

PRINCIPLES OF RATIONALITY

I

I would like to make some headway in ascertaining what our principles of rationality are. That is to say, I want to make a beginning toward uncovering the general principles which constrain the lives of human beings such that if these constraints were not generally operative, we would not say that the person in question was a rational human being. I am concerned to find the principles -- if such principles there be -- which generally, at least in effect, guide human behaviour and failures to act in accordance with them, special circumstances apart, are taken to be deviations from what is expected of human beings. In saying these principles generally guide the behaviour of rational individuals, I am not giving to understand that they must be following them as we might self-consciously follow a rule; rather what I am claiming is that they must generally act in accordance with them in a way analogous to the way we speak in accordance with grammatical rules which most of us cannot formulate.

Similar to the way in which we say that to be a triangle a figure must be a bounded three-sided figure, I want to ascertain what we would fill in when we say that to be rational a person must act in such and such a way. However, by contrast with the triangle case, in the case of human beings I am painfully aware that I cannot give necessary and sufficient conditions for what it is for a human being to be rational. Perhaps that cannot be done at all, but I would like to capture the correct application of 'rational human being' in a way close to what we do when we state necessary conditions for the correct application of 'triangle'. As we would say that to be a triangle a figure must be a figure of a certain sort, so to be a rational human being a person must behave in a certain way.

I want to capture at least some of the very general things that a person must do to be rational which we would on reflection be prepared to call 'principles of rationality'. I make this last remark because there are, of course, myriads of things we will do if we are to be rational persons which surely are not principles of rationality, namely a rational person usually will take care to eat healthy food, exercise, find reasonably pleasurable amusements, not gratuitously insult people, make friends, etc., etc. All or at least most of these things will be covered by a general principle, which is a principle of rationality, namely that a rational human being will look out for his own interests. (This is not, of course, to say that to be

rational a man must only be concerned with his own interests or put the maximization of his own interests over the interests of everyone else. It is not to make the very strong claim that all acts and only those acts, which, on the available evidence, promise to maximize the agent's expectable utility -- his or her preferences -- are rational acts.)

I shall provide a list of criteria for rationality which I shall subsequently explicate and examine.

The list is rather heterogeneous and reflecting on that heterogeneity it is not unnatural to wonder if it is not spurring on or perhaps better feeding an illegitimate question, namely 'What is rationality?'. That question is illegitimate, it might be said, because it is too broad. In asking about criteria of rationality am I asking about criteria for what it is to be a rational person, what it is for a belief to be rational, what it is for a principle of action to be rational or what it is for a desire to be rational? These are quite different matters and to think one general umbrella question 'What is rationality?' can encompass them all is to invite confusion. There is not one question but several questions in the question 'What is rationality?'. We should distinguish between the rationality of persons, beliefs, desires and actions.

There surely is this diversity in this deceptively simple question, but I want to maintain that there is also a general underlying question that justifies proceeding under the rubric 'What is rationality?'. There are various cultural norms and standards which, generally speaking, it is rational for us to act in accordance with. They provide our general guides for what it is rational to do and for what it is rational to believe. But we also tend to think -- though perhaps here we are in some way confused -- that there are standards or principles of rationality itself. Indeed at least some of us think that these principles can be used to assess at least some of our cultural norms. That is to say, it is widely believed that there are standards or principles for what it is (in general) rational for people to believe, do and desire. In asking for criteria or principles of rationality or in asking 'What is rationality?', I am asking what these criteria are. This seems to me a unified and intelligible enough question to admit of fruitful discussion and answer.

In articulating principles of rationality and criteria for rationality, the contrast I am trying to capture is between rationality and irrationality. (I do not, of course, deny that there are many actions and attitudes which are neither rational nor irrational.)

The principles I list could each be prefaced by: 'A rational person as distinct from an irrational person is a person who consciously or in effect acts on the principle....' and then I could list any of the first eleven principles stated below in the optative mood. That is to say, his behaviour will generally be constrained in such a way that he will not violate these principles. The last four principles stated below are, by contrast, stated in the indicative mood, but they easily could be reformulated in the optative mood so as to take the above preface and so as to mesh with the other principles which are quite overtly action-guides. My reason for stating the last four principles in the way I did is to make quite clear that as statements they are true or false claims about what rational beliefs are or, as in the last case, what a rational person is. The utterances cast in the optative mood could easily be re-cast in a statemental form, e.g. rational agents will take, ceteris paribus, the most efficient and effective means to achieve their ends (5) and rational persons will strive to maintain objectivity and, in any domain, duly to take into account all relevant evidence and considerations (2).

I shall now state my fifteen principles of rationality and then briefly comment on some evident preliminary problems raised by this list. I shall turn in subsequent sections to a more detailed examination of these principles.

1. Relevant evidence or considerations are, ceteris paribus, not to be ignored in the forming or holding of beliefs.
2. Objectivity is to be maintained or at least striven for. Relevant evidence and considerations are, ceteris paribus, to be duly taken into account or at least conscientiously sought.
3. Beliefs are, ceteris paribus, to be striven for, for which it is known that there are good grounds for believing that they do not involve inconsistencies or contradictions.
4. Beliefs are, ceteris paribus, to be striven for, for which it is known that there are good grounds for believing they do not involve incoherencies.
5. The most efficient and effective means are to be taken, ceteris paribus, to achieve one's ends.
6. If one has several compatible ends, one, ceteris paribus, is to take the means which will, as far as one can ascertain, most likely enable one to realize the greatest number of one's ends.

7. Of two ends, equally desired and equal in all other relevant respects, one is, ceteris paribus, to choose the end which one has good grounds for believing has the higher probability of being achievable.
8. If there are (as far as one can ascertain) the same probabilities in two plans of action, which secure entirely different ends, that plan of action is, ceteris paribus, to be chosen which secures ends at least one of which is preferred to one of those secured by the other plan.
9. If one is unclear about what one's ends are or what they involve or how they are to be achieved, then, ceteris paribus, a postponement is to be made in making a choice among plans of action to secure those ends.
10. Those ends, which, from a dispassionate and informed point of view, one values absolutely higher than one's other ends, are the ends which, ceteris paribus, are to be achieved. A rational agent will, ceteris paribus, seek plans of action which will satisfy those ends; and plans to satisfy his other ends will be adopted only in so far as they are compatible with the satisfaction of those ends he or she values most highly.¹
11. Ceteris paribus, one is to engage in prudent maximizing, i.e. an agent is to maximize the satisfaction of his or her interests.
12. Rational beliefs are beliefs for which one has or could readily come to have good evidence. False beliefs are irrational beliefs.² [I shall argue in section IV that the second statement here should be rejected, i.e. it need not be the case that false beliefs are irrational beliefs.]
13. Rational beliefs are critical beliefs; that is to say, they are beliefs which are held open to refutation or modification by experience.
14. Rational beliefs are beliefs which are held in such a way that those holding them will not resist attempts critically to consider their assumptions, implications and relations to other beliefs. They will be beliefs which are open to reflective critical inspection.³
15. A rational person's actions, ceteris paribus, will generally be in accordance with his or her rational beliefs.

Let me repeat that I view my endeavour as an attempt to give normally necessary conditions for what it is for a human being to be rational. I am not attempting to give conditions which are jointly necessary and sufficient for a human being to be a rational human being. My hunch is that a search for anything stronger than normally necessary conditions would be misguided. I should also add that I do not face here the question of priority rules between the principles of rationality I set out. But I agree that this is an important question that on some other occasion should be faced. What I am examining is the viability and utility of the claim that a rational person is a person who will act in accordance with the above fifteen principles. Note that if a belief is rational it must be governed by the considerations specified in 1, 2, 3, 4, 12, 13, and 14, and a rational person is a person who will be governed in his actions by the standards of rational belief. That is to say (for example, turning to 13) if rational beliefs are critical beliefs, a rational person will have critical beliefs. That a rational person will generally act in accordance with the other fourteen principles of rationality is what is caught by 15. Furthermore, 5, 6, 7, 8, 9, 10 and 11 are all strong candidates for rational principles of action.

What immediately stands out in the statement of these principles is the pervasive use of the ceteris paribus qualification. Without it, as I shall show, there will be exceptions to these principles or, as with 12, 13, 14, and 15, they will simply be false. Moreover, without it they can conflict. Without the ceteris paribus qualification, 1 and 12, for example, will conflict with 11 if certain circumstances obtain. In other words, it is not or at least might not always be the case that the satisfaction of one's interests is maximized by considering all the relevant evidence or in attempting to have beliefs for which there is good evidence. With such a ceteris paribus qualification such conflicts are avoided and it becomes possible to jointly satisfy all 15 principles such that, on my attempted characterization, a rational human being is not necessarily a Holmesless Watson. However, with the ceteris paribus qualification, it is natural to respond, nothing can be achieved because with so many principles with such a pervasive appeal to 'everything else being equal', we cannot know when everything else is equal and so we cannot know when an action, belief, desire, policy and the like is a rational one and we are very much at sea when a person should be said to be a rational person.

It seems to me that the above objection is mistaken. It is not true that because of the pervasive ceteris paribus qualification we cannot know or at least have sound reasons for believing that everything is equal in a particular situation where we have a full knowledge

of the facts, an understanding of the context and an understanding of how principles bear on that particular situation. We should accept contextualism here and recognize that we do need those particulars. It should also be recognized that I could have dropped the statement of ceteris paribus qualification in my articulation of the fifteen principles and instead simply made the point in a preamble that such a qualification is implicit in any statement of such principles which will be at all realistic. My reason for proceeding in the way I did is pedagogical.

We are not going to be able to capture in exceptionless rules or principles of a substantive sort sound universal claims of rationality which are claims that always hold, i.e. that give us a determinate decision procedure concerning what we actually are to do for every case covered by the principles in question. What we can capture, I should argue, are universal principles of rationality which are absolute in a way analogous to the way prima facie duties are absolute. That is to say, it is always the case that we should take them as constraints upon our behaviour, but that we should always act as they direct is not what we should do. We recognize, if we understand what morality is all about, that 'Promises are to be kept' is always a constraint upon our behaviour, but this does not mean or give to understand that we should always keep all of our promises. Analogously, I shall argue, the above fifteen principles always impose constraints on a rational person's behaviour, but this does not mean or give to understand that all beliefs rational people hold should be beliefs based on evidence or that rational people must always take the most efficient means to achieve their ends. When--I shall argue--'everything is or is not equal' has to be determined in particular situations. In doing this we must take carefully into consideration a) the actual particular claims made about what it is rational to do, believe or desire and b) we must consider the actual persons in their historically and culturally contingent social contexts. What is and is not rational to believe, do or desire is partly fixed by such principles, but it is also not to be determined apart from a consideration of particular matters of fact and certain culturally and contextually determinate norms and conceptions. For these reasons what is and is not rational to do, believe or desire is almost invariably a matter of judgment.

This essay can be seen as an attempt to do justice to this contextualist feature stressed by Wittgensteinians while still recognizing that there are general principles of rationality which are not culturally relative or form-of-life-dependent. These general principles function in such a way that taken by themselves they are such indeterminate constraints on our behaviour that they do not provide the Archimedean benchmark that philosophers have repeatedly sought.

Here, it would seem at least, that my thought differs on such matters rather fundamentally from that of Rawls and Richards. The liberal use of the 'ceteris paribus' in my above principles flags my beliefs concerning their indeterminacy and my convictions about the importance of contextualism. Only if we could get priority rules with--a la Rawls--a strict lexical ordering, could this indeterminacy be avoided. But we cannot have such rules with such ceteris paribus qualifications; if, alternatively, we take away those qualifications and treat the principles as exceptionless rules, we get something which is obviously unacceptable.

II

My claim is that given a thorough understanding of the concept of rationality, anyone in any culture in any period of history would have to accept my above principles of rationality as criteria of rationality. There are no doubt further principles as well but my above principles would be a part of anyone's conception of rationality who had a thorough grasp of the concept. There are, as I shall argue, important areas of indefiniteness in these conceptions, but they still are irreducibly and unavoidably a part of the very concept of rationality. Anyone who would be rational must strive to act in accordance with them.

(In saying they are part of anyone's conception of rationality I am not making the absurd claim that all rational people can state such principles. Not all rational people speak English and not all rational people are very articulate. What I mean--to reiterate in a new context a point made earlier--is that rational people show by their behaviour that they reason and act in accordance with those principles analogously to the way we show by our linguistic behaviour that we speak in accordance with linguistic rules many of us cannot state.)

Let us now begin looking at these principles one by one to see, if, appearances to the contrary notwithstanding, there are sound reasons for believing that they need not be involved in any adequate conceptualization of what is to count as rationality. Consider, first 1. If a man ignored what he acknowledged to be relevant evidence readily accessible to him in the forming or holding of beliefs, he could not rightly be said, at least as far as the acts so effected are concerned, to be rational. However, it might be said that there are or at least plainly could be, exceptions to this. Indeed if we hold anything like a Kuhnian conception of science we will say that reasonable practitioners of science characteristically ignore such evidence. And such accounts of science apart, if we can conceive of plausible

counter-cases--even if they are only hypothetical cases--we have good reasons for believing that 1 is not one of the essential and necessary features of rationality.

A prima facie plausible counter-case is this. If a couple has a child who has cancer and who in all likelihood will die of that cancer within the year, but yet there is some chance that he can be cured, it is not irrational for the parents in their planning for the future to include him in that future planning and, say, continue to save for his university education. It is not irrational of them to believe he may get well, but, that of course, does not involve an ignoring of the evidence; but to believe, as distinct from hope, that he will get well, when the chances are only one in fifty that he will, is irrational. It is reasonable enough in certain circumstances to act on a long chance or centre your endeavour around an end or a goal which is unlikely to be achieved. But beliefs are another thing again. Where, it is tempting to argue, evidence is relevant and at hand, to ignore that evidence in believing what one believes, is always irrational. A person who pulls that off engages in self-deception and holds an irrational belief, though in the above circumstance it is perfectly understandable that people should have such irrational beliefs. ('Irrational' typically has a negative emotive and normative force; that in such a circumstance this does not obtain, may account for a slight uneasiness in using 'irrational' here. We want to reject in such a context the implicit criticism contained in the normal employment of 'irrational', but once 'irrational' is in this context emotively and normatively neutralized, it is seen all the same to be an irrational belief.)

A scientist who sometimes will persist in a favoured hypothesis in spite of the available evidence, indeed in the very teeth of the available evidence, need not be behaving irrationally if he believes--again not ignoring what has been the case in the past--that evidence, direct or indirect, will eventually turn up which will confirm his 'wild hypothesis' and that then the presently existing disconfirming evidence will be outweighed by the newly obtained evidence. There is, of course, plenty of room for rationalization here. Whether there is rationalization or not depends approximately on whether or not the type of 'wild hypothesis' is of a type which has in the past sometimes turned out to be true even when persisted in in the face of the evidence and more fundamentally on whether it does turn out to be true. (This makes it the case that sometimes it is indeed very difficult to ascertain when a belief is rational.) Such a scientist is not ignoring relevant evidence. He acknowledges that if the countervailing evidence cannot be 'explained away' (that is

alternatively accounted for) or is not outweighed by later confirming evidence, he will have to abandon his favoured hypothesis. He cannot simply ignore the evidence or stick to his hypothesis no matter what and remain rational.

Thomas Kuhn has articulated an interesting and an influential account of 'normal science' which might be thought to be in conflict with what I have argued above. Given principle 1--it might be argued--typical scientists would routinely have to be said to be acting irrationally, for, using whatever conceptual scheme they have inherited, they often, and on Kuhn's account rightly, do ignore evidence. Scientists, including very creative scientists, display "firm convictions about the phenomena which nature can yield and about the ways in which these may be fitted to theory...."⁴ Unexpected "novelties of fact and theory," Kuhn continues, "have characteristically been resisted and have been rejected by many of the most creative members of the professional community."⁵ Preconception and resistance to innovation are not to be thought of as human failings of individual scientists, but are to be seen as a rational part of scientific procedure "upon which the continuing vitality of research depends."⁶ To gain a scientific education is to gain "a deep commitment to a particular way of viewing the world and of practising science in it."⁷ The content of this commitment will vary with different historical epochs, but such a commitment will always remain where science is a category of the culture in question. Yet, in every case the particular historically and culturally determinate way of viewing the world set by the distinctive scientific conceptual apparatus of a given time and place will provide the scientists with the rules of the game being played in his or her time and place and will in a general way set for individual scientists "both the problems available for pursuit and the nature of acceptable solutions to them...."⁸ Any mature science operates by the use of scientific paradigms known intimately by the practitioners in a given field and taken as admired and received constructions on which to model their own research and against which to measure their own accomplishment.⁹ Such paradigms will, of course, come and go, but in any historical epoch and in any culture with scientific institutions, there will be received paradigms--that is fundamental scientific achievements which include both theories and exemplary applications to the results of experiment and observation.¹⁰ In the normal run of scientific work--that is in all situations other than those rare at least putatively epoch-making situations when the received paradigm is being challenged and new paradigms are being created-- scientists work, and unavoidably, with a paradigm based way of regarding and investigating nature. In normal science there

is a persistent attempt to match the received paradigm to nature; phenomena which do not square with it, provided they are not too obtrusive, are treated as anomalous and are not allowed to upset the scientific account.

Such an activity--an activity characteristic of normal scientific practice--seems at least to be irrational according to principle 1 as well as principle 2. Certain considerations are simply ignored by scientists: not all relevant evidence is duly taken into account. Yet--to put the matter conservatively--any account of rationality which is committed by its principles to regarding normal scientific practice as suspect would itself surely be suspect. Indeed, if the conclusion is that normal scientific activity is irrational, then the argument which led to that conclusion must somehow be mistaken.

However, without challenging Kuhn's account of science, both principles 1 and 2 can be preserved as essential features of rationality. In typical scientific situations where there are established paradigms and where there is no conceptual crisis, taking into consideration all evidence which is anomalous would surely lack social utility. The ceteris-paribus-qualification comes in to handle such situations. We are not, of course, rationally justified in believing something which is false or probably false simply because it is useful, but questions of the social utility and the accessibility of evidence are not irrelevant to claims about the requirement of attending to the evidence in the holding of beliefs which are to count as rational beliefs. While we plainly cannot rationally believe something simply because it is useful, it is also true that it would not be reasonable to tax a man with irrationality for holding not very momentous beliefs generally held in his society even though he had been told, not implausibly, that there was some very difficult to obtain information which might disconfirm his belief. And in a standard election with well defined parties not taking the trouble to find out about the minor candidates is often the rational thing to do or at the very least not an irrational thing to do. Knowing the likely effect of one's vote, the likely behaviour of the other voters, what the parties stand for and the relative lack of importance of the post, a rational man, whose time is valuable, will not take the rather considerable trouble to find out about these specific minor candidates. He will vote rather blindly and indeed hold what beliefs he has about these candidates without attending to the relevant evidence, for, given the other things he needs to know, and given the relative lack of importance of that particular belief, it is not worth his time to make that investigation. Yet under those circumstances he is not irrational in believing that candidate A (say an N.D.P. candidate) is a better person to vote for than B (say a Tory).

Moreover, and independently of the above point, Kuhn himself stresses that science at certain stages finds itself in crisis situations in which the received paradigms are no longer working as they should and new paradigms are in the processes of being created. This will occur where the phenomena are such that there is repeated failure to account for them in terms of the established paradigms. Such recalcitrant anomalies, where they are particularly stubborn or striking, will be judged as essential anomalies and will no longer be simply swept under the rug and ignored but will lead to altered scientific conceptions. That is to say, new or significantly altered paradigms will be developed. When, as a science develops, certain facts--whose relevance has been admitted by the theory in question--cannot be adequately accommodated by the theory, since repeated attempts to make them mesh in a perspicuous way with the theory end in failure, the theory will be altered or, if the facts are numerous and in systematic relations to each other, the very fundamental paradigms will be abandoned. In this way it can be seen that, even if Kuhn's account of science is accurate, it remains the case that Kuhn's account squares with my first and second principles of rationality.¹¹ Relevant evidence cannot be ignored in the forming or holding of rational beliefs, though what is taken as 'relevant evidence' to be duly considered will not be unrelated to the received paradigms and to the match of the evidence with those paradigms. But even there, what happens in the world, what turns out to be the case, will bear on what judgments of relevance are to be made. Sometimes phenomena which are not readily accommodatable to a favoured scientific paradigm are treated as anomalous. This is in a way already to take note of it as is evidenced by the fact that if this phenomena--initially treated as anomalous--keeps popping up in varied contexts it will eventually force an alteration in the scientific account.

I want now to draw a moral from my examination of 1. Some neo-Wittgensteinians (philosophers I have perhaps tendentiously called Wittgensteinian Fideists) have claimed that substantive criteria of rationality are to be found only within a distinctive form of life.¹² We cannot, they claim, intelligibly ask about the rationality of the forms of life itself. What is relevant to ask here is whether the acceptance of principle 1, which seems at least not to be at all form of life or mode of discourse dependent or relative, constitutes a disconfirmation of such a Wittgensteinian claim? It would only if we gave such a Wittgensteinian account a very literal and unsympathetic reading. 1 is not simply the criterion of some particular form of life or mode of discourse (say scientific discourse) but cross-culturally and across modes of discourse it is a partial criterion wherever considerations of rationality are relevant. But on the Wittgensteinian Fideist side, it remains the case that 1 is so formal

that it does little or nothing to mark off or distinguish certain actual beliefs as rational and certain ones as irrational. In order to do that we would have to know what specifically and concretely counted as 'relevant evidence', when something could rightly be said to be 'readily accessible' and how we established social disutility. But it seems at least that we could not establish any of these things apart from particular contexts. We would need to know what sort of thing we are talking about before we could ascertain what was or wasn't relevant evidence. And what would count as being 'readily accessible' would surely depend on the culture, the importance of the matter under consideration, the sophistication of the people involved and the like. Finally ascertaining what is useful (as Marx and then later MacIntyre have perceptively noted) is notoriously context dependent.

The essential point is that 1 does not give us even a partial general criterion for what substantively is to count as a rational belief. It tells us something important of a very abstract sort, something rational beliefs must conform to, but it does not tell us enough to enable us, without further contextual considerations or-- as the Wittgensteinians would say-- 'form-of-life -dependent' considerations, to ascertain which actual beliefs are to be excluded as irrational beliefs. I shall, as we examine the other partial criteria, ask if similar considerations obtain for them.

The second (2) principle of rationality needs no special discussion independently of 1. Indeed it might well be thought that it is redundant, for it is for the most part simply another phrasing of 1. Yet it is at least of heuristic value, for the stress on objectivity is a way of calling attention to an important element in rationality. But I think it is fair enough to claim that it raises no important independent considerations distinct from those raised concerning 1. The contextual dependencies stressed by Wittgensteinians stand out even more obviously here when we reflect on 'objectivity' itself and 'relevant' and 'duly' as well.

The third (3) principle poses distinct problems. Surely it is part of the concept of rationality to maintain that to be rational is to be committed to trying to obtain beliefs which are free from inconsistencies and contradictions. After all inconsistencies and contradictions are such that the person who commits them is committed to everything and anything. He can succeed in making no claim at all; he has unsaid what he tries to say. No rational man can wish to do that. But here we have something that is quite vulnerable to Wittgensteinian contextualism. Something is a contradiction or an inconsistency only within a system. We just

cannot speak of contradiction or inconsistency sans phrase. Moreover, there can be no overall proof of the consistency of a system itself. Only within a system can we establish what is and isn't a contradiction, but while our standard formal logical theories give us a rationale for believing we cannot intelligibly assert p and not $\neg p$ or assert that this pencil is both red and not-red, we need to turn to the logic of our language itself to know whether 'My pencil is all red' is contradicted by 'My pencil is all blue' or whether 'It is red but not coloured' is an inconsistency. It is the language-games we play with colour words which determines whether we have a contradiction here. But their logic (style of functioning) is in turn determined by the forms of life in which they are embedded.

Similar considerations obtain for 4. Plainly if a belief really is incoherent there is really nothing to be believed. One is only, as long as one does not see the incoherence, under the illusion that there is something to be believed. Suppose I say I can see smells on a clear day. Unless that simply does duty for saying that I have a particularly good eye for spotting the sources of odours, it is an incoherent remark. But if I say sincerely that this is a belief of mine and do not de-mythologize it by making evident its metaphorical status, it counts as an 'incoherent belief'. It is not something that could possibly be true. And knowing this, I would plainly be irrational if I persisted in avowing that I believed it.

Yet, even more obviously than for what counts as inconsistencies or contradictions, what counts as being an incoherency is structured by the forms of language and their corresponding forms of life. Yet are they all utterly contingent upon particular forms of life? There is an ambiguity in this very question. Surely if there were no people with languages with their embedded concepts there would be only a minimal understanding of what it is to smell, though one has to be wedded to a very controversial philosophical thesis to deny that dogs have an understanding of what it is to smell. (That is not just to say that they can smell.) The concept of smelling is not the creature of constitutive rules and practices in the way the concept of chess is. That is to say, there would be smells quite apart from people's conceptions about them, but there would not and could not be chess quite apart from people's conceptions about chess. In sum, for people there would be little understanding of smelling without the having of a language, in that way smelling is contingent upon the possession of a language, but the existence of smells is not contingent in the way the existence of chess is upon there being constitutive rules and practices. In that way the reality of smells is not in any way contingent upon rules. Moreover, anyone who had a conceptual scheme in which he could claim that he could see smells

would have a defective conceptual scheme which generated incoherent beliefs. That is to say, such an incoherence is not form of life dependent in any sense which would make its truth dependent on there being a certain form of life with its distinctive constitutive rules.

This indicates that 4 in some minimal way gives us something more than merely formal constraints on what counts as a rational belief. But it still is very minimal. For unless we have reason to believe that there is some generalized conception of incoherence in accordance with which we could, independently of particular forms of language, with their attendant forms of life, determine whether or not concepts such as kindness, love, justice, freedom, to say nothing of God and immortality, were or were not coherent, we would not have escaped these Wittgensteinian contextualist perplexities. I am not implying or even suggesting that we cannot do that, but it is obviously in each instance--to put it minimally--a considerable philosophical undertaking and scepticism concerning its success is not unreasonable. In short, while we can be confident that we should accept 4 as something inescapably built into the very concept of rationality, we cannot on that account think that it excludes very much as irrational until we get a careful specification of what we can justifiably take as incoherencies. But here we may have rather thoroughly diverse and perhaps even essentially contested conceptions.

When criteria of rationality are set out, 5 in some form or other is almost always listed. It seems evident that rational persons will, where they can ascertain what they are, take, or at least endeavour to take, the most efficient and effective means to achieve their ends. My addition of a 'ceteris paribus-qualification' may even seem to some to be unnecessary pedantic overcaution. Yet it is not, because situations can and do occur where, for some rational persons, other considerations will override considerations of efficiency. An orthodox Jew, given his convictions about dietary laws, will quite knowingly not run the most efficient kitchen. And even if it is the case that all religious beliefs are irrational and--what is something else again--it is irrational for anyone to hold them, there are other cases in which rational persons will knowingly and rationally not take the most efficient means to achieve certain of their ends. The most efficient way for two persons to achieve simultaneous orgasms might not be the most esthetically and humanly satisfying way and indeed might be rationally rejected on this score.

It is, however, standardly the case that rational persons will endeavour to take the most efficient and effective means to achieve their ends. Only in unusual circumstances will this not be the case

and the presumption of rationality always favours it. If there were a tribe of people who had no such conception, could they still be thought to be rational? It is very problematical whether such a suggestion is even intelligible. Could there be a tribe with its ensemble of ongoing activities who had no conception of means/ends and with it a conception of certain means being more or less effective? How else could they carry out their tasks, the necessary workings of any society? I doubt very much whether there could be such a culture, but on the questionable assumption that there could, what we should say is that if a people had no conception at all of efficient/inefficient means, then trivially this could not enter into their conception of rationality. Such people, if they acted in accordance with the other principles of rationality, would be rational persons, though lacking such a conception of taking a means, and taking it efficiently, to achieve their ends, they would have an impoverished conception of rationality. But that there could be such a culture is so counter-intuitive, so problematical, that such a problem about criterion 5 need not detain us. It is clearly one of the principles of rationality.

Principle 6 is very like 5 and presents similar problems. The claim of 6 is that if one has several compatible ends, one will, ceteris paribus, take the means which will enable one to realize the greatest number of one's ends. Wittgensteinians could rightly point out that what counts as 'compatible ends' has a cultural indeterminacy similar to the cultural indeterminacy of what counts as 'an incoherency' or 'a contradiction'. Can one be a money-lender and a Christian? At one time, given a certain conception of a Christian, this was impossible, now it is perfectly possible. But if one's ends are compatible, one (if one is rational) will, everything else being equal, try to realize as many of them as is possible. That is not unlike the commitment to efficiency in 5.

Principle 7 is also of the same type as 5 and 6 and poses problems of a similar type. If there are two things we equally desire and we cannot (say, at one time) have them both, it is surely rational to go after the one which we have reason to believe has the hither probability of being achievable. The ceteris paribus clause simply does the work of allowing for unusual circumstances or conditions coming in quite externally, such as one of the things we desire being illegal, offensive to some people, incompatible with the realization of certain cherished aims of someone we care for and the like. In such circumstances if the end whose probability on the available evidence of being achieved is not quite as high as the end with one or another of these defects, then it could very well be more rational to go after the end with the lower probability of being

achieved. There are myriads of such considerations which could come up in special circumstances and because of this we need the ceteris paribus clause. But always, prima facie, if we have two or more equally desired ends, not all of which can be achieved or can be achieved at one time, the rational thing to do is to favour the end which we have reason to believe has the greater probability of being attainable.

Again with 8 we have something of a very similar type to the previous three. If we have to choose, say, between three plans of action with on the available evidence the same probabilities of being achievable, all of which realize different ends, the (ceteris paribus) rational thing to do is to choose that plan of action we prefer. Here again the same qualifying conditions obtain as in 7, requiring the addition of a ceteris paribus clause. But more interestingly and more controversially, we also can say that we need the ceteris paribus clause in case the preference itself is irrational or not as rational or as reasonable as some other preference, involving one or another of the three plans of action. Remembering that Hume and Russell have argued that we cannot argue about the rationality of preferences or desires themselves but only about the means to achieve them, there is a tendency to wish to avoid such considerations. How can it be that the desires or preferences themselves are irrational or rational? It is sometimes irrational to think that certain desires can be satisfied, that satisfying them will not have certain consequences, that they cohere or conflict with certain other desires, but it is not clear what it could mean to say that the desires or preferences themselves--these extrinsic considerations apart--are rational or irrational.

Perhaps it is enough to say that rational desires are informed desires, that is to say, desires we would continue to have or admit the desirability of having, everything considered, in a 'cool hour' when we were aware of their causes, the consequences of satisfying them, how they cohere with other desires and with our needs and ideals. What we reflectively desire under such conditions or what under the appropriate circumstances we recognize we would desire is what it is rational to desire. Rational desires are reflective, informed desires.¹³

I am not confident that this even approximates an adequate characterization of 'rational desires' or 'rational preferences'. However, if this argument or some other is well taken and we can make out a case for saying that desires or preferences themselves can be irrational or rational, we could argue in rebuttal of a

specific claim, made in accordance with 8, that, though plan of action A is preferred to plan of action B and C, which have on the available evidence equal probabilities, that still A is not as rational to act in accordance with as B and/or C because A is a plan which secures ends it is irrational to prefer or ends which involve irrational preferences or A secures ends which conflict with some of the standard reasons for having the ceteris paribus qualification mentioned in 7, e.g. it might secure ends which are in conflict with the ends of someone for whom the agent in question cares. But allowing for such contingencies it remains the case that in choosing between several plans of action, securing entirely different ends, those plans of action which on the available evidence secure more preferred ends than the other plans are the more rational plans of action.

III

The principle of postponement, as in 9, involves another quite distinct consideration. The claim is that a rational man will, ceteris paribus, postpone a choice among plans of action where he is unclear in the relevant domains what his ends are, what they involve or how they are to be achieved. Here the ceteris paribus qualification applies very obviously, for there will be many situations in which 'everything is not equal'. If on a remote trail miles from any help I come on a badly mangled child, it will be unclear what the consequences of moving him may be. Perhaps it will cause even more serious injury or even his death. And I may be quite unsure as to the legal consequences to myself which might obtain from my carrying him out should he consequently die or remain crippled. However, if it looks as if he will die or suffer horribly if I do not bring him out, it will be the case that in carrying him out or in quickly running out to get help, I act more rationally than if I postpone acting and sit around wondering what to do for several hours. There are many situations which require action where it would be less than rational to postpone acting. (Have I confused moral with 'strictly rational' considerations here? It is not implausible to claim that I have, but it is also not implausible to say that it is a mistake to so contrast 'rational' and 'moral' in such a context.) There are other situations in which action is not 'strictly required' (whatever exactly that means) but where postponement would be less desirable and less rational than non-postponement. Suppose, say somewhere in the Odenwald, a group of us were taking a day's hike in the forest. We have been hiking for several hours on a trail far from where we left our car. The object is to make a wide circle and come back to the car. We, however, come on a crossing in which the trail divides in several different ways. No matter which trail we take it is not at all clear that it will lead back to the car.

Indeed, if we take any of them, we may be put to some considerable inconvenience getting back to our auto, e.g. taking a bus, stumbling around in the dark and the like. The safest and easiest alternative is simply to walk back the way we came. But suppose that way is rather boring and uninteresting. Taking any of the other ways may, but again may not, be very interesting, with many beautiful views. There is no way at the crossroads to resolve the uncertainty. We debate which of the ways other than the one back to take. We can postpone any decision here and simply go back the way we came. If we act in accordance with 9, forgetting for a moment the implicit ceteris paribus qualification, that indeed is the rational thing to do. But it is far from evident that it is in all such circumstances and it is even further less than evident that there is an objective answer that could be given independently of variable temperaments. For a person of a conservative temperament the desirable and rational thing to do might well be to go back the way we came. For a person of more adventuresome temperament, it might be more desirable and more rational to take a chance on one of the trails. It is not evident whether there is or can be any objective answer to which temperament is the more rational. (Perhaps this is just a way of saying there cannot be any answer at all, for if there cannot be an 'objective answer' there cannot be a 'subjective answer' either. An 'objective answer' may be a pleonasm. Whatever is the least misleading thing to say here, what we want most crucially to know is whether it is possible to make a true claim about what kind of temperament it is most rational to have and if so what that temperament is.)

What we should conclude from reflection on these examples is that there are occasions on which the more rational thing to do may not be to postpone making a choice of plans of action under the conditions of uncertainty described in 9. But the ceteris paribus clause in 9 actually captures that. Could it plausibly be said that anyone could be a rational agent and not in general act in accordance with 9? I do not mean he must have consciously formulated that principle but that at least his behaviour can generally be seen to be in accordance with it; and, when it is carefully explained to him, he will accept it. What I want to know is whether there are any rational alternatives to it or whether it could be rationally rejected? Could a man reasonably oppose 9 by saying it implicitly commits people to a play-safe conservative policy and that it is by no means evident that this is the best, the most rational, overall policy? Could it be that an adventuresome life full of risk and a giving way to the gambler's instinct and to the dare-devil in people could have more zest and be more humanly satisfying and in a certain way more reasonable or at least as reasonable as a play-safe life?

Surely there is much to be said against always playing it safe. We all know grey and dour old men and women who always play it safe and whose lives are thoroughly dead and provide no model for anyone. But does 9 really commit us to such a conservative strategy? Surely if one is unclear about what one wants and if one does not know what ends one wishes to further or commit oneself to in a given domain, it is better, in most circumstances, not to choose between plans of action until one can get clearer about things.

Where (if ever) we are in a kind of Sartrean situation where the choices are in the nature of the case unclear and cannot be cleared up, we are, of course, in a different ball game, but where we can clarify them, where in various ways we can better ascertain what we want, and the choices are important and do not require or urgently call for an immediate decision, it is better (indeed more rational) to postpone action. To commit yourself to that posture is not to side with the grey old men who will not depart or depart only with the greatest reluctance from 'the tried and true ways' of doing things. Maybe it would, after all, be better and more reasonable to accept such conservative policies, but this is not what 9 commits one to. Rather it gives us to understand that we should act in accordance with what we believe is or at least should be a truism, namely that, generally speaking, where we can avoid it, we should avoid blind action when what is at stake is important to us or others. It seems to me that accepting this is safely a part of what it is to be rational.

It (to oversimplify 10) is always, ceteris paribus, rational--the rational thing to do, where such considerations are relevant--to form plans of action which will realize those ends which, from a dispassionate and informed point of view, one values the most.¹⁴ The ceteris paribus clause is plainly necessary for while we might value certain ends absolutely higher than others, if we were quite aware that these highly valued ends were unattainable or probably unattainable, we might very well not, if we were rational, seek those 'more valued ends' and rule out other more surely attainable, but less valued ends, incompatible with them. Don Quixotes need not be irrational, but to be rational one need not be a Don Quixote.

Principle eleven (11) is surely one of the evident principles of rational action. Indeed some philosophers take it as the principle of rational action, such that a human being cannot be acting rationally unless he always acts so that he will strive to be a maximizer who intelligently and prudently maximizes what, on a careful review of the facts, he has the best evidence for believing will most fully satisfy his own interests. This last contention seems to be far too strong,

for, if it were true, a human being who reflectively and with a full knowledge of the facts (including facts about his own interests) acts against what he knows to be his own interests in the name of some moral or social ideal will have to be acting irrationally. But it is far from evident (to understate the matter) that this must be so; indeed just to insist that it must be so is to engage in a bit of linguistic and conceptual legerdemain not rooted in the actual use of 'rational'.¹⁵ There is no self-evidence about such a claim concerning rationality; such a conception of rationality as a prudent maximizing of needs, has often been assumed but has not received very careful argumentation and justification. Simply to claim that it is the sole or the overriding criterion of rational action is to be arbitrary; to claim, alternatively, that to so regard rational action is a useful fiction, may be true for some parts of economic theory, but to insist on this simplifying device, when we are trying to ascertain what the principles of rationality are, is to make an arbitrary and question-begging move.

However, all this can be true, while it remains the case that ceteris paribus--which is all 11 commits one to--one is to seek to maximize the satisfaction of one's interests. A man, who for no reason at all, utterly ignored what he knew to be in his own interest would be behaving in a paradigmatically irrational manner. Where relativity, or at least contextualism, may enter here is over what is in a human being's interests. Certainly human beings want different things and conceive of their interests differently. If across cultures the common denominators are rather insignificant and the differences loom large or, alternatively, people from different cultures cannot even agree about that, then we should not be very sanguine about basing a conception of rationality on 'the true interests' of man. 'True interests' may be persuasively defined and essentially contested. To the extent that this is so, we also get in principle 11 an indeterminate criterion of rationality.¹⁶

When it is claimed, as principle 12 does, that rational beliefs are beliefs for which there is good evidence and that false beliefs are irrational beliefs, it sounds at first blush, that, as with 1 and 2, we have something which is incontestable. But, as MacIntyre has well argued, this is not so.¹⁷ False beliefs, given the information and conceptual sophistication that a given culture in a given period of time could be expected to have, could for some people be rational beliefs. A primitive tribe living on the Russian Steppes in the 10th century would surely rationally believe that the earth was more or less flat and that men would never fly. The kind of evidence which they had available surely points to that and if they attended to that they would

reasonably believe what we now know to be false.

MacIntyre remarks concerning the relation between rationality and truth that it is a blunder of no small dimension to confuse them. "What entitles us to call the belief in witchcraft irrational is not its falsity, but the fact of its incoherence with other beliefs and the criteria possessed by those who held it."¹⁸ It is not, he claims, the content of beliefs which make them irrational.¹⁹ We must not mistake the standards of normal belief in our age for the standards of rational belief; "...which beliefs count as delusions and which as rational is a matter of the standards of a given time and place."²⁰ Beliefs are rational or irrational in relation to other beliefs. Because of this it is a mistake to predicate rationality or irrationality of any complete set of beliefs held in a given culture at any given time. "To say that a belief is rational is to talk about how it stands in relation to other beliefs, given a background of yet further beliefs as to what counts as a good reason for holding beliefs on a particular type of subject matter in a given culture."²¹ There can be no supra-cultural criteria of rationality as there is or at least sometimes is for the truth of a statement.

There is at least enough truth in what MacIntyre says to indicate that 12 cannot be accepted as it stands. Plainly it is reasonable for certain people in certain contexts to have beliefs which others can know to be false. Truth and rationality cannot be identified or so closely linked as 12 gives us to understand. Yet it is not entirely clear that rationality is as relativized, as relational and as context dependent as MacIntyre would have it. Indeed a remark that MacIntyre makes himself later in his essay points to the kind of consideration that would not allow such a sharp separation of rationality and truth as the above quoted remarks sanction or at least appear to sanction. MacIntyre remarks that the "...community of shared rationality to which ... all recognizably human societies must belong must of course also be a community of shared beliefs to some extent. For there are some commonsense beliefs (about day and night, the weather, the material environment generally) which are inescapable for any rational agent."²² This clearly claims, contrary to what he claimed earlier, a) that there are some true beliefs which could not reasonably be denied by any rational agent with normal sensory apparatus and b) that to hold false beliefs concerning them is for such an agent irrational. Since this is so, it cannot be the case that considerations of truth and falsity are entirely irrelevant to what is or is not rationally believed and it cannot be the case that the rationality of beliefs is entirely a relational matter between beliefs and culturally and historically contingent standards.

Yet the taking of the hyperbole out of MacIntyre's claims about rationality and truth still leaves us with the fact that the considerations MacIntyre has brought to the fore clearly show the falsity of 12. False beliefs need not be irrational beliefs. Given both the information available and the conceptions, the standards and the beliefs accessible to a given people, it might be highly irrational for a member of a given culture not to believe what in reality is a false belief. (I do not, of course, exempt our own culture from this judgment.) What needs to be said succinctly about the relation of rationality to truth is this: a true belief could be an irrational belief and a false belief could be a rational belief, but a person could not rationally believe \underline{p} when he or she knows \underline{p} to be false or has better grounds for believing \underline{p} to be false than he or she has for believing any alternative belief of which he or she is aware or readily could be aware to be false and where such alternatives to \underline{p} cohere equally well with his or her other beliefs; likewise, if he or she knows \underline{p} to be true or has excellent grounds for believing \underline{p} to be true and no better grounds for believing anything he or she knows or plausibly believes to be incompatible with \underline{p} to be true and \underline{p} coheres as well with his or her other beliefs as do the alternatives to \underline{p} , he or she cannot rationally believe \underline{p} to be false.

However, there are some at least apparent counter-examples to my above claim that a person could not rationally believe \underline{p} when this person has better grounds for believing \underline{p} to be false, etc. Suppose that the person in question is a person who rightly is said to have a 'nose' for smelling things out in a certain domain. He can look at someone and just tell that he is going to get ulcers in three months' time. Now if such a person in such a situation--say a doctor who has practised medicine successfully for many years--has a hunch that Sven is going to get ulcers when that doctor actually has excellent grounds of a standard scientific sort for believing that to be false, we would not (to put it conservatively) obviously be justified in claiming that he was being irrational in believing that Sven will get ulcers. Yet this is what my criterion seems at least to commit me to.

My criterion does not do that, for, given the doctor's past performance, where he has successfully acted on his hunches and his prognostications have subsequently turned out to be correct, we have good grounds, and he has good grounds, of a perfectly empirical sort for relying on his hunches; he has learned from experience and we have, as well, that, in spite of appearances, he has recognized what is the true state of affairs in a way that he and we do not yet understand. That is part of the reason why we say that he has 'a good nose' for these things. But without that kind of background, it

is irrational to just rely on a hunch against massive and systematically integrated evidence.

Suppose--to turn to the second counter-example--that a person believes that he will probably fail some examination he must take to further some of his rationally desired ends. He also believes that if he gets discouraged he is even more likely to fail. Suppose that both these beliefs are true. However, he succeeds in deceiving himself into coming to believe that he is likely to pass and in this way he succeeds in encouraging himself and increasing the likelihood that he will pass. On my account his belief based on the self-deception that he is likely to pass is an irrational belief. Moreover, it might be thought that I am committed to claiming he is being irrational in so deceiving himself. Yet if the facts are as I have described them above it is not implausible to claim that it is very doubtful if either of these things are so.

Surely the belief based on self-deception and an ignoring of the evidence, is not a rational one. The serious question is whether a person in such a circumstance is being irrational in so deceiving himself and holding an irrational belief, which nonetheless is a belief which furthers his chances of passing an examination he needs and wants to pass. On the one hand, we want to say that self-deception and the holding of irrational beliefs is generally speaking an irrational thing for a person to do and, on the other hand, we also want to say that a rational person will, ceteris paribus, take the most effective and efficient means to realize his preferred ends. That is to say, and at the same time to expand the matter a bit, he will act in accordance with 5, 6 and 8.

It will not help to say that a thoroughly rational person will not allow himself to get discouraged at the likelihood of his failing when he also knows that his getting discouraged will increase the likelihood of his failing. It will not help, for ex hypothesi in the above counter-example, he will get discouraged unless he is self-deceived. So under the circumstances, is he not doing the rational thing and behaving as a rational individual in deceiving himself? If he was not self-deceived his belief would not be rational, but he is self-deceived and he is acting rationally in acting on a belief which cannot be rationally believed without self-deception.

Just as ignorance or deception by others can make something rational to believe which otherwise would be irrational to believe, so self-deception can make something rational to believe which otherwise would be irrational to believe. To become self-deceived under such

circumstances--depending on what the other consequences (direct and indirect) are-- may be desirable and therefore a good thing to have happen to one. Indeed a rational man might very well hope that, under just the above circumstances, that would happen to him; and a rational man, who could not so deceive himself, might rationally desire (wish) that he were so self-deceived. To respond by claiming that a rational man could never be self-deceived is to make the criterion for 'rational man' far too strong.

Finally, in wrestling with this second putative counter-example, we have in effect underlined the value of distinguishing between conceptual questions that emerge about rational beliefs, rational actions, rational desires and rational persons. The above case shows that circumstances could arise in which a rational person could rationally desire (wish) to be self-deceived and to be able to act on an irrational belief and that, if that self-deception were to take place, it would be rational for him to act on that irrational belief. This claim only has the air of paradox because a) it is seldom the case that conditions obtain such that such a claim holds, and b) in most circumstances it is plainly a failing in rationality if one were so self-deceived, and c) in most circumstances it is irrational to act on irrational beliefs.

It is natural to remark--to return to our probing of 12-- that since this is so 12 cannot be accepted as it stands, but that the first sentence in 12 might well be accepted and that indeed it squares perfectly with MacIntyre's claims concerning rationality. In other words, what we should do is limit 12 to the claim that rational beliefs are beliefs for which one has or could readily have good evidence. But even this will not do, for while it is true that many rational beliefs are just such beliefs and that it is essential in developing attitudes of rationality that such beliefs play a crucial role in human thinking and acting, it still remains the case that not all rational beliefs are in accordance with that criterion.

There are beliefs, such as the belief that pleasure is good and the infliction of unnecessary suffering is evil, which are rational beliefs and yet it is not at all clear that it even makes sense to speak of evidence for or against them. It is not even evident that reasons can be given for or against such beliefs. Indeed there are things we can point to, such as the fact that people want pleasurable experiences and do not want to suffer. But it is unclear that such considerations can be offered as evidence for the truth of these normative beliefs or as reasons for holding these beliefs. Some moral philosophers have thought these beliefs to involve judgments of intrinsic value for which, in principle, no evidence or reasons can be

given, but whatever we should say about this account, it raises enough problems to make it anything but clear that these normative beliefs are beliefs for which there is or can be evidence or grounds. Yet, they most certainly appear to be rational beliefs. That is to say, we are far more confident that they are rational beliefs than we are of any claim that they are beliefs for which there is, or can be, evidence.

If some non-cognitive meta-ethical account could be established which would give us good grounds for believing that such 'normative beliefs' were in reality not beliefs at all but were expressions of the utterer's attitude or decisions of principle, which are neither true nor false, rational nor irrational, we would have grounds for believing that these putative normative beliefs are not counter-examples to the claim that all rational beliefs must be beliefs for which there is evidence. But, as is now tolerably evident, such meta-ethical accounts are not very plausible.²³ Such 'normative beliefs' appear to be genuine beliefs and no sufficient argument has been given for believing they are not.

There are also other types of belief for which it is far from clear that evidence can be given but which are clearly enough rational beliefs, namely such beliefs as the belief that three times seven is twenty one and the belief that if A is to the right of B and B of C then A is to the right of C. It may be replied that reasons can be given for such a priori truths and that in recognizing this the spirit, though not the letter, of 12 has been captured. But in response to this it can be countered that it is not clear that reasons can be given for the axioms of the systems in which such a priori truths are embedded, though, in turn it is also not clear that they cannot, if we consider the systems as a whole and if the reasons come from outside the system and are of a pragmatic, vindicatory sort. In short, what should be said here is not at all evident; the matter is deeply contestable.

From reflection on these examples (and others can be given as well), I think it should be said that 12, even circumscribed as we are now circumscribing it, is not clearly an unexceptional part of any adequate conception of rationality at least in the sense that all rational beliefs must satisfy this criterion. But what also seems tolerably evident is that there hardly could be a culture which could rightly be said to have rational beliefs and attitudes which did not in many domains at least consider the attainment of good evidence a desideratum in fixing belief and regard it, in many if not most contexts, as irrational not to be concerned to have (directly or indirectly) good

evidence for a whole range of beliefs. A culture (pace MacIntyre and Winch), if one could exist, without such a concern could hardly be said to be rational. In this important way the first part of 12 seems at least, as much as 1 through 11, to be an unexpungable, historically non-relative part of the very concept of rationality.

V

Principle 13 states that rational beliefs are critical beliefs; that is to say, they are beliefs which are held open to refutation or modification by experience. It is very like 1 and it is indeed tempting to believe that it is merely a specification in a certain direction of 1 with a stress on what it is to count as a 'rational belief', rather than a more general directive concerning how to act in order to act rationally. Our discussion of 1 in effect shows how important 13 is in a specification of what is to count as a 'rational belief'. My discussion of the rationality in certain circumstances of a rather blind voting behaviour only seems to present a counter-instance to 13. In believing without evidence that the Labour candidate for a minor post is likely to be better than the Tory candidate, it need not be the case, and for a rational man will not be the case, that his beliefs are not open to refutation by experience or that he regards evidence as irrelevant to his beliefs; he has beliefs and a strategy about the rational utilization of his time and certain general beliefs about what the Labour party and the Tories are about, which, if rational, are grounded in experience and subject to refutation or modification by experience.

However, is it really the case that all rational beliefs are subject to such refutation or modification by experience? Again a consideration which we brought up in discussing 12 is relevant. The belief that if A is to the right of B and B is to the right of C, then A is to the right of C does not seem to be so subject to refutation or modification by experience. However, it might be responded, a la Quine and Putnam, or even Wittgenstein, that even here, when one considers questions about the choice of conceptual frameworks and the like, that such a belief is not absolutely beyond refutation or modification in the light of our experience of the world. This, however, as the extensive discussion surrounding it has brought out, is a very problematic philosophical claim. It seems to me what should be said apropos 13, is that what is being talked about are factual beliefs and some normative beliefs and that talk of belief or beliefs is not at home where a priori propositions are involved. Moreover, to claim a further exception for such normative beliefs as we discussed in discussing 12 is also a mistake, for in the large

sense stressed by John Stuart Mill and restressed by John Rawls, they are refutable or modifiable by experience, though once more we should recognize that we are on philosophically controversial ground.

Perhaps at any time in any culture, no matter how extensively the critical spirit has been developed, there are some very central beliefs--deeply embedded assumptions of the culture--which are not held open to refutation or modification by experience. Examples which come readily to mind are belief in God and the Last Judgment in the Middle Ages, and confidence in the reliability of science and scientific accounts of reality in our age. Both in the Middle Ages and in our century there are (were) many individuals who are (were) unquestionably rational who hold (held) quite firmly, and quite unquestioningly, their respective fundamental cultural beliefs. Are we to say that in holding so uncritically these culturally ubiquitous beliefs they are (were) being irrational? Surely, to say that is a mistake.

Someone might respond that in the culture in which they are pervasive, such beliefs are not irrational but non-rational. But this sounds at least like a bit of arbitrary stipulation to save a philosophical thesis, for to say of a reflective open-minded person, who duly and impartially weighs (weighed) the matters which come (came) up for debate in his or her culture, that in unquestioningly accepting these leading and generally unquestioned beliefs, he or she is (was) behaving non-rationally and that his or her beliefs are (were) non-rational, is to suggest there is some defect in the people involved. But isn't the word 'defect' here with the criticism it implies far too strong? It asks too much of agents in order for them to earn the honorific title 'rational agent'.

All of us have such beliefs. They are indeed so deeply embedded, so pervasively and unreflectively a part of our way of responding and acting, that we often forget about them, are typically unable clearly to formulate them, are not cognizant of how they function for us and indeed sometimes some of us are not even aware of them, though we can often easily spot them in much earlier periods of our own culture, e.g. the Middle Ages.

As I have just remarked, we all have such beliefs--beliefs which are not subject to the test of experience--but we are not shown to be irrationalists simply because of that, though it is also fair enough to remark that to the extent we can approximate the heuristic ideal of perfect rationality, just to that extent, all our beliefs will be critically held beliefs.

The short of this is that we should acknowledge that in any culture there are some beliefs which are central to it which may be rationally believed in that culture while not being critically tested in the way 13 says all rational beliefs must be tested. But we should also add that if a person is rational and becomes aware of the particular beliefs in his culture which have this status, he must acknowledge that such beliefs, as well as the less central beliefs, require critical inspection--if not by him at least by some competent people. So Aquinas and Scotus looked into the rationale for belief in God and the Last Judgment and Popper, the logical empiricists and the pragmatists looked into the rationale behind our pervasive reliance on science. There are many very central beliefs, crucial segments of our culture, which we just unthinkingly accept. We can, as Peirce stressed, pace Descartes, quite reasonably continue to accept them until we have some positive reason not to, but in recognizing that we implicitly acknowledge the force and the legitimacy of the critical attitude, for we are in effect acknowledging that if there is evidence of at least some apparent importance against a given belief of this sort or prima facie good reasons for not believing it, we must acknowledge, if we are rational, that someone should look into the matter. That is to say, we must acknowledge that the evidence simply cannot be ignored, though, if in normal conditions we are scientists working with received paradigms, we may ourselves not examine this evidence.

We can approach the problem raised about 13 in another way. We must carefully distinguish between criticizable beliefs and criticized beliefs. There will be in any culture some (perhaps many) centrally embedded beliefs which are not held critically; indeed we are, if we think about it at all, quite unclear about what standards or techniques we could use in criticizing many of them. They are the very least uncriticized beliefs. They escape our doubts; indeed it is not clear for us--caught up as we are in a form of life--what seriously doubting them could come to.²⁴ They are uncriticized beliefs and we need not be irrational in accepting them and they need not be themselves irrational beliefs in being so accepted. But this does not show that they are uncriticizable beliefs. Someone who adopts the critical attitude--reasons in accordance with 13--will maintain that all rational beliefs (in the broad sense I have characterized) are criticizable beliefs but he need not maintain and indeed should not maintain that a) they are all criticized beliefs, b) that we understand the relevant canons of criticism for all uncriticized beliefs or, c) that we should, to be rational, strive to turn all criticizable beliefs into criticized (rationally examined) beliefs. Here we should follow Peirce, Dewey and Wittgenstein and not Descartes, Husserl and Russell.

What I have tried to establish is that while 13 is far more controversial than 1, that, like 1, it is a central and unexpugnable characteristic of rationality, though, as we have seen, it may not be the case that every rational belief must have this characteristic. It gives a partial specification of what it is for a belief to be a rational belief. In sum 13 is problematic, but when we probe it we come to see that generally speaking rational beliefs must, in the way specified, be critical beliefs.

Let us now consider principle 14, i.e. rational beliefs are beliefs which are held in such a way that those holding them will not resist attempts critically to consider their assumptions, implications and relations to other beliefs. 14 is practically a corollary of 13, for critical beliefs are precisely the sort of beliefs which will invite probing. A rational human being who is reasonably well informed will be aware of the extensive capacity of people to rationalize and to engage in self-deception. Such a person will not exempt himself or herself and in attempting to compensate for these unfortunate propensities he or she will critically probe their beliefs and this involves a consideration of their assumptions, implications and relations to other beliefs.

We saw in examining 13 that rational beliefs are generally critical beliefs; 14 simply spells out some further characteristics of critical beliefs. It is only problematic to the extent and in the manner in which 13 is problematic. This is not to say that a rational man must be constantly, in a fit of Cartesianism, probing all of his beliefs. A rational person will not do that. As we have learned from Peirce and Wittgenstein, such a person could not probe any of them if in a given context he or she did not question others. Indeed in any given inquiry the vast majority of their beliefs must remain unquestioned, but that does not make any of their beliefs unquestionable or uncriticizable. It is Cartesianism not fallibilism which is irrational. It is when in the actual course of some live inquiry or in the context of a need for practical decision and action in the course of living that some specific beliefs are questioned or come to stand in need of questioning that we should make such a reflective inspection of those beliefs. It is there where we must not balk at or resist such an inspection. In the standard case a rational belief is one that can withstand such an inspection and a person in almost all circumstances is not being rational if he or she is not prepared so to inspect them, where there is a need in the actual course of inquiry or in the course of living to subject his or her beliefs to rational inspection. People must, to be rational, be

prepared to engage in such an inspection and, if necessary, alter their beliefs accordingly, but it is not the case that a belief, which a person holds prior to such an inspection, need at this earlier time be irrational, if subsequently it will not withstand that inspection. In speaking of 'a need' here, I do not mean that the agent himself with the belief in question must feel such a need, but simply that among the inquirers and agents involved such a need must arise and be felt.

It is further not the case that 14 should be interpreted as claiming that all men always, no matter what their particular circumstances, should so hold all their beliefs open to such an inspection. To claim such a readiness appears at least to be too strong a claim. Consider a very old, desperately ill man with a steadfast belief in immortality or consider a person lost deep in the Canadian or Russian North after the crash of his aircraft or a passenger on an airline when she suddenly realizes that in a few moments her plane will crash into the sea. In all these rare and desperate circumstances one may, rationally have beliefs which one does not subject to reflective inspection. Given that the old man is wracked with pain, that it is quite impossible that he will get well, and that in a very short time he will die, and, given that prior to that he has not resisted inspecting arguments about the grounds for his belief in immortality, he is not being irrational if he refuses in his present state to make such an inspection of his beliefs. He will indeed, if belief in immortality is somehow a mistake, gain in understanding if he makes such an inspection, but against this we should weigh the fact that he will, given his background and particular situation, make his remaining days even more intolerable and rob himself of all peace and hope without the prospect, as would obtain in more normal cases, of a later greater satisfying of interests and needs which might accrue from living a life more in accord with the way things actually are. In weighing up these factors, there is indeed room for clashing and not obviously resolvable fundamental valuations, but minimally from this case alone, it should be evident that it is not clear that in all cases the rational thing to do is to make or be prepared to make such a reflective inspection of all one's beliefs.

Consideration of my other two examples will, I believe, reinforce what I have said above. If I am lost deep in the Canadian North in a situation in which my chances of getting out alive are very slim indeed and if considering very clearly the percentages here would so psychologically paralyze me that it would destroy even the very remote chance I have, by determined and reflective action, to survive, it is better--indeed in this instance more rational--if I do not make such a reflective inspection. Similar things obtain for what a person should do in setting himself for the impending airplane crash.

However, these are rare and odd cases and I think we can justifiably generalize about them in a way which will support 14 (though not all readings of 14). Ceteris paribus, a rational man will do what will answer to his own interests. Normally, knowing the truth and having critical beliefs answers to a human being's interests. Where they do not and where no other person's interests are involved, or where there is no more indirect long term advantage to the agent in question from such a rational inspection of a particular belief, then, in those particular circumstances, it is not irrational of him to not make such a rational inspection.

However, these are very special and very definitely circumscribed circumstances where an individual's ability to survive or hold himself together is dependent on his not being critical about a given belief. They give us no reason at all to think that 14 and indeed 13 do not generally hold. Actually the very extremity of these examples underlines the fact that in the general course of living 14, as well as 13, are essential elements of rationality.

Principle 15 is again a rather obvious element in any conception of rationality. A clear mark of a rational man is that his actions will generally be in accordance with his beliefs; a Dostoevskian undergroundling, by contrast, is a man whose actions do not square with his rational beliefs. Of course, some disparity here is compatible with rationality--we have the 'exceptions' discussed above--but generally where it obtains over matters of any importance rationality is diminished. Yet a person--say in the United States--might quite reasonably believe that the achievement of socialism was not to be attained within the next decade and--let us suppose-- that he also quite reasonably believes that the likelihood of its achievement anytime in the foreseeable future is very slight, yet, given its desirability, he still might, without a failure in rationality, work very hard for its achievement. Similarly, a man might know he has cancer and correctly believe that his chances of getting well are rather slight and yet live and act as if he were going to go on living. In certain circumstances--say he neglected to make provisions for his wife and children--that way of behaving would be irrational but it need not be in all circumstances.

Perhaps these cases are not cases of a rational person's actions not being in accordance with his rational beliefs. If they are not, then there is no reason to think 15 false but even if they are, there is still no reason to think 15 false, for 15 has the ceteris paribus-qualification. Yet it is cases of this sort which are the candidates for there being cases where a rational person's

actions--including his non-rational actions--are not in accordance with his rational beliefs; if these candidates will not pass muster, it would be crucial for someone who wishes to be sceptical here, to trot out a plausible counter-example to what appears at least to be an important truism. I, for one, can think of none and until one is forthcoming and really makes its way, it seems to me not unreasonable to remain quite sanguine about this truism.

In sum, I have argued that these fifteen principles are all essential and inexpugnable elements of rationality. No account of rationality could be adequate which left them out of account. However, as I indicated at the outset, it is not my intention to suggest that I have provided anything like a complete list of the essential characteristics of rationality. I have not given a statement of the necessary and sufficient conditions for rationality. It is not even clear to me how we could know whether we had such a list. There must be more that goes into the concept rationality than what I have been able to articulate here. I have rather been concerned to show that there are certain elements (and to show, as well, what they are) which are essential to the concept of rationality.²⁵

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FOOTNOTES

1. David A. Richards, A Theory of Reasons for Action (Oxford: Clarendon Press, 1971), p. 229.
2. Steven Lukes, "Some Problems about Rationality," Rationality, ed. by Bryan R. Wilson (Oxford: Basil Blackwell Ltd., 1970), p. 207. But see my "Rationality and Relativism," Philosophy of the Social Sciences, forthcoming.
3. Ibid.
4. Thomas Kuhn, "The Function of Dogma in Scientific Research," in Readings in the Philosophy of Science, ed. by Baruch A. Brody (Englewood Cliffs, New Jersey: Prentice-Hall Inc., 1970), p. 357
5. Ibid.
6. Ibid.
7. Ibid., p. 358
8. Ibid.
9. Ibid., pp. 359-60
10. Ibid., p. 363
11. Ibid., pp. 369-70. See, as well, for fuller discussions of these themes Thomas Kuhn, The Structure of Scientific Revolutions (2nd ed.; Chicago: Chicago University Press, 1970), Imre Lakatos and Alan Musgrave (eds.), Criticism and the Growth of Knowledge (Cambridge, England: Cambridge University Press, 1970), Israel Scheffer, Science and Subjectivity (Indianapolis, Indiana: The Bobbs-Merrill Co. Inc., 1967), Roger Trigg, Reason and Commitment (Cambridge, England: Cambridge University Press, 1972), Frank Cunningham, Objectivity in Social Science (Toronto: University of Toronto Press, 1973), Stephen Toulmin, "Conceptual Change and the Problem of Relativity," in Critical Essays on the Philosophy of R. G. Collingwood, ed. by Michael Krausz (Oxford, England: Oxford University Press, 1972), pp. 201-21, Michael Krausz, "Relativism and Rationality," American Philosophical Quarterly, Vol. 10, No. 4 (October, 1973), pp. 307-12 and William E. Connolly, "Theoretical Self-Consciousness," in Social Structure and Political Theory, ed. by William E. Connolly and Glen Gordon (Toronto: D. C. Heath and Company, 1974), pp. 40-66.

12. The account or accounts that I have characterized as Wittgensteinian Fideist occur in Peter Winch, The Idea of a Social Science (London: Routledge & Kegan Paul, 1958), Peter Winch, "Understanding a Primitive Society," American Philosophical Quarterly, Vol. 1 (1964), pp. 307-24, D.Z. Phillips, The Concept of Prayer (London: Routledge & Kegan Paul, 1965), Faith and Philosophical Enquiry (London: Routledge & Kegan Paul, 1970), Paul Holmer, "Wittgenstein and Theology," in New Essays on Religious Language (New York: Oxford University Press, 1969), Dallas M. High (ed.), "Atheism and Theism," Lutheran World, Vol. XII (1963), "Metaphysics and Theology: The Foundations of Theology," The Lutheran Quarterly (1967). I have criticized such accounts in my "Wittgensteinian Fideism," Philosophy (July, 1967 and in my Contemporary Critiques of Religion (London: Macmillan, 1971), Chapter 5 and in my Scepticism (London: Macmillan, 1973), Chapter 2. For further examinations of Wittgensteinian Fideism, see Robert C. Coburn, "Animadversions on a Wittgensteinian Apologetic," Perkins Journal (Spring, 1971), pp. 25-36, Michael Durrant, "Is the Justification of Religious Belief a Possible Enterprise?," Religious Studies Vol. 9 (1973), pp. 449-55, Patrick Sherry, "Learning How to be Religious," Theology (February, 1974), pp. 81-90, H.O. Mounce, "Understanding a Primitive Society," Philosophy, Vol. 48 (1973), pp. 347-62, Hugo Meynell, "Truth, Witchcraft and Professor Wirch," The Heythrop Journal, Vol. XIII, No. 2 (April, 1972), pp. 162-72 and John Kekes, "Rationality and Coherence," forthcoming.
13. Richard Brandt, "Rational Desires," Proceedings and Addresses of the American Philosophical Association, Vol. XLIV (1969-70).
14. Richard Brandt, "Rationality, Egoism and Morality," David Gauthier, "Brandt on Egoism," Kai Nielsen, "Ethical Egoism and Rational Action," all in The Journal of Philosophy, Vol. LXIX, No. 20 (November 2, 1972), pp. 681-99 and Kai Nielsen "Rationality and Egoism," Studi Internazionali Di Filosofia, forthcoming.
15. I have argued this briefly in my "Ethical Egoism and Rational Action," The Journal of Philosophy, Vol. LXIX, No. 20 (November 2, 1972), pp. 681-99 and more in detail in my "Rationality and Egoism," Studi Internazionali Di Filosofia, forthcoming and in my "On the Rationality of 'Rational Egoism'," The Personalist, forthcoming.

16. I have argued this in detail in my "On Being Rational," forthcoming. See also Alasdair MacIntyre, "The Essential Contestability of Some Social Concepts," and Norman S. Care, "On Fixing Social Concepts," both in Ethics, Vol. 84, No. 1. (October, 1973), Stuart Hampshire, "Political Theory and Theory of Knowledge," Twentieth Century Studies (September, 1973), pp. 70-79, William E. Connolly, "Essentially Contested Concepts in Politics," forthcoming and W. B. Gallie, Philosophy and the Historical Understanding (London: Chatto & Windus, 1964), Chapter 8.
17. Alasdair MacIntyre, Against the Self-Images of the Age (London: Gerald Duckworth & Co., 1971), pp. 244-59.
18. Ibid., p. 249.
19. Ibid., p. 258.
20. Ibid., p. 257. Note, however, Antony Flew's comments about this in his "The Ideologist Behind the Mask," Humanist, Vol. 87, No. 2 (February, 1972).
21. Alasdair MacIntyre, op. cit., p. 250.
22. Ibid., p. 253. See also Ann Swidler, "The Concept of Rationality in the Work of Max Weber," Sociological Inquiry, Vol. 43, No. 1 (Spring, 1973), pp. 35-42.
23. I have tried to bring together some of the evidence for this in my "Problems of Ethics," The Encyclopedia of Philosophy, Vol. III, ed. by Paul Edwards (New York: Cromell Collier & Macmillan Inc., 1967). pp. 129-32.
24. Ludwig Wittgenstein, On Certainty, translated by Denis Paul and G.E.M. Anscombe (Oxford: Basil Blackwell, 1969) and G. H. von Wright, "Wittgenstein on Certainty," Problems in the Theory of Knowledge, ed. by G. H. von Wright (The Hague: Martinus Nijhoff, 1972), pp. 47-60. See also the response in the same volume by B.F. McGuinness.
25. Many people have helped me in criticizing several versions of this essay. I should like to thank Professor John Baker and the members of the seminar on rationality I taught jointly with him at the University of Calgary, the members of the philosophy departments of the Universities of Calgary, Lethbridge, Wyoming, Rice University and North Texas State. In addition, I should like to thank Professors Szabados, Kekes, Stein, Jack and Ozol for their helpful criticisms and suggestions.