational to desire political power or great wealth.<sup>32</sup> Their grounds for this were the following. Whether one is able to successfully achieve political power or great wealth typically depends on countless contingencies that are outside of one's control. And inasmuch as this is so, there is too great of a chance that one will become miserable in virtue of having one's desires frustrated. To be rational in one's desires is to desire things which one need not rely on Fortune to attain. The person with rational desires thus achieves her good in virtue of having his or her desires satisfied. If I am right, this line of thought rests on a fundamental confusion. It is not the expected consequences of holding a desire that determines the rationality of that desire. The fact

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<sup>31</sup>As reported by G.T. Wilson in his "Behavior Therapy and the Treatment of Obesity".

<sup>32</sup>For a useful overview of Epicureanism and Stoicism, see Terence Irwin's Classical Thought, Chapters 8 and 9.

that one would learn much by being a Professor at Oxford is a reason to desire an Oxford Professorship; the fact that if one was a Professor at Oxford one would have to leave one's home and friends is (perhaps) a reason not to desire an Oxford Professorship. But the fact that if one desired an Oxford Professorship, one would most likely end up disappointed is no reason not to desire an Oxford Professorship. And this is because one's *not-desiring* an Oxford Professorship cannot be based on a desire to avoid disappointment, in a way that it *can* be based on a desire not to leave one's home.<sup>33</sup>

In the present century, the Consequentialist Mistake has frequently manifested itself in attempts to justify claims that adherence to certain constraints are constitutive of rationality. Consider, for example, the attempt to justify Bayesian constraints on rational belief by appeal to Dutch Book Arguments. It can be shown that, if my degrees of belief do not conform to the axioms of the probability calculus, then (given that I am willing to bet accordingly) I am vulnerable to a *Dutch Book*: a series of bets such that no matter how the world turns out, I am bound to lose money. Hence, (it is argued) rationality requires that one's degrees of belief conform to the axioms of the probability calculus. As several philosophers note however, this argument seems to conflate the rationality of a belief with the consequences or the effects of its being held.<sup>34</sup>

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<sup>33</sup>One might hold that it makes no sense to talk about states such as not-desiring or not-believing as being "based on" considerations. But that, I think, would be a mistake. For example, we can ask whether a juror's not believing *that the accused is guilty* is genuinely based on the juror's belief that the prosecutor has presented inadequate evidence, or whether the juror's not believing the relevant proposition is due to the fact that the juror never believes that people of a certain skin color are guilty of the crimes of which they are accused. As Kant emphasized, we can certainly ask questions about the considerations on which the non-performance of an action is based: a store-owner's not cheating his customers might be based on his desire to avoid a bad reputation, or it might be based on his respect for the moral law. The fact that it is not only actions, beliefs, and desires which can be based on considerations, but also omissions and abstentions gives rise to an additional desideratum on any analysis of the basing relation.

<sup>34</sup>The point was first made, I believe, by Ralph Kennedy and Charles Chihara, "The Dutch Book: Its Subjective Sources, Its Logical Flaws". It is well-pressed by John Pollock and Joe Cruz in their Contemporary Theories of Knowledge, page 95.

This criticism of the Dutch Book argument is a familiar one; I mention it chiefly for the sake of comparison. For there is a close analogue to the Dutch Book argument with respect to desires or preferences: the "Money Pump" argument that preferences be transitive.<sup>35</sup> If I prefer  $x$  to  $y$ ,  $y$  to  $z$ , and  $z$  to  $x$ , then (the argument runs) I should be willing to pay some money to move from  $x$  to  $y$ , and (from there) some money to move from  $y$  to  $z$ , and (finally) some money to move from  $z$  to  $x$ . I thus end up where I started, only poorer. Those criticisms of the Money Pump argument that have been put forth thus far claim either that the argument founders on some technical point<sup>36</sup> or that it trades on an illicit assumption<sup>37</sup>. Schick, for example, claims that the money pump argument depends on the illicit assumption that the value of placing several bets together is the sum of the values of the same bets placed separately. However, if the argument of the present paper is substantially correct, then we are in a position to make what is perhaps a more fundamental criticism, viz. that the Money Pump argument simply conflates the rationality of a given preference with the practical consequences of having that preference. Of course, it might very well be that my having intransitive preferences is in fact irrational. But nothing about the rationality of my preferences follows from the fact that they are *costly*. My preference that a young child not have some terminal disease might very well prove costly in virtue of causing me great anguish when she is diagnosed with that disease. But this hardly shows that my preference is irrational.

The final example of the Consequentialist Mistake that I wish to consider has arisen in connection with certain contemporary debates concerning the rationality of science. Because this is perhaps the most subtle as well as the most widespread manifestation of the Consequentialist Mistake, it is worth examining at somewhat greater length.

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<sup>35</sup>First stated by Donald Davidson, J. McKinsey, and Patrick Suppes, "Outlines of a Formal Theory of Value". They attribute the argument to Norman Dalkey.

<sup>36</sup> Raymond H. Burros, "Axiomatic Analysis of Non-Transitivity of Preference and of Indifference".

<sup>37</sup> Frederic Schick, "Dutch Bookies and Money Pumps".

In general, a significant portion of the most prominent historical and sociological work on science since the Second World War has presented a picture of scientific development which has made that development seem--or at least, seem to many--less rational or "objective" than it appeared on more traditional pictures. Thomas Kuhn's The Structure of Scientific Revolutions is undoubtedly the locus classicus of this genre.<sup>38</sup> There, Kuhn presented a picture of scientific change which struck many of his readers as constituting a more or less direct challenge to the rationality of science. In particular, the patterns of belief revision which according to Kuhn had been exemplified by many of the greatest scientists looked a great deal less rational than the conventional account of science would have led one to expect. For example, in a much-discussed passage, Kuhn compared the process by which a scientist abandons belief in one paradigm in favor of belief in a competing paradigm to a (presumably arational) process of religious conversion.<sup>39</sup> Many of Kuhn's readers found comparisons of this kind simply scandalous; others found them liberating. But what both groups shared was the assumption that Kuhn was *denigrating* or *impugning* the rationality of science.

Kuhn's response to this common assumption was an extremely interesting one.<sup>40</sup> In contrast to all of those who took his empirical, historical research to be relevant to the question of *whether* scientific practice is or had been rational--or at least, relevant to the question of the extent to which scientific practice is or had been rational--Kuhn himself tended to view his research as *revealing what rationality is*. As to the question of whether or not science is rational, Kuhn

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<sup>38</sup>Also notable in this connection is Paul Feyerabend's Against Method, the historical scholarship of Gerald Holton (see the references in footnote 40) and more popular works such as Arthur Koestler's The Sleepwalkers.

<sup>39</sup>The Structure of Scientific Revolutions, page 111.

<sup>40</sup>In what follows, I draw primarily on Kuhn's lengthy and illuminating "Reflections on My Critics". In fact, when confronted with the charge of "according to you, science is irrational", Kuhn tended to offer two distinct lines of response. One line of response was to complain that readers had simply taken his talk of "conversion experiences", or of adherents of different paradigms "living in different worlds" too literally. This line of response, although more frequently noticed by readers of Kuhn, is to my mind much less interesting than the second line of response which I find in his work and which I discuss below.

embraced what has been aptly described as "tautological optimism".<sup>41</sup> Kuhn did not think much of the suggestion that we possess some independent grasp on theoretical rationality, prior to our investigation of how actual scientists revise their beliefs. In fact, he was inclined to dismiss such suggestions out of hand: "To suppose that we possess criteria of rationality which are independent of our understanding of the essentials of the scientific process is to open the door to cloud-cuckoo-land".<sup>42</sup>

Since it was first articulated, Kuhn's view has become increasingly popular among both prominent historians and philosophers of science.<sup>43</sup> Consider, for example, the views of Gerald Holton, a physicist who became one of the most eminent historians of science of the present generation. Holton's historical research has been devoted to determining the conditions that are most hospitable to the advancement of science: both the institutional, social, and political conditions that are most conducive to scientific breakthroughs, and also the habits of mind and traits of character of those individuals who are most likely to achieve such breakthroughs.<sup>44</sup> Holton has written at length of the tendency of scientists to engage in what he calls "the suspension of disbelief". Holton uses this term to refer to the believing of favored theories in the face of strong disconfirming evidence. According to Holton, "any discussion of the advance of science that does not recognize the role of suspension of disbelief at crucial points is not true to the activity".<sup>45</sup> The suspension of disbelief, he claims, is "an important mechanism in the practice

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<sup>41</sup>The phrase was coined, I believe, by David Stove.

<sup>42</sup>"Reflections", page 264.

<sup>43</sup>For a particularly explicit endorsement by a prominent philosopher of science, see Philip Kitcher, "The Naturalist's Return", page 73.

<sup>44</sup>The key texts in this project include The Advancement of Science and Its Burdens, The Scientific Imagination: Case Studies, Thematic Origins of Scientific Thought, and Einstein, History, and Other Passions.

<sup>45</sup>Holton, The Advancement of Science and Its Burdens, page 12.

of experimental as well as theoretical scientists"<sup>46</sup>; Holton lists Einstein, Max Planck, and R.A. Millikan as particularly able practitioners of the art.<sup>47</sup>

One might have thought that, if in fact the holding of beliefs in the face of strong disconfirming evidence is sometimes essential to the advancement of science<sup>48</sup>, then science is sometimes best advanced when great scientists are less than fully rational, or even irrational. An interesting conclusion, to be sure.<sup>49</sup> This, however, is not the conclusion drawn by Holton himself. Instead, Holton takes the alleged indispensability of the "suspension of disbelief" as bearing on the question of the *rationality* of the relevant beliefs. In defending the suspension of belief as rational, Holton echoes Kuhn in writing of "...the emptiness of all attempts to impose external standards of correct thinking on the practice of scientists or to label as 'irrational' scientific work that fails to meet such criteria".<sup>50</sup>

Certainly, our preexisting ideas about the nature of rationality are not sacrosanct and should not be held immune from revision, including (or perhaps, especially) revision which is inspired by reflection on empirical studies of scientific development. Still, there are limits to the malleability of our ideas about rationality. The suspension of disbelief is, after all, the stubborn refusal to abandon a favored theory in the face of strong disconfirming evidence. It is safe to say, I think,

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<sup>46</sup>Holton, Einstein, History, and Other Passions, page 29.

<sup>47</sup>See especially the essays in Holton's collection, The Scientific Imagination: Case Studies.

<sup>48</sup>Of course, the extent to which protagonists of various key episodes in the history of science do manifest the kind of epistemic unscrupulousness recorded in such accounts is a controversial issue. Because I am not a historian or sociologist of science, I am not competent to (attempt to) answer this question. But the further question of what, if anything, we should conclude in case such epistemic unscrupulousness is in fact a relatively pervasive phenomenon seems worth pursuing in any case. This is especially so in light of the fact that my main claims concern what we should *not* conclude (i.e., what would not follow) in the event that the phenomenon in question is a relatively common one.

<sup>49</sup>And a conclusion which need not, I hasten to add, undermine our confidence in the institution of science itself, or its deliverances. For we should distinguish carefully between questions about the level of rationality displayed by particular scientists on particular occasions, and questions about the reasons which we have for believing that particular scientific theories accurately depict reality.

<sup>50</sup>Holton, Einstein, History, and Other Passions, page 29.

that in ordinary life someone who clung stubbornly to a favored theory about (say) politics in the face of disconfirming evidence would quite appropriately be taken to be irrational for doing so. Suppose that, as Holton suggests, the suspension of disbelief is sometimes essential to the advance of science, and that nothing that is essential to the advance of science can properly be considered irrational. Should we then conclude that our ordinary ideas about rationality are incorrect, and that the person who clings stubbornly to his pet theories about politics in the face of disconfirming evidence is, in fact, rational? (Or is the suspension of disbelief only rational in science, and irrational everywhere else?)

In fact, to draw conclusions about the rationality of a belief from considerations of *practical indispensability* is, I think, a mistake. Indeed, it is simply another manifestation of the Consequentialist Mistake, or the mistake of supposing that the expected consequences of holding a belief (or the fact that holding a belief is necessary in order to best achieve some desired goal) can rationalize that belief. It is perhaps easy enough to accept the idea that an athlete's overly optimistic beliefs about her abilities are irrational, even if those beliefs tend to promote her goals. It is no doubt more difficult to accept the claim that what are broadly-speaking *intellectual* or *cognitive* goals (e.g., the goals of scientific inquiry) might similarly be best promoted when individuals pursuing those goals are occasionally less than fully rational in their beliefs. But the fact that certain beliefs tend to promote the goals of scientific inquiry no more shows that those beliefs are rational, than the fact that an athlete's overly optimistic beliefs tend to promote her goals shows that those overly optimistic beliefs are rational. In each case, it is not the effects of holding the beliefs which determines their status as rational or irrational, but rather the quality of the evidential considerations on which the beliefs are based.<sup>51 52</sup>

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<sup>51</sup>For an argument against the general idea that epistemic goodness should be understood as practical or instrumental goodness with respect to our cognitive or epistemic goals, see Kelly, "Epistemic Rationality as Instrumental Rationality: A Critique".

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